



ANNUAL REPORT 2017-2018

National Institute of
Technology Rourkela

AWARDS AND ACCOLADES

- Think Odisha Leadership Award, The Times of India in 2009.
- “Outstanding Engineering Institute of Eastern India”, Star News in 2011.
- “Best Government Engineering College”, Star News in 2011.
- Ranked 18th DQ CMR T-School Survey 2011.
- Ranked 12th overall and 8th for academic, Data Quest Survey 2011.
- 2nd prize in design category at the formula SAE-India Design Challenge – Society of Automotive Engineers (SAE-India).
- Ranked 1 by World Bank amongst all technical institutes of the country for project implementation.
- “Outstanding Engineering Institute” (East), ABP News in 2012.
- “Best Government Engineering College”, ABP News in 2012.
- Ranked 19th by Outlook-MDRA Engineering Colleges Survey 2012.
- Ranked 15th by DQ CMR T-School Survey 2012.
- “Outstanding Contribution to Education” to Prof. S. K. Sarangi, Director.
- The World Education Congress in 2012.
- Ranked 5th among the best universities of the country and 1067th position among World Universities by Cyber metrics survey in 2012 a Spain based research group.
- “Education Leadership Award” to Prof. S. K. Sarangi, Director, ET NOW in 2013.
- Ranked 1 among NITs and ranked 7th among all India Technical Institutions in Academic Environment.
- “Outstanding Engineering Institute (East)”, ABP News in 2013.
- “Best Government Engineering College” – ABP News in 2013.
- Ranked 11th by DQ-CMR Best Tech. School Survey 2013-14.
- Ranked 7th by Global Human Resource Development Centre, CSR Engineering Institute Survey 2014.
- Outstanding Engineering Institute (East)” – ABP News in 2014.
- Ranked 9th in DQ-CMR, Top T-Schools, 2015.
- Ranked 13th in Careers 360, Outstanding Universities (Engineering Public), March 2015.
- Ranked 7th among Top Engineering Colleges of Super Excellence by CSR-GHRDC Survey – 2015.
- Ranked 12th in India (1st among all NITs) and 1621 Globally among overall Institutes of World in Webometrics ranking of world Universities.
- Ranked 111 in QS BRICS ranking – 2016 (Institutional Ranking among BRICS countries constituting Brazil, Russian, India, China, South Africa).
- Ranked 19th in NIRF 2016 ranking by MHRD. Vision

To become an internationally acclaimed institution of higher learning that will serve as a source of knowledge and expertise for society and be a preferred destination for undergraduate and graduate studies.

Mission

To advance and spread knowledge in the area of Science & Technology leading to creation of wealth and welfare of humanity.

Quality Policy

Every student and employee of NIT Rourkela as well as all external agencies providing service to the Institute shall strive to achieve quality, speed and economy (in that order of importance) in all their endeavors. They will employ and create TECHNOLOGY to enhance productivity, protect the environment and uphold human dignity.

Transparency Policy

Every faculty, officer and staff of the institute shall perform his duties with complete transparency and will voluntarily share all information available to him with all stakeholders and the public.

Privileged information, such as question papers (before a test), personal data and confidential information of other

organizations kept at the disposal of the institute will, however, remain protected as long as such protection is necessary for welfare of the stake holder.

Guiding Principles

- Build an environment that is conducive to academic pursuit, nurturing creative thoughts and inculcating a spirit of inquiry.
- Promote free exchange of knowledge and experience with others, while respecting each other's right to intellectual property.
- Ensure quality, speed, economy and transparency in all spheres of our activities.
- Create a truly multicultural community and promote cultural bonding and teamwork among all.
- Provide opportunity to every member of the Institute for achieving academic excellence, developing all round personality and realizing his or her full potential.
- Adopt state of the art technology in all endeavors.
- Serve the society around, using the knowledge and expertise of the Institute.





NIT Rourkela

Producing Technology &
Technologists for the nation

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1. Introduction

National Institute of Technology, Rourkela was established on 15th August, 1961 as Regional Engineering College jointly supported by Government of India and Government of Odisha. The college started with only three under-graduate programmes in the disciplines of Mechanical Engineering, Electrical Engineering and Civil Engineering and was affiliated to Utkal University in the beginning and later to Sambalpur University in 1967. The college had its natural growth over time and kept on adding programmes like Metallurgical & Materials Engineering (1963), Chemical Engineering (1963), Mining Engineering (1979), Computer Science & Engineering (1986), Applied Electronics & Instrumentation Engineering (1987), Ceramic Engineering (1994), Physics (1961), Chemistry (1962), and Mathematics (1965). The post graduate programmes and the research programmes in select branches were initiated. As it grew the college was made academically autonomous in 1992 but remained affiliated to Sambalpur University.

However the turn-around came on 26th June, 2002 when the college was declared as National Institute of Technology and was completely taken to the fold of Ministry of Human Resource Development, Government India as a centrally funded institution and was made a Deemed University. The administrative structure, the source of finance and the status of the institute got reformed. The objective was redefined. National Institute of Technology, Rourkela prepared itself for a giant leap in every front. The culture and the ethos of the institute took contemporary turn to promote healthy and productive attitudes towards learning, life and work and to develop ambitions of achievements; striving for the maximum for every stakeholder.

The NIT Act by Government of India came into force on 15th August, 2007 and the institute was declared as an Institute of National Importance. Working in the line of the Act, the institute went through a complete metamorphosis. The prime mover had been set to go through major transformation. The NIT era has so far been a great journey. New programmes like Communication Engineering (2005), Biotechnology and Medical Engineering (2007), Life Science (2009), Industrial Design (2010), MBA (2010), Development Studies (2010), Planning and Architecture (2013), Food Process Engineering (2013), Earth and Atmospheric Science (2013) and 27 different specializations in the post graduate programme of various disciplines have been added considering the market demand. In the coming academic session post graduate programmes in Polymers, Plastics and Wood Engineering under Mechanical Engineering and Business Intelligence and Analytics under Computer Science and Engineering Department will be started. Today NIT Rourkela stands to be the institute with the widest range of programmes among all NITs. New and innovative additions to the galaxy of curricula along-with increase in the intake capacity to every programme are attracting bright students from across the country. All academic programmes have been modified and expanded considering the present scenario of technological and scientific developments. The research programmes have been given grander emphasis. Sponsored research programmes are given a thrust and the highly motivated faculties are continuously trying to multiply it by manifold. The research programmes in all the Departments have seen phenomenal growth. The infrastructure, such as academic buildings, laboratory facilities, students' hostels, faculty and staff residence, common facilities and conveniences have been created and are continuously scaled up to cater to the present as well as future needs.

National Institute of Technology Rourkela continues to be ranked as one of the top institutes of the country. The institute, now, is placed only amongst a few counted one. It attracts the best students from the country for its Bachelor's, Master's and Doctoral programmes, and in the 54 years of its existence, more than 18000 students have graduated from NIT Rourkela. The alumni of the institute have distinguished themselves through their achievements and contributions in diverse fields, and the engagement with the alumni continues to grow. Research is an increasing focus of activity of the institute coupled with strong efforts to see that the fruits of the research are translated into commerce through licensing or through startups. The institute continues to attract outstanding faculty members, and this is at the core of the growth of the institute. Presently, we have 275 faculty members – the largest by far among all the NITs – with many of them internationally reputed for their research contributions. It may be worth mentioning that NIT Rourkela is the first NIT to adopt IIT-like 4-Tier flexible faculty structure and has been attracting bright and reputed faculty into its fold. The Institute continues to build links with international and national peer universities to enhance research and educational programmes.

2. The BOG And Other Committees

Board of Governors (Ref: MHRD Order No. F.14-3/2011-TS. III, Dt. 31.03.2011)

Table 1: Name and Contact details of Board of Governors, NIT, Rourkela

Sl. No	Name	Contact No.
1.	Dr. Santrupt B. Misra, Chairperson, BOG, NIT, Rourkela & CEO, Carbon Black Business Director, Group H.R. Aditya Birla Management Corporation Pvt. Ltd. Aditya Birla Centre, 'C' Wing, 3rd Floor S. K. Ahire Marg, Worli, Mumbai-400 030, India	Ph : 022-66525000/249995000 Fax : 022-66525811/ 24995811 Email : santrupt.misra@adityabirla.com
2.	Prof. Animesh Biswas Director National Institute of Technology Rourkela -769 008 (Odisha)	Tel : 0661-2462001(O)/2472050(O)/2463001(R) Mob : 9437972455 Fax : 2472926/ 2462022 Email : director@nitrkl.ac.in
3.	Shri S. S. Sandhu, IAS Adll. Secretary (TE) Department of Higher Education Ministry of Human Resource Development Government of India Shastri Bhavan, New Delhi- 110001	Tel : 011-23381097(O) Fax : 011-23386903(Fax) Mob : 09999001061(M) Email : sandhu.edu@nic.in
4.	Mrs. Darshana Momaya Dabral, Joint Secretary & Financial Advisor Ministry of Human Resource Development Government of India, Dept. of Secondary & Higher Education, Shastri Bhavan, New Delhi- 110001	Tel : 011-23382696 Fax : 011-23070668 Mob : 9868136775 Email : jsfa.edu@gov.in
5.	Prof. Shobhana Narasimhan Professor Theoretical Sciences Unit JNCASR, Bangalore-560064	Tel : 080-22082833(O)/ 22082707(Secy.) Fax : 080-22082766 Mob : 9880641962 Email : shobhana@jncasr.ac.in
6	Dr. Shobhona Sharma Senior Professor (Retd.) 1103A Tulsigagan Building, President CHS, Plot 28 & 29, Sector 21, Kharghar, Navi Mumbai- 410210.	Tel : (Res): +91-22-27743426 Mob : 9892352830/9987260961 Email : shobhona@gmail.com
7.	Prof. R V Raja Kumar Director Indian Institute of Technology Bhubaneswar, Toshali Bhawan, satyanagar, Bhubaneswar-751 013	Tel : (0674-2570334) Fax : 0674-2576004 Mob : Email : director.office@iitbbs.ac.in
8.	Shri Sanjay Kumar Singh, IAS Commissioner-cum-Secretary to Government Skill Development & Technical Education Dept. Government of Odisha, Bhubaneswar, Odisha 751001	Tel : 0674-2391319(O) Fax : 0674-2391324 Email : etet.od@nic.in

Sl. No	Name	Contact No.
09	Shri N. R. Mohanty Ex-Chairman, HAL Flat No.620 B4 Yamuna Block, National Games Village (NGV) Koramangala Bangalore-560047 (Karnataka).	Mob : 9845038631 Email : nalinirmohanty@yahoo.co.in
10.	Prof. C. R. Patra ¹ Professor, CE National Institute of Technology, Rourkela-769008 (Odisha)	Tel : 0661-2462316 (O), 2463316(R) Mob : 9437085492 Email : crpatra@nitrkl.ac.in
11.	Prof. H. B. Sahu Associate Professor, MN National Institute of Technology, Rourkela-769008 (Odisha)	Tel : 0661-2462606(O)/ 2463606(R) Mob : 9437245625 Email : hbsahu@nitrkl.ac.in
12.	Er. S. K. Upadhyay Registrar & Secretary, BOG, National Institute of Technology Rourkela – 769 008(Orissa)	Tel : 0661-2462021/ 2476773 (O) Fax : 0661-2462022/2472926 Mob : 9437153285 Email : registrar@nitrkl.ac.in

Finance Committee

Table 2: Name and Contact details of Members of Finance Committee

Sl. No	Name	Contact No.
1.	Prof. Animesh Biswas Acting Chairman & Director National Institute of Technology Rourkela -769 008 (Odisha)	Tel : 0661-2462001(O)/2472050(O)/2463001(R) Mob : 9437972455 Fax : 2472926/ 2462022 Email: director@nitrkl.ac.in
2.	Shri S. S. Sandhu, IAS ¹ Adll. Secretary (TE) Department of Higher Education Ministry of Human Resource Development Government of India Shastri Bhavan, New Delhi- 110001	Tel : 011-23381097(O) Fax : 011-23386903(Fax) Mob : 09999001061(M) Email: sandhu.edu@nic.in
3.	Mrs. Darshana Momaya Dabral, Joint Secretary & Financial Advisor, MHRD, Govt. of India, Dept. of Secondary & Higher Education, Shastri Bhawan, New Delhi – 110 001.	Tel. : 011-23382696 Fax : 011-23070668 Email: jsfa.edu@gov.in
4.	Prof. (Ms) Shobhana Narasimhan, Professor Theoretical Sciences Unit JNCASR, Bangalore-560064	Tel : 080-22082833(O)/22082707(Secy.) Fax : 08022082766 Mon : 9880641962 E-Mail: shobhana@jncasr.ac.in
5.	Prof. H. B. Sahu Associate Professor, MN National Institute of Technology, Rourkela-769008 (Odisha)	Tel : 0661-2462606(O)/2463606(R) Mob : 9437245625 Email : hbsahu@nitrkl.ac.in
7	Er. S. K. Upadhyay Registrar & Secretary, BOG, National Institute of Technology Rourkela – 769008(Orissa)	Tel : 0661-2462021/ 2476773 (O) Fax : 0661-2462022/2472926 Mobile: 9437153285 E. Mail: registrar@nitrkl.ac.in

Building & Work Committee

Table: 3 Name and Contact details of Member of Building & Work Committee

Sl. No	Name	Contact No.
1.	Prof. Animesh Biswas, Director & Chairman, BWC, N.I.T., Rourkela	Ph: 0671-2462001(O) Fax: 2472926 Mob: 9415132483, 9437972455 Email: director@nitrkl.ac.in
2.	Shri Madan Mohan DDG(HE) Ministry of Human Resource Development, Room No. 431, 'C', Shastri Bhawan, New Delhi- 110001	Ph: 011- 23070186 (O) Fax: 011-23382298 Mob: 9868237799 Email: mmohan.edu@nic.in
3.	Shri Ajaya Kr. Nayak, DGM PL No.917095 Civil Engineering, Town Engineering Department, SAIL, RSP, Rourkela. Qr. No.C-2, Sector-1, Rourkela	Mob: 08895500078
4.	Shri Vinod Kr Shrivastava, Ex-DGM, RSP, SAIL C/o- Salil Shrivastava, Flat No. D-1603, Ozone Evergreen Apartment Harlur Road, Off Sarjapur Road Bangalore - 560102	Ph: 0661-25139639 Mob: 08895500102/9337100691
5.	Prof. C. R. Patra Professor, CE NIT, Rourkela.	Ph: 0661-2462316(O)/ 2463316 (R) Mob: 9437085492 Email: crpatra@nitrkl.ac.in
6.	Prof. J. Bera, Professor, CR & Dean (PD), NIT, Rourkela	Ph: 0661-2462204(O)/ 2463204 (R) Mob: 9437246159 Email: jera@nitrkl.ac.in
7.	Er. S.K. Upadhyay, Registrar & Secretary, BWC, NIT, Rourkela	Ph: 0661-2462021/ 2476773 (O) Fax: 0661-2462022 Mob: 9437153285 Email: registrar@nitrkl.ac.in
Special Invitees:		
8.	Shri. B. K. Pati, Executive Engineer PWD, Uditnagar, Rourkela- 12	Mob: 9437085593
9.	Prof. P. Sarkar, PIC(Civil Const.), NIT Rourkela	Ph. 0661-2462326(O)/2463326 (R) Mob: 9439429739
10.	Prof. U. Chattaraj, PIC(Civil Maint), NIT, Rourkela	Ph: 0661-2462327(O)/2463327 (R) Mob: 9778596926
11.	Prof. S. Samanta, PIC(Elect. Const.), NIT Rourkela	Ph: 0661-2462420 (O)/ 2463420(R) Mob: 9439104535
12.	Prof. S. Karmakar, PIC(Elect. Maint.), NIT Rourkela	Ph: 0661-2462411 (O)/ 2463411(R) Mob: 9439782318
13.	Prof. S. Murugan, PIC(AC), NIT Rourkela	Ph: 0661-2462525(O)/2463525(R)
14.	Mr. Joydip Mondal Executive Engineer, NIT Rourkela	Ph: 0661-2462071(O) Mob:8630066021
15.	Mr. Rajesh Sahoo Engineer, Estate, NIT Rourkela	Ph: 0661-2462089(O)/2463089(R) Mob: 9439966656

Members of the Senate

A			
1.	Prof. A. Biswas, Director	-	Chairman, Senate
2.	Shri S. K. Upadhyay, Registrar	-	Secretary, Senate
B) External:			
1.	Prof. R.K. Mishra Electronics Science Berhampur University, Bhanja Vihar, Berhampur- 760007 r.k.mishra@ieee.org	-	Member
2.	Prof. P.K. Biswas Department of E & ECE Engineering IIT, Kharagpur – 721 302 pkb@ece.iitkgp.ernet.in	-	Member
C) All Professors:			
1.	Prof.(Mrs) K. Parmanik, BM	-	Member
2.	Prof. K.C. Patra, CE	-	Member
3.	Prof. M. Panda, CE	-	Member
4.	Prof. N. Roy, CE	-	Member
5.	Prof. S.P. Singh, CE	-	Member
6.	Prof. S. K. Sahu, CE	-	Member
7.	Prof. C.R. Patra, CE	-	Member
8.	Prof. K.C. Biswal, CE	-	Member
9.	Prof. R. K. Singh, CH	-	Member
10.	Prof.(Mrs.) A. Sahoo, CH	-	Member
11.	Prof.(Mrs.) M. Kundu, CH	-	Member
12.	Prof. S. Paria, CH	-	Member
13.	Prof.(Mrs.)S. Mishra, CH	-	Member
14.	Prof. A.K. Turuk, CS	-	Member
15.	Prof. D.P. Mohapatra, CS	-	Member
16.	Prof. S.K. Rath, CS	-	Member
17.	Prof. S. Bhattacharya, CR	-	Member
18.	Prof. D. Sarkar, CR	-	Member
19.	Prof R. Sarkar, CR	-	Member
20.	Prof. J. Bera, CR	-	Member
21.	Prof. R.K. Patel, CY	-	Member
22.	Prof. R. Dinda, CY	-	Member
23.	Prof. K.K. Mohapatra, EC	-	Member
24.	Prof. S. Meher, EC	-	Member
25.	Prof. J. K. Satapathy, EE	-	Member
26.	Prof. B. Subudhi, EE	-	Member
27.	Prof. A. K. Panda, EE	-	Member
28.	Prof. P.K. Sahu, EE	-	Member
29.	Prof.(Mrs.) D. Patra, EE	-	Member
30.	Prof. K.B. Mohanty, EE	-	Member
31.	Prof.(Mrs.) S. Das, EE	-	Member
32.	Prof. S.K. Patra, LS	-	Member
33.	Prof. S.S. Ray, MA	-	Member
34.	Prof. G.K. Panda, MA	-	Member
35.	Prof. S. Chakravarty, MA	-	Member
36.	Prof. K. C. Pati, MA	-	Member
37.	Prof. R.K. Sahoo, ME	-	Member
38.	Prof. K.P. Maity, ME	-	Member
39.	Prof. S.S. Mohapatra, ME	-	Member
40.	Prof. D.R.K. Parhi, ME	-	Member
41.	Prof. S. K. Sahoo, ME	-	Member
42.	Prof. S. K. Acharya, ME	-	Member

43.	Prof. S. Murugan, ME	-	Member
44.	Prof. A. Satapathy, ME	-	Member
45.	Prof. A. K. Satapathy, ME	-	Member
46.	Prof. C.K. Biswas, ME	-	Member
47.	Prof. S.C. Mohanty, ME	-	Member
48.	Prof. S.K. Patel, ME	-	Member
49.	Prof. B.B. Verma, MM	-	Member
50.	Prof. B.C. Ray, MM	-	Member
51.	Prof. S.C. Mishra, MM	-	Member
52.	Prof. B.K. Pal, MN	-	Member
53.	Prof. S. Jayanthu, MN	-	Member
54.	Prof. D. P. Tripathy, MN	-	Member
55.	Prof. S. Panigrahi, PH	-	Member
56.	Prof. (Mrs.)S. Mohanty, HS	-	Member
57.	Prof. B. Ganguli, PH	-	Member
58.	Prof. D. Behera, PH	-	Member

D) Invitees

1.	Prof. S.K. Pratihari, Chief Warden	-	Invitee
2.	Prof. A. Thirugnanam, HOD, BM	-	Invitee
3.	Prof. S. Chatterjee, HOD, CY	-	Invitee
4.	Prof. T.K. Dan, HOD, EC	-	Invitee
5.	Prof. B. Kundu, HOD, ER	-	Invitee
6.	Prof. R.C. Pradhan, HOD, FP	-	Invitee
7.	Prof. B.B.V.L. Deepak, HOD, ID	-	Invitee
8.	Prof. S. Sarkar, HOD, MM	-	Invitee
9.	Prof. N.R. Mishra, HOD, HS	-	Invitee
10.	Prof. B. Mallick, HOD, LS	-	Invitee
11.	Prof. (Mrs.)B.Sarkar, HOD, PA	-	Invitee
12.	Prof. D.Bag, HOD, SM	-	Invitee
13.	Prof. S. Behera, CR	-	Special Invitee
14.	Mr. K. P. Panigrahi, Asst. Registrar, Academic (Res.)	-	Invitee
15.	Mr. A.K. Behera, Asst. Registrar (UG & PG)	-	Invitee

E) Student Invitees

1.	Mr. M. Mishra, Roll No.114ME0233 (UG)	-	Invitee
2.	Mr. S.K Bhuyan, Roll No.513MM1002(PG&R)	-	Invitee

DEANS AND HODs

List of DEAN as on 30th June 2018

Deans	Asso. Deans
1. Prof. K. K. Mohapatra, Dean(AC)	Prof. S. K. Behera, Assoc. Dean(AR)
2. Prof. S. Meher, Dean(AR)	Prof. D. Patra, Assoc. Dean(FW)
3. Prof. B. C. Ray, Dean (FW)	Prof. A. Sahoo, Assoc. Dean(SR)
4. Prof. J. Bera, Dean(PD)	Prof. Alok Satapathy, Assoc. Dean(AC)
5. Prof. A. K. Panda, Dean(SR)	
6. Prof. S. Panigrahi, Dean(SW)	

List of Head of Departments as on 30th June 2018

Sl. No.	Dept.	Existing Incumbent
1.	BM	Prof. M.K. Gupta
2.	CR	Prof. Ritwik Sarkar
3.	CH	Prof. R. K. Singh

Sl. No.	Dept.	Existing Incumbent
4.	CY	Prof. S. Chetterjee
5.	CE	Prof. Mahabir Panda
6.	CS	Prof. D. P. Mohapatra
7.	EC	Prof. T. K. Dan
8.	EE	Prof. J.K. Satpathy
9.	ER	Prof. Md. Equinuddin
10.	FP	Prof. S. Mishra
11.	HS	Prof. N. R. Mishra
12.	ID	Prof. Md. Rajik Khan
13.	LS	Prof. Bibekanand Mallick
14.	MA	Prof. K. C. Pati
15.	ME	Prof. D. R. K. Parhi
16.	MM	Prof. Smarajit Sarkar
17.	MN	Prof. D. P. Tripathi
18.	PA	Prof. B. Sarkar
19.	PH	Prof. P. Kumar
20.	SM	Prof. D. Bag
21.	WS	Prof. Saurav Datta



3. Education System

[B. Tech. / B. Arch. / Dual Degree (B. Tech. & M. Tech.) / Integrated M. Sc.]

i) Admission Procedure

Admission to all Undergraduate programs is made through the JEE (Main) Examination and allocation of seats is done through the Central Seat Allocation Board (CSAB). Besides, a specified number of foreign nationals / NRI selected under the policy laid down by Government of India are admitted directly to the 1st year of any of the courses.

ii) Programme Structure

The duration of the program leading to B. Tech. degree is four years and duration of the program leading to B. Arch., Dual Degree B. Tech. & M. Tech., and Integrated M. Sc. degree is five years. The curricula for the different programs are proposed by the respective departments and recommended by the Curriculum Development Committee (CDC) and Undergraduate Programme Evaluation Committee (UGPEC) before being approved by the Senate. The departments also prepare the syllabus of each programme and constituent courses containing the scope of studies, detailed instructions to be imparted, course outcome and course objectives. The curricula and syllabi are approved by Senate.

All subjects have a Lecture-Tutorial-Practical (L-T-P) component to indicate the contact hours. The Tutorial (T) or Practical (P) component may be absent in certain courses. Separate pure laboratory subjects (O-O-P) may exist in certain cases as decided by the Senate. All subjects have a credit count 'C'. Teachings of subjects are reckoned in terms of credits.

In each of the first two semesters, two credits are assigned for Extra Academic Activity (EAA) consisting of 3 hours activity per week. The EAA is chosen from N.S.S., N. C. C., or any other physical education approved by Senate. The curricula of B. Tech. programmes also includes compulsory Short-term Industrial or Research Experience (SIRE) of 8 weeks duration after 6th semester in any reputed industry, research organization or a reputed institute which is evaluated in the 7th semester. Research project carries a total of 10 credit distribution between 7th & 8th semester. The summary of credits assigned to research projects and seminar and technical writing is presented in Table-4.

Course Structure of M. Tech. Dual Degree from 1st to 6th semester is similar to B. Tech. courses of the department. The 7th & 8th semester typically contains five theory courses and three laboratory courses. SIRE is evaluated at the end of 7th semester. The research project starts on completion of 8th semester (during Summer Vacation which is evaluated at the end of 9th semester) and continues till end of 10th semester. The curricula of 9th & 10th semester constitute two theory courses, research project and seminar and technical writing. Total project credit is 40. The summary of credits assigned to research projects, seminar and technical writing is presented in Table-4.

iii) Registration

Students are registered in 2nd year (3rd semester) at the end of 1st year on completion of following:

- Completion at least 40 credits of courses out of the prescribed course for the first two semesters and secured 'P' or higher grade.
- Obtain a Cumulative Grade Point Average (CGPA) of not lower than 5.70.
- If the CGPA at the end of the first year is between 5.00 and 5.69 (both inclusive), the student is permitted to suspend studies and resume it in the following year along with the next batch of students. The B. Tech. programme must then be completed within 6 years of the original admission. However, if the CGPA is less than 6.00 in the repeat year, the student needs to leave the Institute to pursue other academic avenues.
- While registering for 3rd, 5th or 7th semester, a student may register for backlog courses of 1st, 3rd or 5th semester and while registering for 4th, 6th or 8th semester, may register for backlog courses of 2nd, 4th or 6th semester. A student has to appear for both Mid-Semester and End-Semester examinations and the grades are awarded based on the marks of the examinations. The Teacher's assessment component is carried forward from the original evaluation. The registration for backlog papers is done at the time of semester registration. Backlog courses are awarded one grade lower than the secured grade. ('P' grade remains as 'P' as exception).

- (e) A student may opt to repeat a course in which case he/she need to attend classes, and there is no reduction of grade awarded. In such case they are not eligible for awards / medals and prizes which are based on academic performance. If regulations and examination schedule otherwise permit, a student may register for spring semester elective in autumn semester and vice-versa. A student may change an elective course if the pre-requisites are satisfied. If a student has completed 8 semesters of study but has 'F' grades in few course, he must register for them as full time courses and attend classes in term of 9th semester if time table permits. The time limit for completion of B. Tech. programme is 6 years.
- (f) It is necessary for students to maintain a minimum CGPA of 6.00 at all times. If the CGPA falls below 6.00, he / she should enter into slow place programme in own interest. When a student of 1st semester gets a CGPA score below 6.00 or a student of any other semester scores CGPA below 6.00 for two consecutive semesters, parents are required to visit the Institute and are apprised of the position. Students of 3rd or higher semesters are permitted to register in the next semester only in slow pace, in such a manner that he has a possibility of improving his CGPA above 6.00. Parents and students give an undertaking that they are aware of the possibility of leaving the Institute. If at the end of 3rd consecutive semester, CGPA remains below 6.00; the student will enroll only in backlog courses with 'P' grade with no new course. If a student gets CGPA below 6.00 in the 4th consecutive semester, he / she must leave the Institute to pursue other avenues of study.

In truly exceptional circumstances, if the arithmetic of the grade card dictate that the required improvement can only be achieved in at least 2 semesters, the Senate, at its discretion may sanction 2 semesters instead of one to improve CGPA with a maximum of 4 new courses spanning over two semesters.

PG Programs [M. Tech. / M. Sc. / MA / MBA – 2 Years duration]

The M. Tech. regulation provides the necessary guidelines for the Postgraduate programme in Engineering of two years duration. Persons working in various organizations can join the same course in a slow pace spanning over 3 years duration. In such case the course work is of 2 years (4 semesters) duration and the third year is devoted for Research Project.

Similarly the MA / M.Sc. / MBA regulation provides guideline for these courses. The duration of MA / M. Sc. / MBA course is two years (broken up to four semesters) and 3 years for those admitted under slow pace category.

The institute offered 28 regular M. Tech., 4 M. Sc. (2 years), 3 MBA, and on MA in development studies programs.

i) Admission Procedure

M. Tech.

The programs leading to M. Tech. degree are open to candidates who have obtained the requisite qualification with 60% marks or 6.50 CGPA in aggregate in the qualifying examination and have cleared GATE in appropriate branch. Admission is made through Centralized Counselling for M.Tech./M.Arch./M.Plan. Admissions (CCMT).

Besides, few seats are also given to Sponsored Candidates. Relaxation up to 5% of marks or 0.5 CGPA is allowed by the Senate for sponsored candidates with proven research or profession experience. Sponsored candidates are not eligible to receive scholarship even if they are qualified in GATE. These candidates should have total of minimum two years full time work experience in the sponsoring organization. There is no age restriction. However, preference is given to those who are below 45 years.

M.Sc. (Applied Geology, Atmospheric Science, Chemistry, Life Science, Mathematics, and Physics)

For admission to M. Sc., candidates must have required B. Sc. degree with the subject applied for as one of the subjects (either Pass or Honours), Mathematics in +2 levels is compulsory for all programs except Life Science. The admission to the above programs is made based on Joint Admission Test for M. Sc. [JAM] and through Centralized Counselling for M. Sc. Admissions in NITs (CCMN).

M. A. (Development Studies)

The requisite academic qualification for MA in Development Studies is B. Tech. / B. A. / B. Sc. / B. Com. With 55% marks or 6.00 CGPA. Amongst B. A. / B. Sc. / B. Com. applicants with honours are given preference. Admission to the programme is made on the basis of career mark and/or Personal Interview by the Department.

M. B. A.

The minimum eligibility criterion for admission to MBA is B. Tech. degree in any branch of engineering with 60% marks or 6.50 CGPA. Applicants who have qualified at national or international tests like GMAT, CAT, XAT, MAT, etc. for admission

to Business Schools and secured high scores get preference. Final selection is made on the basis of Group Discussion and Personal Interview conducted at the Institute, along with academic career and score of national or international tests for admission to Business Schools.

ii) Programme Structure

Teaching for the courses is reckoned in credits, as specified against each subject. Due credit is given to lecture, tutorial (theory) and practical components for a given subject. The first two semesters have theory and practical (laboratory) subjects and a compulsory Seminar and Technical Writing of 2 credits in each semester. The total course credits in the 1st and 2nd semester together range between 46 to 48 credits. The summer vacation constitute a part of the 3rd semester. The summer work (either industrial training or industrial project or any assigned work in the institute) carries 4 credits and this is evaluated in 3rd semester. The 3rd and 4th semester mostly constitute the project work. The comprehensive viva-voce is carried out based on all subjects taught in first two semesters. The complete course structures for M. Tech. programmes of all departments are thoroughly reviewed in the PGPEC and recommendations are placed in the Senate for approval.

Project Work and Seminar and Technical Writing constitute an important aspect of the curricula. Details of credit and Seminar and Technical Writing are presented at Table-4.

Class Tests, assignments, tutorials, viva-voce, laboratory assignments, etc., are the constituent components of continuous assessment process and a student must fulfil all these requirements as prescribed by the teacher / coordination committee of the subject. If due to any compelling reason (such as participation in national / international events with due approval of the institute illness, calamity in the family, etc.) a student fails to meet any of the requirements within / on the scheduled date and time, the teacher / coordination committee may take such steps (including conduction of compensatory tests / examinations) as are deemed fit to ensure a fair assessment.

iii) Registration

Students in Postgraduate programs register for the course at the beginning of each semester. The courses do not have summer / supplementary examination. Students securing 'F' grade in any course appear the examination in the following session. Attendance in all classes is compulsory and regulation is similar to Undergraduate course.

Research Programs [Ph. D. and M. Tech. (Res.)]

Admission to Research Programs [Ph. D. and M. Tech. (Res.)] are made in both Autumn and Spring semesters through open advertisement. Applications are scrutinized and shortlisted applicants are invited for selection process. Selection is made based on Written Test and/or Personal Interview conducted by the respective departments.

i) Eligibility for Ph.D

The minimum qualification required for admission to Ph. D programs in Engineering, Science, Management, and Humanities & Social Sciences is one of the following:

- M.E./M.Tech./M.Pharm in relevant discipline with at least 6.5 CGPA or 60 percent marks in aggregate in both B.Tech. (or M.Sc./B.Pharm/ MCA or equivalent) and M.Tech. levels from a recognized Technical Institute or University.
- B.E./B.Tech./B.Pharm/MCA or equivalent in relevant discipline with CGPA of 7.0 or 65 percent marks in aggregate.
- M.Sc. in Basic Sciences with CGPA 7.0 or 65 percent marks in aggregate in relevant disciplines. For applicants with valid GATE/NET/GPAT score requirement may be relaxed upto 0.5 CGPA or 5% marks.
- M.B.B.S./B.V.Sc. with CGPA 6.5 or 60 percent marks in aggregate.

Additionally, candidates having the following qualification can also apply for Ph. D in Management and Humanities & Social Sciences:

- M.A. / MBA / M.Com. /M. Sc. in Humanities and Social Sciences or Management with 6.5 CGPA or 60 percent marks in aggregate.

Students without adequate background in the primary discipline will be required to have 10% extra marks (1.0 CGPA) to qualify over students with specialization in a primary discipline, unless explicitly exempted by the senate.

ii) Eligibility for M. Tech. (Res.)

The minimum qualification required for admission to M.Tech.(Research) program in Engineering, Science, Management and Humanities & Social Sciences is one of the following:

- B.E./B.Tech./B.Pharm/MCA or equivalent in relevant discipline with 60 percent marks in aggregate (or 6.5 CGPA).
- M.Sc. in Basic Sciences with 60 percent marks in aggregate (or 6.5 CGPA) in relevant disciplines.
- M.B.B.S./B.V.Sc. with 60 percent marks in aggregate (or 6.5 CGPA).

Additionally, candidates having the following qualification can also apply for M.Tech.(R). in Management and Humanities & Social Sciences:

- M.A. / MBA / M.Com. /M. Sc. in Humanities and Social Sciences or Management with 6.5 CGPA or 60 percent marks in aggregate.

Table 4: Details of Project Work, Seminar and Technical Writing

Course	Number of Semesters	Typical credit per semester	Total course credit	Project work credit	Semester assigned for project	Seminar & Technical Writing credit
B. Tech.(4 years)	8	23 – 30	210 – 220	10	7th & 8th	4
B. Arch. (5 years)	10	26 – 30	260 – 280	16	8th & 10th	2
M. Tech. Dual Degree (5 years)	10	23 – 30	260 – 270	40	9th & 10th and summer term after 8th semester	8
Integrated M. Sc. (5 years)	10	21 – 30	260 – 270	16	7th, 8th, 9th & 10th	4
M. Tech. (2 years)	4	25 – 26	100 – 104	40	3rd & 4th	8
MBA (2 years)	4	26 – 29	110	3	4th	8
M. Sc. (2 years)	4	23 – 29	100 – 108	10	3rd & 4th	4
MA (2 years)	4	20 – 27	101	10	3rd & 4th	4
M. Tech. (R) (> 2 years)	4 – 8	16 – 26	> 160	> 78	All	> 12
Ph. D. (> 3 years)	6 – 16	16 – 26	> 156	> 126	All	12 or 16

Results

Summary of results of different academic programme is presented from Table-5 to Table-8.

B. Tech. Programme

Table 5: Results of B. Tech. Programme (Graduation Batch 2018)

Sl. No	Branch	Graduated in 2018					
		No. Regis.	No. Passed			Total Passed	% Passed
			Hons	1st Class	2nd Class		
1	Biomedical	25	6	12+1*	2	21	84
2	Biotechnology	30	9	11+4*	2*	26	86.67
3	Civil Engineering	41	20	17+2*	0	39	95.12
4	Chemical Engineering	52	18	26+2*	1+1*	48	92.31
5	Ceramic Engineering	30	9	16+1*	1+1*	28	93.33
6	Computer Science & Engineering	87	32	36+3*	3+1*	75	86.21
7	Electronics & Communication Engineering	38	18	13+2*	2*	35	92.11
8	Electrical Engineering	61	28+1*	30	2*	61	100
9	Electronics & Instrumentation Engineering	38	17	15+3*	1+1*	37	97.37
10	Food Process Engineering	25	6	15	0	21	84
11	Industrial Design	27	13	11+2*	0	26	96.3

Sl. No	Branch	Graduated in 2018					
		No. Regis.	Hons	No. Passed		Total Passed	% Passed
				1st Class	2nd Class		
12	Mechanical Engineering	86	53	23+4*	1*	81	94.19
13	Metallurgical & Materials Engineering	45	26	16+3*	0	45	100
14	Mining Engineering	35	12	15+5*	0	32	91.43
TOTAL		620	268	288	19	575	92.74

Dual Degree B. Tech. & M. Tech. Programme

Table 6: Results of M. Tech. Dual Degree (Graduation Batch 2018)

Sl. No	Branch	Graduated in 2018					
		No. Regis.	Hons	No. Passed		Total Passed	% Passed
				1st Class	2nd Class		
1	CE3 : Transportation Engineering	9	6	3	0	9	100
2	CE4 : Water Resources Engineering	11	4	6	0	10	90.91
3	CH1 : Chemical Engineering	9	6	2	1	9	100
4	CR2 : Industrial Ceramics	10	4	4	0	8	80
5	CS1 : Computer Science	10	7	1+2*	0	10	100
6	CS2 : Information Security	13	3	8+2*	0	13	100
7	EC2 : VLSI Design and Embedded Systems	9	7	2	0	9	100
8	EC5 : Communication & Networks	13	3	8+1*	0	12	92.31
9	EE1 : Electronic Systems & Communication	8	3	3+1*	0	7	87.5
10	EE3 : Control & Automation	10	4	6	0	10	100
11	EE4: Power Electronics & Drive	10	2	7+1*	0	10	100
12	ME4 : Mechatronics & Automation	11	4	6+1*	0	11	100
13	MM1 : Metallurgical & Materials Engineering	9	5	4	0	9	100
14	MN1 : Mining Engineering	7	1	4+1*	0	6	85.71
TOTAL		139	59	73	1	133	95.68

*Students admitted prior to 2013 but graduated in 2018

M. Tech. Programme

Table 7: Results of M. Tech. Programme (Graduation Batch 2018)

Sl. No.	Branch	No. Regis.	Graduated in 2018	% Passed
1	BM1 : Biomedical Engineering	9	9	100
2	BM2 : Biotechnology	11	11	100
3	CE1 : Geotechnical Engineering	16	16	100
4	CE2 : Structural Engineering	19	17	89.47
5	CE3 : Transportation Engineering	19	18	94.74
6	CE4 : Water Resources Engineering	15	15	100
7	CH1 : Chemical Engineering	9	8	88.89
8	CH2 : Safety Engineering	15	15	100
9	CR2 : Industrial Ceramics	9	9	100
10	CS1 : Computer Science	17	16	94.12
11	CS2 : Information Security	13	13	100
12	CS3 : Software Engineering	17	17	100
13	CS4 : Analytics & Decision Sciences	9	9	100
14	EC2 : VLSI Design and Embedded Systems	10	10	100
15	EC3 : Electronics and Instrumentation Engineering	15	15	100
16	EC5 : Communication and Networks	14	14	100
17	EC6 : Signal and Image Processing	19	18+1*	100
18	EE1 : Electronic Systems and Communication	17	16+1*	100
19	EE3 : Control and Automation	11	11	100

Sl. No.	Branch	No. Regis.	Graduated in 2018	% Passed
20	EE4 : Power Electronics and Drives	11	10	90.91
21	EE5 : Industrial Electronics	12	12	100
22	ID1 : Industrial Design	15	15	100
23	ME1 : Machine Design and Analysis	17	16+1*	100
24	ME2 : Production Engineering	17	17	100
25	ME3 : Thermal Engineering	15	14	93.33
26	ME5 : Cryogenic and Vacuum Technology	19	19	100
27	ME6 : Plastic Composite & Timber Technology	12	12	100
28	MM1 : Metallurgical and Materials Engineering	15	15	100
29	MM2 : Steel Technology	16	16	100
30	MN1 : Mining Engineering	11	11	100
TOTAL		424	417	98.35

*Students admitted prior to 2016 but graduated in 2018

M. Sc., Integrated M.Sc, M. A. and M. B. A. Programmes

Table 8: Results of All Programmes (Graduation Batch 2018)

Sl. No	Branch	Graduated in 2018				
		No. Regis.	1st Class	2nd Class	Total Passed	% Passed
1	AG2: Applied Geology	25	25	0	25	1
2	AS2: Atmospheric Sciences	11	10	0	10	2
3	CY2: Chemistry	22	22	0	22	3
4	LS2: Life Science	21	21	0	21	4
5	MA2: Mathematics	23	20	1	21	5
6	PH2: Physics	26	18+2*	6	26	6
7	HS1: Humanities	5	5	0	5	1
8	SM1: School of Management	40	38	0	38	1
9	AG2: Applied Geology	25	25	0	25	1

*Students admitted prior to 2016 but graduated in 2018



4. Academic Programmes/ Courses Offered

Courses Offered at NIT Rourkela

B. Tech.	-	4 years
B. Arch.	-	5 years
M. Tech.	-	2 years
M. Tech. Dual Degree	-	5 years
M. Sc.	-	2 years
M. Sc. Integrated Course	-	5 years
M. A. Development Studies	-	2 years
M. B. A.	-	2 years
Ph. D.		

B. Tech. Course Offered at NIT Rourkela

B. Tech.

B. Arch	(30)
Bio Medical	(30)
Bio-technology	(30)
Ceramic	(35)
Chemical	(50)
Civil	(40)
Computer Science	(70)
Electrical	(60)

Electronics & Communication	(35)
Electronics & Instrumentation	(35)
Food Process	(30)
Industrial Design	(30)
Mechanical	(80)
Metallurgical & Materials	(50)
Mining	(35)

M. Tech. Course Offered at NIT Rourkela

Statistics of Students in Different Courses

M. Tech.

1. Biotechnology & Medical Engineering

- Biomedical Engineering
- Biotechnology

2. Civil Engineering

- Geotechnical Engineering
- Structural Engineering
- Transportation Engineering
- Water Resources Engineering

3. Chemical Engineering

- Chemical Engineering
- Safety Engineering

4. Ceramic Engineering

- Industrial Ceramics

5. Computer Science & Engineering

- Computer Science
- Information Security
- Software Engineering

6. Electronics & Communication Engineering

- VLSI Design & Embedded Systems
- Electronics & Instrumentation
- Communication & Networks
- Signal & Image Processing

7. Electrical Engineering

- Electronic Systems & Communications
- Control & Automation
- Power Electronics & Drives
- Industrial Electronics

8. Industrial Design

9. Mechanical Engineering

- Machine Design & Analysis
- Production Engineering
- Thermal Engineering
- Cryogenic & Vacuum Technology

10. Metallurgical & Materials Engineering

- Metallurgical & Materials Engineering
- Steel Technology

11. Mining Engineering

- M. Tech. in Mining

Post Graduate Specialization in Business Administration

M. B. A.

Human Resources

Finance

Marketing

Post-Graduation in Science and Arts

M. Sc. and M. A.

(30 seats in each specialization)

Applied Geology
Atmospheric Science
Chemistry

Mathematics
Physics
Life Science

M.A. in Development Studies

Integrated M. Sc. (5 Years) Course offered at NIT Rourkela

M. Sc.

5 years Integrated Course (30 seats each)

Chemistry

Mathematics

Physics

Life Science

M. Tech. Dual Degree (B. Tech. & M. Tech. in 5 Years)

M. Tech. Dual Degree

B. Tech. & M. Tech. in 5 Years

1. Civil Engineering

- M. Tech. in Geotechnical
- M. Tech. in Transportation
- M. Tech. in Water Resources

2. Chemical Engineering

- M. Tech. in Chemical

3. Ceramic Engineering

- M. Tech. in Ceramic

4. Computer Science & Engineering

- M. Tech. in Computer Science
- M. Tech. in Information Security

5. Electronics & Communication Engineering

- M. Tech. in Communication & Signal Processing

6. Electronics & Instrumentation Engineering

- M. Tech. in VLSI Design & Embedded Systems

7. Electrical Engineering

- M. Tech. in Electronic Systems & Communications
- M. Tech. in Power Control & Drives
- M. Tech. in Control & Automation

8. Mechanical Engineering

- M. Tech. in Mechatronics & Automation

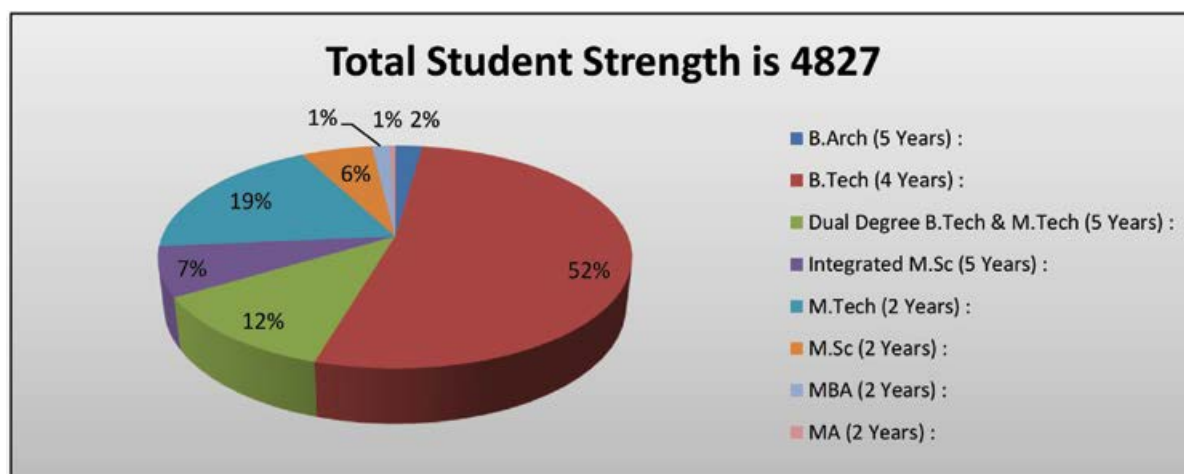
9. Metallurgical & Materials Engineering

- M. Tech. in Metallurgical & Materials

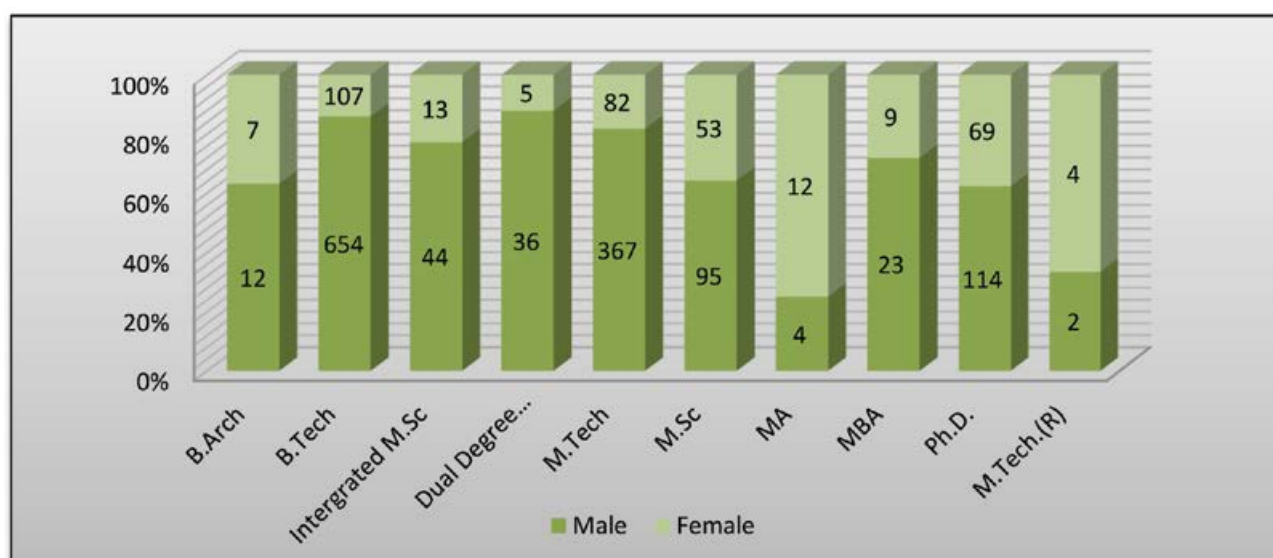
10. Mining Engineering

- M. Tech. in Mining





Course-wise Enrolment with Gender Break-up (UG & PG)



Course-wise Enrolment with Reservation Category (UG & PG)

Table 9: Details of Reservation Category break-up in number

Sl. No	Programme Name	OP	OPPH	SC	SCPH	ST	STPH	BC	BCPH	Foreign	Strength	Male	Female
1	B.Arch	9	0	2	0	2	0	6	0	0	19	12	7
2	B.Tech	347	10	102	3	52	0	185	4	58	761	654	107
3	Intergrated M.Sc	34	0	5	0	2	0	16	0	0	57	44	13
4	Dual Degree B.Tech & M.Tech	20	0	6	0	4	0	10	0	1	41	36	5
5	M.Tech	245	2	57	0	26	0	117	0	2	449	367	82
6	M.Sc	74	0	22	0	9	0	43	0	0	148	95	53
7	MA	13	0	1	0	2	0	0	0	0	16	4	12
8	MBA	28	1	0	0	1	0	2	0	0	32	23	9

Sl. No	Programme Name	OP	OPPH	SC	SCPH	ST	STPH	BC	BCPH	Foreign	Strength	Male	Female
9	Ph.D.	122	0	10	0	3	0	37	11	0	183	114	69
10	M.Tech.(R)	3	0	0	0	0	0	3	0	0	6	2	4
TOTAL		895	13	205	3	101	0	419	15	61	1523	1307	348

Table 10: (A) B. Tech. Student strength year-wise

Branch Code	1st Year (2017)		2nd Year (2016)		3rd Year (2015)		4th Year (2014)		TOTAL
	Sanctioned Strength	Actual +Foreign	Sanctioned Strength	Actual +Foreign	Sanctioned Strength	Actual +Foreign	Sanctioned Strength	Actual +Foreign	
BM	30	26 + 1	30	15+1	30	19+2	30	23	87
BT	30	29	30	22	30	24	30	22	97
CR	35	35	35	23	35	28	35	32	118
CH	50	50+3	50	40+2	50	45+1	50	46+2	189
CE	60	60+9	40	36+5	40	37+11	40	37+4	199
CS	90	90+20	70	69+20	70	65+15	70	69+20	373
EC	45	45+11	35	33+8	35	33+3	35	31+3	168
EI	45	45	35	21+1	35	33	35	33	135
EE	90	90+3	60	57+6	60	55+1	60	60	277
ID	30	30+1	30	22	30	29	30	26	109
ME	90	90+9	80	71+13	80	76+18	80	74+13	368
MM	50	50+1	50	39	50	46	50	44	188
MN	35	35	35	29+5	35	32+2	35	32	135
FP	30	29	30	16	30	14	30	25	85

(B) B. Arch. Student strength year-wise

Department	1st Year (2017)		2nd Year (2016)		3rd Year (2015)		4th Year (2014)		5th Year (2013)		TOTAL
	Sanctioned	Actual	Sanctioned	Actual	Sanctioned	Actual +Foreign	Sanctioned	Actual +Foreign	Sanctioned Strength	Actual +Foreign	
Architecture	20	19	20	17	20	16	30	27	30	28	107

Table 11: Integrated M. Sc. (5 Years) Student strength year-wise

Branch Code	1st Year(2017)		2nd Year(2016)		3rd Year(2016)		4th Year(2014)		5th Year(2013)		Total
	Sanctioned	Actual	Sanctioned	Actual	Sanctioned	Actual	Sanctioned	Actual	Sanctioned	Actual	
CY	20	18	30	12	30	21	30	28	30	24	103
LS	20	5	30	10	30	15	30	14	30	11	55
MA	20	15	30	12	30	17	30	24	30	20	88
PH	20	19	30	14	30	21	30	24	30	23	101

Table 12: M. Tech. Dual Degree (5 Years) Student strength year-wise

Department	1st Year (2017)		2nd Year (2016)		3rd Year (2015)		4th Year (2014)		5th Year (2013)		TOTAL
	Sanctioned	Actual	Sanctioned	Actual	Sanctioned	Actual +Foreign	Sanctioned	Actual +Foreign	Sanctioned Strength	Actual +Foreign	
Transportation Engineering			10	9	10	9	10	10	10	9	37
Water Resources Engineering			10	9	10	10	10	10	10	10	39
Chemical Engineering	10	10+1	10	10	10	8+1	10	9+1	10	9	49
Industrial Ceramic	10	10	10	6	10	8	10	8	10	10	42
Computer Science			10	9+2	10	9+2	10	10+2	10	10+1	45

Department	1st Year (2017)		2nd Year (2016)		3rd Year (2015)		4th Year (2014)		5th Year (2013)		TOTAL
	Sanctioned	Actual	Sanctioned	Actual	Sanctioned	Actual +Foreign	Sanctioned	Actual +Foreign	Sanctioned	Actual +Foreign	
Information Security			10	9+2	10	9+2	10	10	10	10+1	43
VLSI Design and Embedded System			10	8	10	8	10	10	10	9	35
Communication and Networks			10	10	10	10	10	10	10	10+1	41
Electronic Systems and Communication			10	9	10	9	10	9	10	8	35
Control and Automation			10	9	10	9	10	10	10	10+1	39
Power Electronics and Drive			10	9	10	9	10	10	10	9	37
Mechatronics and Automation			10	9+1	10	9+1	10	10	10	10	40
Metallurgical and Materials Engineering	10	10	10	7	10	7	10	9	10	10	43
Mining Engineering	10	10	10	8	10	8	10	10	10	8	44

Table 13: M. Sc. / MBA / MA (2 Years) Student strength year-wise

Sl. No	Department	1st Year (2017)		2nd Year (2016)		TOTAL
		Sanctioned Strength	Actual +Foreign	Sanctioned Strength	Actual +Foreign	
1	AG2 : Applied Geology	30	26	30	25	51
2	AS2 : Atmospheric Sciences	15	10	15	11	21
3	CY2 : Chemistry	30	29	30	24	53
4	LS2 : Life Science	30	25	30	21	46
5	MA2 : Mathematics	30	29	30	25	54
6	PH2 : Physics	30	29	30	26	55
TOTAL		165	148	165	132	280

MBA

Sl. No	Department	1st Year (2017)		2nd Year (2016)		TOTAL
		Sanctioned Strength	Actual +Foreign	Sanctioned Strength	Actual +Foreign	
1	SM1 : School of Management	60	32	60	38	70

MA in Developmental Studies

Sl. No	Department	1st Year (2017)		2nd Year (2016)		TOTAL
		Sanctioned Strength	Actual +Foreign	Sanctioned Strength	Actual +Foreign	
1	HS1 : MA in Developmental Studies	30	16	30	6	22

Table 14: M. Tech. (2 Years) Student strength year-wise

Sl. No	Department	1st Year (2017)		2nd Year (2016)		TOTAL
		Sanctioned Strength	Actual +Foreign	Sanctioned Strength	Actual +Foreign	
1	BM1 : Biomedical Engineering	25	12	25	9	21
2	BM2 : Biotechnology	25	19	25	11	30
3	CE1 : Geotechnical Engineering	25	19 + 1	25	17	37

Sl. No	Department	1st Year (2017)		2nd Year (2016)		TOTAL
		Sanctioned Strength	Actual +Foreign	Sanctioned Strength	Actual +Foreign	
4	CE2 : Structural Engineering	25	20	25	21	41
5	CE3 : Transportation Engineering	25	19	25	20	39
6	CE4 : Water Resources Engineering	25	20	25	17 + 1	38
7	CH1 : Chemical Engineering	25	10	25	9	19
8	CH2 : Safety Engineering	0	0	15	17	17
9	CR2 : Industrial Ceramic	25	9	25	11	20
10	CS1 : Computer Science	25	20	25	17	37
11	CS2 : Information Security	25	16	25	13	29
12	CS3 : Software Engineering	25	15	25	17	32
13	CS4 : Analytics and Decision Sciences	0	0	21	9	9
14	EC2 : VLSI Design and Embedded System	25	19	25	12	31
15	EC3 : Electronics and Instrumentation Engineering	25	19	25	16	35
16	EC5 : Communication and Networks	25	17	25	15	32
17	EC6 : Signal and Image Processing	25	16	25	18	34
18	EE1 : Electronic Systems and Communication	25	18	25	16	34
19	EE3 : Control and Automation	25	19	25	13	32
20	EE4 : Power Electronics and Drives	25	18	25	14	32
21	EE5 : Industrial Electronics	0	0	25	16	16
22	EE6 : Power Systems Engineering	25	17	0	0	17
23	ID1 : Industrial Design	25	17	25	15	32
24	ME1 : Machine Design and Analysis	25	19 + 1	25	17	37
25	ME2 : Production Engineering	25	20	25	19	39
26	ME3 : Thermal Engineering	25	19	25	17	36
27	ME5 : Cryogenic and Vacuum Technology	25	16	25	19	35
28	ME6 : Plastics, Composites and Timber Engineering	0	0	25	12	12
29	MM1 : Metallurgical and Materials Engineering	25	15	25	16	31
30	MM2 : Steel Technology	0	0	25	17	17
31	MN1 : Mining Engineering	25	19	25	14	33
TOTAL		650	449	736	455	904



5. Training and Placement Centre

The Training and Placement Centre has been actively performing a number of training and placement related activities for the students. Some of the major activities are Practical Training/Internship, Local Study Tour and Campus Placement. Like previous years the Centre had a series of such activities during the academic year 2017-18.

Practical Training/Internship

Practical Training/Internship is an integral part of engineering education that aims at making students familiar with the work culture and environment of industries, and to gain practical knowledge on working of various machines, equipments and processes which cannot be accommodated in class room/laboratory. Students are exposed to the concept of overall plant management and organization. A total of 768 Practical Trainings/Internships for B.Tech. and M.Tech. (Dual Degree) students were arranged in 268 different organizations/industries during May-July 2017. It was ensured that eight weeks of Practical Training/Internship at the end of 3rd year were completed by each student before they appeared at the final examination. Some of the students were paid by the industries for doing internship instead of taking practical training. Some of them carried out research projects in various educational institutes or research organizations.

The list of industries/institutes where the students undertook Practical Training/Internship during May-July, 2017 is given below:

Campus Placement

During the academic session 2017-18, a total of 237 recruitment drives from 212 different companies were handled for full time employment, out of which the highest pay package of Rs. 39.1 lakh per annum was offered. A total of 1016 full time job offers were issued to our students, out of which 777 were boys and 239 were girls. Thus, there was an increase of 53% in job offers compared to that of 2016-17 year (i.e. 664 job offers). The following two records in placement statistics could be achieved:

- i) For the first time, the total number of companies that visited our campus for full time employment crossed double century with a figure of 212.
- ii) For the first time, the total number of full time job offers crossed the four digit figure with 1016.



Branch wise and Course wise Job offers during Academic Year 2017-18

Branch\Degree	B.Tech.	Dual Degree	Int. MSc.	M.Tech.	MBA	MSc	PhD	Total
BioTechnology	21							21
BioMedical	18			2				20
Ceramic	30	5		4			2	41
Civil	29	8		15			9	61
Chemical	44	8		13				65
Computer Science	81	19		44			2	146
Electronics & Instrumentation	41							41
Electronics & Communication	37	22		31			6	96
Electrical Engineering	63	28		19			14	124
Mechanical	83	13		25			4	125
Industrial Design	29			11			1	41
Food Processing	19							19
MBA					26			26
Mining	34	6		3				43
Metallurgy	46	14		11			1	72
Physics			8			1	2	11
Chemistry			11			3		14
Mathematics			14			13	2	29
Earth Science								
Applied Geology						7		7
Humanities						5		5
Life Science			3			6		9
Grand Total	575	123	36	178	26	35	43	1016

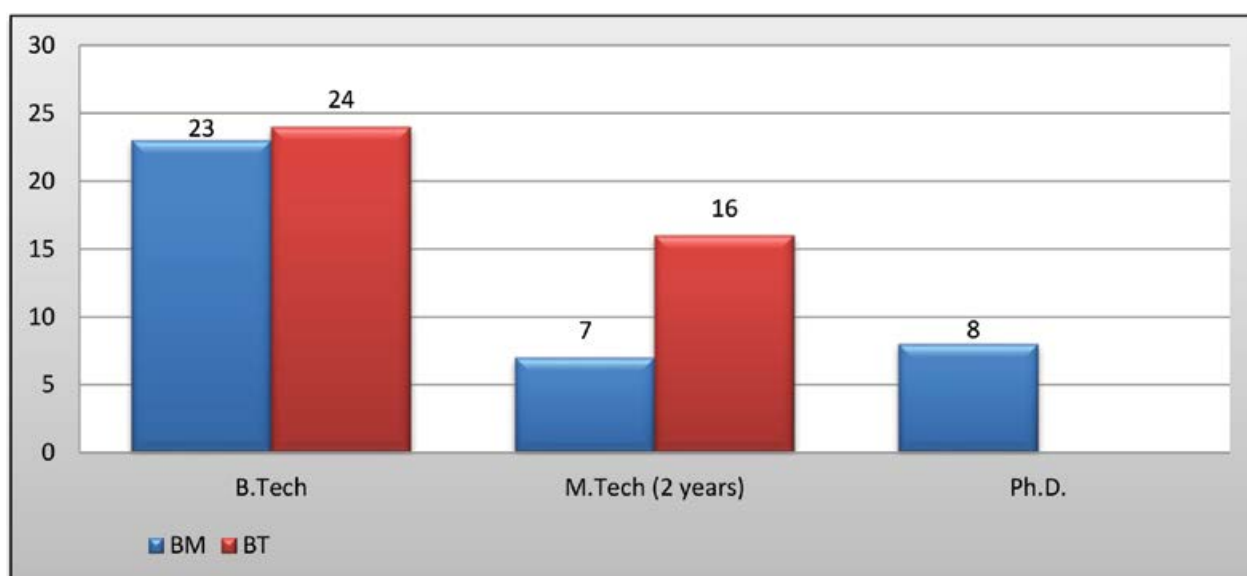
Employability Skill Development Programmes

- The following workshops/invited talks/training programmes were organized by T&P Centre during academic year 2017-18 with an objective of improving the employability skill of the students.
- Sri Leo Kurians Paulose, 2011 batch Nitraan, BTech in Electronics and Communication, Innovation Expert of M/s Amdocs, Pune, delivered a talk to around 120 of our students in PPT room in T&P Centre on the topic "Planning Your Career and Beyond" at 4 PM on 15th Aug, 2017.
- Sri Anupam Chakrabarty, Managing Director, M/s Lindstrom Services India Pvt Ltd, 1996 batch Nitraan, BE in Metallurgical Engg. delivered a placement related talk to around 100 students on the topic "What do the interviewers expect from candidates?" at 5.15 PM on 4th Sep, 2017 in PPT Room, T&P Centre.
- Sri Sangramjit Pujari and Sri Rahul Dev, two professionals of M/s Confidence Factory, Bhubaneswar, addressed to around 150 students on "How to face job interview confidently" in BB Auditorium at 10 AM on 28th Oct, 2017.
- Sri Damodar Padhi, Global Head, Talent Development and Ms. Gino Premila, both from M/s TCS conducted a workshop for around 100 of our students and few of faculty members on the topic "Digital Learning" at 3.30 PM on Nov 19, 2017 in PPT room in T&P Centre.
- Mr. Pavan Jaiswal, M/s Brainwiz, Hyderabad conducted a workshop on "Skill improvement in employability" in BB Auditorium at 9.30 AM on 6th Jan, 2018.
- Ms. Sanghamitra Sabat, M/s Possibl Management, Kolkata conducted a workshop on "Tips to do well in job interview" in BB Auditorium at 9.30 AM on 13th Jan, 2018. This workshop was sponsored by TEQIP-III.
- Sri Bismoy Pati, M/s Tata Motors, Jamshedpur and 2008 batch Nitraan (BTech in Mechanical Engg) delivered a talk on "Supply Chain Management in Automobile Industries" at 9.30 AM on 15th Jan, 2018 in PPT room in T&P Centre.
- Sri Leo Kurians Paulose, Innovation Expert, M/s Amdocs, Pune conducted a workshop for around 100 of our students and few of faculty members on the topic "Disruptive Innovation and its impact on the industry" at 3PM on 23rd Jan, 2018 in PPT room in T&P Centre.
- Sri Shyam Mohapatra, Director, M/s Spark Bootcamp, alumnus of IIT Kanpur and IIM Bangalore, conducted a workshop on "Improving skill in creativity in programming and algorithmic problem solving" at 5.15 PM on 29th Jan, 2018 in PPT Room, T&P Centre.
- A team of four trainers of M/s Confidence Factory, Bhubaneswar conducted two days of workshop on the topic "How to Face Interview Confidently" in T&P Centre during March 3-4, 2018. A total of 93 students attended the workshop. This workshop was sponsored by TEQIP-III.
- Ms. Sunita Bose of M/s Let's Talk, Kolkata delivered a talk on "Careers and Employability in India and Overseas" on 9th April, 2018 to around 80 students at 5.15 PM in PPT Room, T&P Centre. It was sponsored by TEQIP-III.
- Mr. Rahul Anand, Founder of M/s B-Factory, Ranchi conducted a workshop for around 100 students on Verbal and Aptitude Test at 5.15 PM on 10th April, 2018 in PPT Room, T&P Centre.

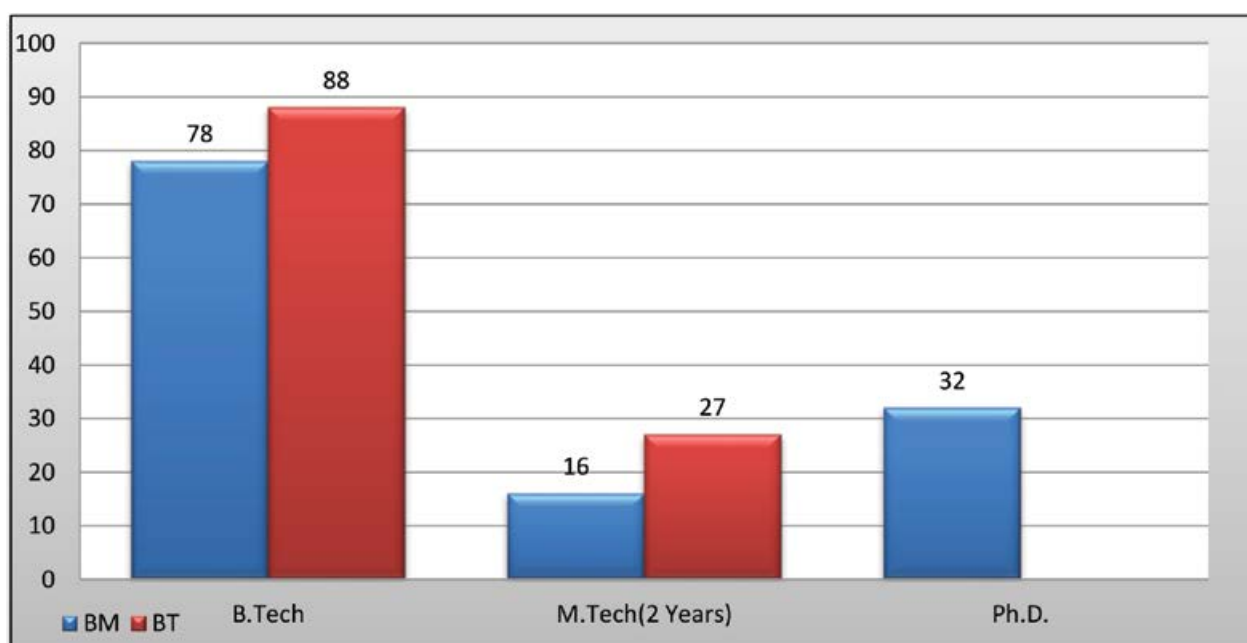
6. Departments And Academic Units

Department of BIOTECHNOLOGY & MEDICAL ENGINEERING

Student Intake in 2017-18

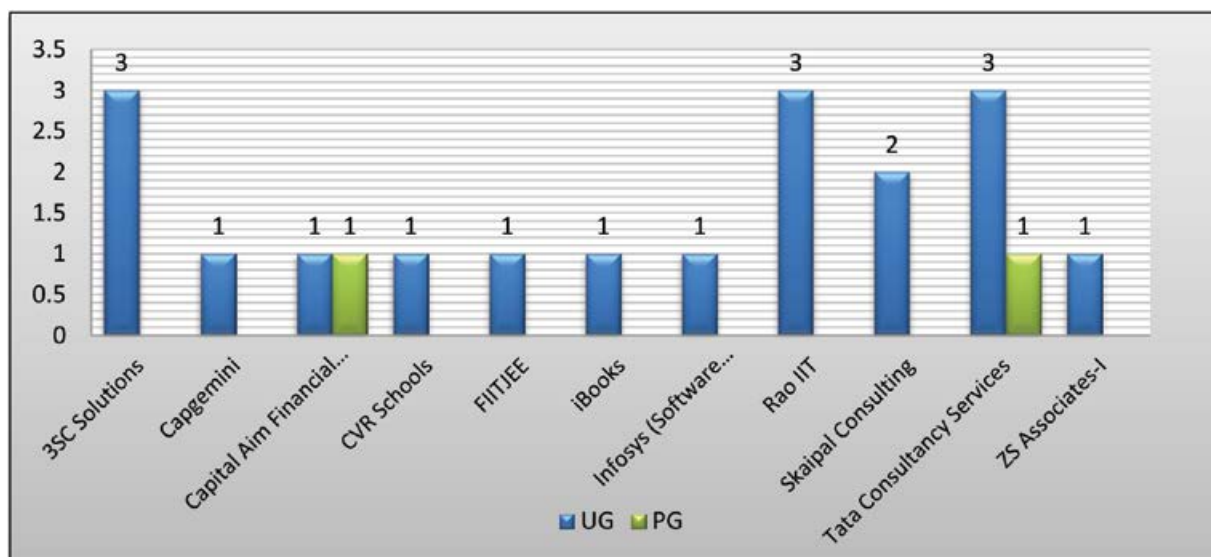


Total Student Strength

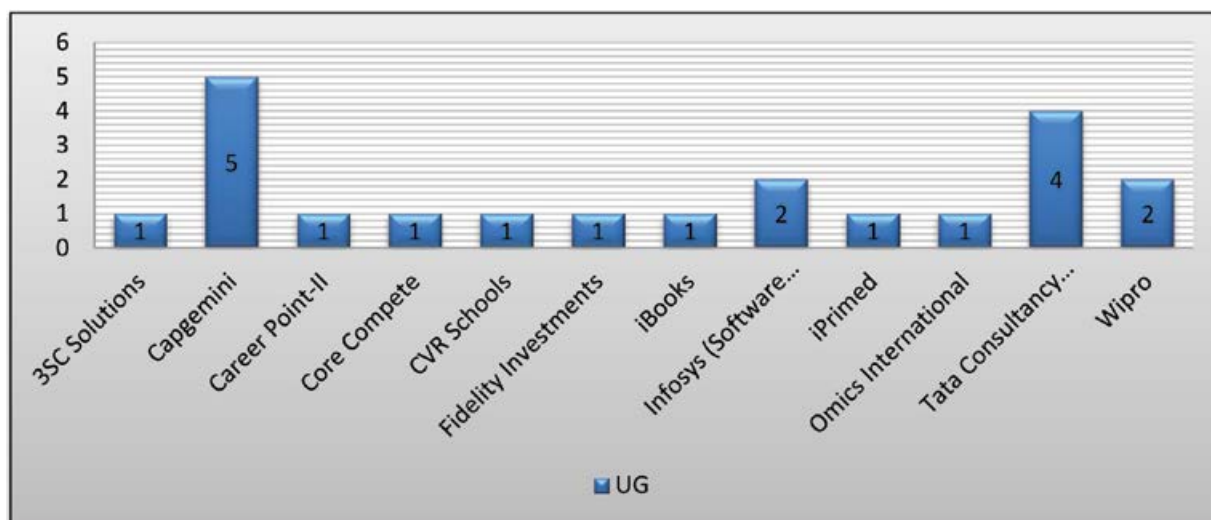


Placement Statistics

Bio Medical Engineering



Bio Technology



Faculty

Sl.	Name & Specialization
1.	Prof. Mukesh K. Gupta (guptam@nitrkl.ac.in) Associate Professor, Ph.D. (Konkuk University, S. Korea) (Head of the Department) , Animal Biotechnology, Genetic Engineering, Transgenesis, Assisted Reproductive Technologies, Animal Cloning, Stem Cells.
2.	Prof. Krishna Pramanik (kpr@nitrkl.ac.in) Professr, Ph.D. (Calcutta University) Nanobiotechnology / Nanomedicine, Biomaterial & Tissue Engineering, Stem cell Biology
3.	Prof. Subhankar Paul (spaul@nitrkl.ac.in) Associate Professor, Ph.D. (IIT Delhi) Nanotechnology in Cancer Therapy, Biosensing, Biomolecule-based Nanostructure Development & Bioapplication

Sl. No.	Name & Specialization
4	Prof. Indranil Banerjee (banerjeei@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Regenerative Medicine & Tissue Engineering, Biomicrofluidics, Theranostics Systems
5	Prof. Kunal Pal (palk@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Biomedical Signal Processing, Biomedical Instrumentation, Soft materials, Controlled Drug Delivery Systems, Tissue Engineering
6	Prof. Nandini Sarkar (sarkarn@nitrkl.ac) Assistant Professor, Ph.D. (IIT Guwahati) Protein Misfolding and Aggregation, Protein Engineering
7	Prof. Amit Biswas (amitb79@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Biomaterials, Surface Engineering, Corrosion and Oxidation of Materials
8	Prof. Angana Sarkar Environmental Microbiology, Ecology and Biotechnology
9	Prof. A.Thirugnanam (thirugnanam.a@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Madras) Biomechanics, Biotransport, Biomaterials
10	Prof. Devendra Verma (vermad@nitrkl.ac.in) Assistant Professor, Ph.D. (North Dakota State University, ND, USA) Tissue Engineering, Wound Healing and Wound Management
11	Prof. Kasturi Dutta Bioprocess development for industrially important products, Enzymology, Bioenergy,
12	Prof. Nivedita Patra (patran@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Delhi) Bioprocess Engineering
13	Prof. P. Balasubramanian ((biobala@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Madras) Agriculture and Environmental Biotechnology
14	Prof. Bibhukalyan Prasad Nayak (bibhukalyan@nitrkl.ac.in) Assistant Professor, MBBS, MMST (IIT Kharagpur) Regenerative Medicine, Neurodegenerative Disorders, Bioinformatics, Rehabilitative Tissue
15	Prof. Sirsendu Sekhar Ray (sirsendu@nitrkl.ac.in) Assistant Professor, MBBS, MMST (IIT Kharagpur) Tissue Engineering, Cryobiology, Nanobiotechnology
16.	Prof. J.Sivaraman (jsiva@nitrkl.ac.in) Assistant Professor, Ph.D. (National Institute of Technology, Tiruchirappalli) Bioinstrumentation, Signal processing
17.	Prof. Anju R Babu (babua@nitrkl.ac.in) Assistant Professor, Ph.D. (Indian Institute of Science, Bangalore) Biomechanics

Publication

Publications in Journals

- R. Biswas and A. Sarkar, "Characterization and optimization of arsenite oxidizing strains for their potential in arsenic bioremediation" *Preparative Biochemistry and Biotechnology*, vol.11, pp.1-8, June 2018.
- R. Biswas and A. Sarkar, "Isolation and characterization of arsenite oxidizing strains for their potential in arsenic bioremediation", *Journal of Environmental Research and Development*, vol.12, pp. 436-442, Jun 2018.
- K. Gupta, P. Babu and A. Sarkar "Characterization of marine bacteria for protease production" *Journal of Environmental Research and Development*, vol. 12, pp.402-409, Jun 2018.
- K. Gupta, M. Vivekanand and A. Sarkar, "Application of advanced omics tools for wastewater treatment", *Journal of Environmental Research and Development*, vol.12, pp.493-498, Jun 2018.

- Indu Yadav, Suraj K Nayak, VS Sharan Rathnam, Indranil Banerjee, Sirsendu S Ray, Arfat Anis, and Kunal Pal, Reinforcing effect of graphene oxide reinforcement on the properties of poly (vinyl alcohol) and carboxymethyl tamarind gum based phase-separated film. *Journal of the Mechanical Behavior of Biomedical Materials*, 2018. 81: p. 61-71.
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- Preeti Madhuri Pandey, Indranil Banerjee, Arfat Anis, and Kunal Pal, An Insight on the Swelling, Viscoelastic, Electrical, and Drug Release Properties of Gelatin–Carboxymethyl Chitosan Hydrogels. *Polymer-Plastics Technology and Engineering*, 2018. 57(5): p. 404-416.
- Kunal Pal, Kunal Mitra, Arindam Bit, Saugat Bhattacharyya, and Anilesh Dey, Medical Signal Processing in Biomedical and Clinical Applications. *Journal of Healthcare Engineering*, 2018. 2018.
- Suraj K Nayak, Arindam Bit, Anilesh Dey, Biswajit Mohapatra, and Kunal Pal, A Review on the Nonlinear Dynamical System Analysis of Electrocardiogram Signal. *Journal of Healthcare Engineering*, 2018. 2018.
- Chanda Vilas Dhumal, Kunal Pal, and Preetam Sarkar, Characterization of Tri-Phasic Edible Films from Chitosan, Guar Gum, and Whey Protein Isolate Loaded with Plant-Based Antimicrobial Compounds. *Polymer-Plastics Technology and Engineering*, 2018: p. 1-15.
- Gauri Shankar Shaw, Preeti Madhuri Pandey, Yamini Yogalakshmi, Indranil Banerjee, SM Al-Zahrani, Arfat Anis, and Kunal Pal, Synthesis and Assessment of Novel Gelatin–Chitosan Lactate Cohydrogels for Controlled Delivery and Tissue Engineering Applications. *Polymer-Plastics Technology and Engineering*, 2017. 56(13): p. 1457-1467.
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Patents

Title	Identification Number	Inventors/Owners	Applicant	Status	Date of Filing/Granted
Nano-Fibrous polyelectrolyte complex for rapid control of haemorrhage	201831026577	Devendra Verma, Sabir Hossain	NIT Rourkela	Filed	17 Jul 2018
Biomaterial and Methods of Use Thereof for the Prevention of Post-operative Adhesions US9757499B2	US9757499B2	Noshir Langrana, Devendra Verma, Michele Previtera	Rutgers University	Granted	12 Sep 2017

Awards Received/Distinction Achieved

By Faculty:

- Prof. P Balasubramanian: Faculty of the year – 2017 award from Arunai International Research Foundation (AIRF), Chennai, India.
- Prof. N.Patra: Early Career Research Award ,SERB, Govt. of India, May 2018 – May 2021.
- Prof. N. Sarkar: Awarded SERB ECR award for a duration of three years for a project entitled “Evaluating anti-amyloidogenic propensity of surface functionalized carbon dots”.

By Students:

- Mr. Suraj Nayak (Ph.D student of Prof.K.Pal): DST International Travel Support Scheme award for attending the conference “25th European Signal Processing Conference” during the period Aug 28- Sept 2, 2017; held at Kos Island, Greece.
- Mr.Kaustuv Das (M.Tech student of Prof.S.S.Ray): 1st prize in Poster presentation at International Conference on Current Trends in Material Science and Engineering (CTMSE 2018), Institute of Engineering & Management, Kolkata and S.N. Bose National Center for Basic Sciences, Kolkata, 19-20 Jan 2018.

Seminar, Symposia, Winter School, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

- 1-Week Workshop on Medical Signal & Image Processing (MSIP-2018), Feb 4-10, 2018, Co-ordinator: Prof. Kunal Pal.
- National Conference on Waste to Energy, Carbon Capture and Storage (NCWECCS - 2017), 03 Aug 2017 - 05 Aug 2017, Co-ordinator: Prof. P Balasubramaniam.
- NATIONAL CONFERENCE On Tissue Engineering & Regenerative Medicine (NCTERM-2017),NIT Rourkela, 19-20 July 2017, Co-ordinator:Prof. Amit Biswas.
- 5-day Workshop on “Animal Cell culture 2017 ” ,NIT Rourkela,19-24 Nov 2018,Co-ordinator:Prof.I.Bannerjee.

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI / Co-PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Molecular characterization of arsenic transformation mechanism of arsenite oxidizing bacteria isolated from contaminated ground water of Bihar to elucidate their potential application in as bio remediation.	SERB	PI-Prof. Angana Sarkar	1500000/-	2016	2019

Name of the Project	Sponsoring Agency	Name of the PI / Co-PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Development of pH based portable arsenic bio-sensor exploiting arsenic oxidizing bacteria	DST	PI-Prof. Angana Sarkar Co-PI-Prof. Sougata Kumar Kar	4473200/-	2017	2020
Study for the development and characterization of immunomodulating functional mango butter based chocolate fortified with curcuminoids and its potential uses	DST	Kunal Pal (PI), Indranil Banerjee (Co-PI)	3355560	07-2017	06-2020
Low cost bench-top fluorescence microscope with integrated diagnostic algorithm for early detection of cervical cancer risk prediction	DST	Kunal Pal (Co-PI) from NIT Rourkela	605000 (For NIT Rourkela)	10-2017	09-2020
Design and fabrication of 3D scaffolds and tissue engineered testicular construct for in vitro spermatogenesis	ICMR	Prof. M.K.Gupta	13.56	May 2018	Apr 2021
In vitro spermatogenesis as a method to bypass pre- and post-meiotic barriers to spermatogenic process and restoration of fertility.	ICMR	Prof. M.K. Gupta	33.79	Mar 2015	Mar 2018
Design and fabrication of 3D scaffolds and tissue engineered testicular construct for in vitro spermatogenesis	DBT	Prof. M.K. Gupta	63.83	Dec 2014	Nov 2017
Analysis of spermatozoal RNA and its functional relevance to fertility.	CSIR	Prof. M.K. Gupta	11.50	Jan 2015	Dec 2017
Bioinformatics Infrastructure Facility (BIF) for the promotion of biology teaching through bioinformatics	DBT	Prof. M.K. Gupta	113.77	Mar 2013	Mar 2020
Fermentation-assisted recovery of novel compounds from food industry wastes	SERB	Dr. Nivedita Patra	21,69,992.00	May 2018	May 2021
Development of Nanocomposite scaffolds with High Wet Strength for Bone tissue Engineering	DST	Prof. D. Verma	3298760	2015	2018
Preparation of stable selfassembled hybrid nanostructure of bovine a-lactolbumin and egg white lysozyme for the evaluation of antiproliferative activity in multiple cancer cells: Study of simultaneous targeting and anti cancer drug delivery application	SERB	Prof. D. Verma	4408000	2016	2019
Microfluidics based interstitial-flow mimetics for lineage specific differentiation of human mesenchymal stem cell (RGYI)	DBT	Prof.I.Bannerjee	1525000	2013	2017
Study for the development and characterization of immunomodulating functional mango butter based chocolate fortified with curcuminoids and its potential uses	DST	Prof.I.Bannerjee	3355560	2017	2020
Low cost bench-top fluorescence microscope with integrated diagnostic algorithm for early cervical cancer risk prediction	DST	Prof.I.Bannerjee	3432000	2017	2020

Name of the Project	Sponsoring Agency	Name of the PI / Co-PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Medicinal plant extract for treatment of tissue related diseases and its implication in livelihood generation and socio economic upliftment of rural community of odisha	DST	Prof. K. Pramanik	325600	2015	2017
Injectable Nanocrystalline Hydroxyapatitepolyanhydride Based Paste for bone Substitution	DBT	PI:Prof. S. Dasgupta Co PI: Prof. K. Pramanik	4509600	2017	2020
Cryopreservation and characterization of Human Adipose Tissue Derived Stem Cells	DST	Prof. S.S.Ray	1789000	2012	2017

Institutional Programme Support/Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date

List of Laboratories Developed

Sl. No.	Name of the Laboratories

Ph.D. Degrees Awarded by the Department

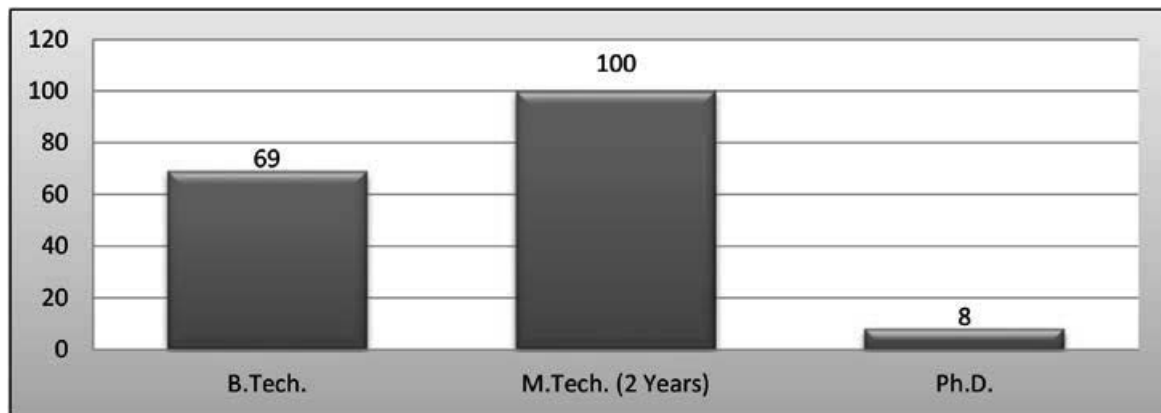
Name of the Student	Title of Thesis	Supervisor
Vinay Kumar Singh	Development and Characterization of Sesame Oil based Formulations for Controlled Drug Delivery	Kunal Pal Amitesh Kumar (IIT-BHU)
Krishna Kumar Ramajayam (511BM101)	An approach to improving efficacy of cryosurgery: numerical and experimental (using gel phantoms) studies	Prof. A. Thirugnanam (Supervisor) Prof. S.K Sarangi (Co-supervisor)
Tejinder Kaur (512BM1006)	Development of carbon reinforced polymer-ceramic composites for bone tissue engineering	Prof. A. Thirugnanam (Supervisor) Prof. K. Pramanik (Co-Supervisor)
Senthilguru K	Cobalt Doped Nano-Hydroxyapatite Incorporated Gum Tragacanth-Alginate Polymeric Beads: An Angiogenic-Osteogenic Matrix for Bone Tissue Engineering	Prof. I. Bannerjee (Supervisor) Prof. K. Pramanik (Co-Supervisor)

M.Tech. Research Degrees Awarded by the Department: nil

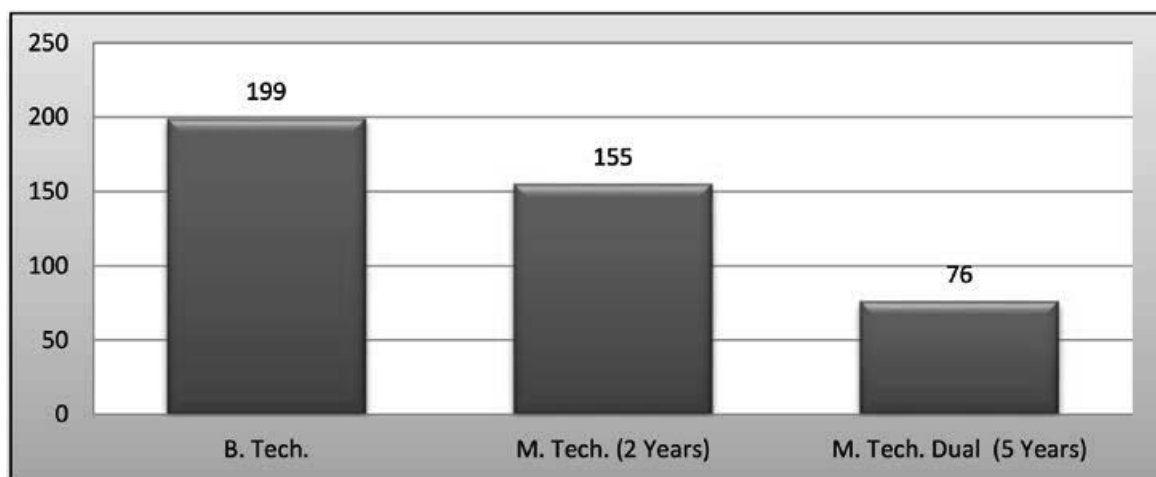
Name of the Student	Title of Thesis	Supervisor

Department of CIVIL ENGINEERING

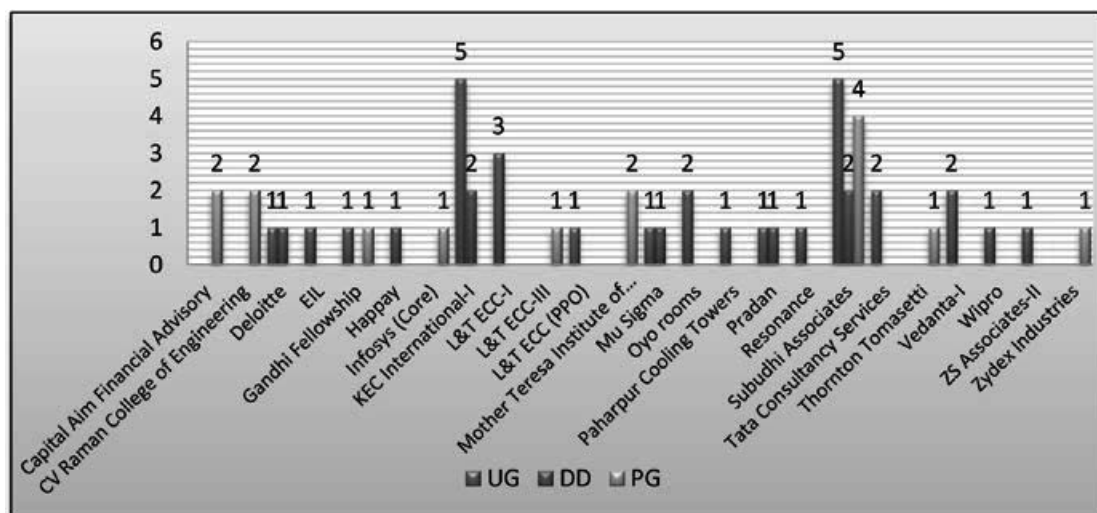
Student Intake in 2017-18



Total Student Strength



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof.(Mrs.) Asha Patel (apatel@nitrkl.ac.in) Associate Professor, M.Sc (Engg.) (Sambalpur) Structural Engineering
2	Prof. Awadhesh Kumar (akumar@nitrkl.ac.in) Associate Professor, Ph.D.(NIT Rourkela) Water Resources Engineering
3	Prof. Nagendra Roy (nroy@nitrkl.ac.in) Professor, Ph.D. (IIT Delhi) Geotechnical Engineering
4	Prof.(Mrs.) Kaoli Karar(Paul) (kkpaul@nitrkl.ac.in) Associate Professor, Ph.D. (IIT Kharagpur) Environmental Engineering
5	Prof. Kanhu C. Patra (kcpatra@nitrkl.ac.in) Professor, Ph.D.(IIT Kharagpur) Water Resources Engineering
6	Prof. Kishanjit K. Khatua (kkkhatua@nitrkl.ac.in) Associate Professor, Ph.D.(NIT Rourkela) Water Resources Engineering
7	Prof. Kishore C. Biswal (kcb@nitrkl.ac.in) Professor, Ph.D. (IIT Kharagpur) Structural Engineering
8	Prof. Mahabir Panda (mpanda@nitrkl.ac.in) Professor & H.O.D, Ph.D. (IIT Kharagpur) Transportation Engineering
9	Prof. Mahendra Gattu (gattum@nitrkl.ac.in) Assistant Professor , Ph.D. (Northwestern university) Structural Engineering
10	Prof. Manoranjan Barik (mrbarik@nitrkl.ac.in) Associate Professor, Ph.D.(IIT Kharagpur) Structural Engineering
11	Prof. Nagendra Roy (nroy@nitrkl.ac.in) Professor, Ph.D. (IIT Delhi) Geotechnical Engineering
12	Prof. Pradip Sarkar (sarkarp@nitrkl.ac.in) Associate Professor, Ph.D. (IIT Madras) Structural Engineering
13	Prof. Prashant K. Bhuyan (bhuyanp@nitrkl.ac.in) Assistant Professor, Ph.D.(IIT Bombay) Transportation Engineering
14	Prof. Rabi Narayan Behera (beherarabin@nitrkl.ac.in) Assistant Professor , Ph.D. (NIT Rourkela) Geotechnical Engineering
15	Prof. Robin Davis P. (robind@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Madras) Structural Engineering
16	Prof. Sanat Nalini Sahoo (sahoosanat@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Guwahati) Water Resources Engineering
17	Prof. Sarat K. Das (sarat@nitrkl.ac.in) Associate Professor, Ph.D. (IIT Kanpur) Geotechnical Engineering
18	Prof. Shishir Kumar Sahu (sksahu@nitrkl.ac.in) Professor, Ph.D. (IIT Kharagpur) Structural Engineering

Sl. No.	Name & Specialization
19	Prof. Somesh Jena (sjena@nitrkl.ac.in) Assistant Professor, Ph.D. (NIT Rourkela) Environmental Engineering
20	Prof. Subhajit Mondal (mondalsubhajit@nitrkl.ac.in) Assistant Professor, Ph.D. (NIT Rourkela) Structural Engineering
21	Prof. Suresh P. Singh (sp Singh@nitrkl.ac.in) Professor, Ph.D.(Anna University) Geotechnical Engineering
22	Prof. Ujjal Chattaraj (chatttaraju@nitrkl.ac.in) Assistant Professor, Ph.D.(IIT Kanpur) Transportation Engineering
23	Prof. U. K. Mishra (ukmishra@nitrkl.ac.in) Assistant Professor, Ph.D. (NIT Rourkela) Structural Engineering

Publication

Publications in Journals

- Abhijit Mistri, Pradip Sarkar, and Robin Davis P “Column–beam moment capacity ratio and seismic risk of reinforced concrete frame building” *Proceedings of the Institution of Civil Engineers - Structures and Buildings*, Institution of Civil Engineers, 2018, 10.1680/jstbu.17.00100.
- Ali Alraie, and Manoranjan Barik “Effect of continuity on reduction factors of bending moments and shear forces in grid slabs” *Journal of Building Engineering*, Elsevier, 13:291-297, 2017, 10.1016/j.job.2017.08.010.
- Amit Kumar Das, and Prasanta Kumar Bhuyan “Hardcl method for defining LOS criteria of urban streets” *International Journal of Civil Engineering*, Springer, 15(7): 1077-1086, 2017, 10.1007/s40999-017-0207-6.
- Amit Kumar Das, and Prasanta Kumar Bhuyan “Self-organizing tree algorithm (SOTA) clustering for defining level of service (LOS) criteria of urban streets” *Periodica Polytechnica Transportation Engineering* Budapest University of Technology and Economics, 2018, 10.3311/PPtr.9911.
- Aparupa Pani, and Suresh Prasad Singh “Effect of temperature on strength of lime stabilized fly ash” *Environmental Geotechnics*, Institution of Civil Engineers, 2018, 10.1680/jenge.17.00050.
- Arpan Pradhan, and Kishanjit Kumar Khatua “Assessment of roughness coefficient for meandering compound channels” *KSCE Journal of Civil Engineering*, Springer, 22(5):2010–2022, 2018, 10.1007/s12205-017-1818-9.
- Arpan Pradhan, and Kishanjit Kumar Khatua “Gene-expression programming to predict manning’s n in meandering flows” *Canadian Journal of Civil Engineering*, 45(4): 304-313, 2018, 10.1139/cjce-2016-0569.
- Ashish Kumar Patnaik, Ankit Raj Ranjan, and Prasanta Kumar Bhuyan “Investigating entry capacity models of roundabouts under heterogeneous traffic conditions” *Transportation Research Record: Journal of the Transportation Research Board*, SAGE Publications, 2018, 10.1177/0361198118777603.
- Ashish Kumar Patnaik, Saswat Chaulia, and Prasanta Kumar Bhuyan “Roundabout entry capacity models: genetic programming approach” *Proceedings of the Institution of Civil Engineers - Transport*, ICE Publishing, 2018, 10.1680/jtran.17.00089.
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- Bhosale Avadhoot Shivaji, Robin Davis P, and Pradip Sarkar “New seismic vulnerability index for vertically irregular buildings” *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering*, American Society of Civil Engineers, 4(3), 2018, 10.1061/AJRUA6.0000973.

- Bhosale Avadhoot Shivaji, Robin Davis P, and Pradip Sarkar "Seismic safety of vertically irregular buildings: performance of existing indicators" *Journal of Architectural Engineering*, American Society of Civil Engineers, 24(3), 2018, 10.1061/(ASCE)AE.1943-5568.0000319.
- Bhosale Avadhoot Shivaji, Robin Davis P, and Pradip Sarkar "Vertical irregularity of buildings: regularity index versus seismic risk" *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering*, American Society of Civil Engineers, 3(3), 2017, 10.1061/AJRUA6.0000900.
- Biraja Prasad Mishra, and Manoranjan Barik "NURBS-augmented finite element method for stability analysis of arbitrary thin plates" *Engineering with Computers*, Springer, 1-12, 2018, 10.1007/s00366-018-0603-9.
- Brijesh Kumar, Kanhu Charan Patra, and Venkat Lakshmi "Error in digital network and basin area delineation using d8 method: a case study in a sub-basin of the Ganga", *Journal of the Geological Society of India*, Springer, 89(1): 65-70, 2017, 10.1007/s12594-017-0559-1.
- Debadatta Jena, and Kishore Chandra Biswal "Violent sloshing and wave impact in a seismically excited liquid-filled tank: meshfree particle approach" *Journal of Engineering Mechanics*, American Society of Civil Engineering, 144(3): 1-15, 2018, 10.1061/(ASCE)EM.1943-7889.0001364.
- Elluri Venkata Prasad, and Shishir Kumar Sahu "Vibration analysis of woven fiber metal laminated plates -experimental and numerical studies" *International Journal of Structural Stability and Dynamics*, World Scientific, 2018, 10.1142/S0219455418501444.
- Himanshu Sekhar Panda, Shishir Kumar Sahu, and P. K. Parhi "Thermal effects on parametric instability of delaminated woven fabric composite curved panels" *International Journal of Structural Stability and Dynamics*, World Scientific, 17(1), 2017, 10.1142/S0219455417500080.
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- Kanhu Charan Patra, Alok Adhikari, and N Adhikari "Prediction of discharge in straight compound channels using conventional and soft computing tools" *International Journal of Engineering Research and Application*, IJERA, 7(8 Part 2): 42-51, 2017 .
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- Kanhu Charan Patra, and M M Sahoo "Development of a functional water quality index: a case study in Brahmani river India" *International Journal of Environmental Science and Technology*, Springer, 2018, 10.1007/s13762-018-1933-2.
- Kanhu Charan Patra, and Mrunmayee Manjari Sahoo "Stochastic risk assessment of water quality using advection dispersion equation and Bayesian approximation: A case study" *Human and Ecological Risk Assessment: An International Journal*, Taylor and Francis, 24(3): 567-589, 2018, 10.1080/10807039.2017.1394174.
- Kanhu Charan Patra, and Sachin Dhiman "Experimental study of embankment breach based on its soil properties" *ISH Journal of Hydraulic Engineering*, Taylor and Francis, 2018, 10.1080/09715010.2018.1474500.

- Kanhu Charan Patra, Brijesh Kumar, and Lakshmi V “Evaluating the uncertainties in the SWAT model outputs due to DEM Grid size and resampling techniques in a large Himalayan river basin” *Journal of Hydrologic Engineering*, American Society of Civil Engineers, 22(9), 2017, 10.1061/(ASCE)HE.1943-5584.0001569.
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- Kishanjit Kumar Khatua, and Kamalini Devi “An analytical method for over bank flow modeling” *ISH Journal of Hydraulic Engineering*, Taylor & Francis, 2017, 10.1080/09715010.2017.1398113.
- Kishanjit Kumar Khatua, Arpan Pradhan, and Sovan Sankalp “Variation of velocity distribution in rough meandering channels” *Advances in Civil Engineering*, Hindawi, 2018, 10.1155/2018/1569271.
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- Rabi Narayan Behera “Discussion of “bearing capacity of shallow strip foundations in sand under eccentric and blique loads” by R. Ganesh, Sunil Khuntia, and Jagdish Prasad Sahoo” *International Journal of Geomechanics*, American Society of Civil Engineers, 18(5): 1-2, 2018, 10.1061/(ASCE)GM.1943-5622.0001091.
- Rabi Narayan Behera, and Chittaranjan Patra “Ultimate bearing capacity prediction of eccentrically inclined loaded strip footings” *Geotechnical and Geological Engineering*, Springer, 1-52, 2018, 10.1007/s10706-018-0521-z.
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- Saleema Panda, and Manoranjan Barik "Large amplitude free flexural vibration of arbitrary thin plates using superparametric element" *International Journal of Dynamics and Control*, Springer, 5(4): 982-998, 2017, 10.1007/s40435-016-0275-5.
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- Sambit Kumar Beura, and Prasanta Kumar Bhuyan "Operational analysis of signalized street segments using multi-gene genetic programming and functional network techniques" *Arabian Journal for Science and Engineering*, Springer, 1-22, 2018, 10.1007/s13369-018-3176-4.
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- Subhashree Jena, Mahabir Panda, and Prasanta Kumar Bhuyan "Development of sulfur modified bituminous paving mixes containing sand as aggregates" *Advances in Civil Engineering Materials*, ASTM International, 7(3): 1-14, 2018, 10.1520/ACEM20170085.
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- Suresh Prasad Singh, and Meena Murmu "Effects of curing temperature on strength of lime-activated slag cement" *International Journal of Civil Engineering*, Springer, 15(4): 575-584, 2017, 10.1007/s40999-017-0166-y.
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- Uttam Kumar Mishra and Shishir Kumar Sahu “Parametric instability of beams with transverse cracks subjected to harmonic in-plane loading” *International Journal of Structural Stability and Dynamics*, World Scientific Publishing, 15(1), 2015, 10.1142/S0219455415400064.

Publications in Conferences

- Rabi Narayan Behera, and Lalatendu Bidyadhar Jena “Geotechnical characterization of Construction and Demolition (C&D) waste and its utilization” *Sustainable Materials and Technology for Better Future (SMBTF-2017)*, NIT Rourkela, Pages 25.
- Rabi Narayan Behera, Abhishek Kumar, and Chittaranjan Patra “Geotechnical and geoenviornmental characterization of TTPS pond ash and its utilization” *Indian Geotechnical Conference 2017, GeoNEst, IIT Guwahati*, Pages 96.
- Vamsi Alla, Suwendu Kumar Sasmal, Rabi Narayan Behera, and Chittaranjan Patra “Development of Alternate Liner Material by Blending Fly Ash, Local Soil and Bentonite” *Indian Geotechnical Conference 2017 GeoNEst, IIT Gawahati, IIT Guwahati, India*, Pages 95.
- Shishir Kumar Sahu, and Elluri Venkata Prasad “Free vibration analysis of fiber metal laminated plates” *Proceedings of International Conference on Theoretical, Applied, Computational and Experimental Mechanics IIT KGP*.
- Samaptika Mohanty, Nagendra Roy, and Suresh Prasad Singh “Strength characteristics of dispersive soil by using industrial by-products” *Contemporary Issues in Geoenvironmental Engineering*, Springer, Part of the Sustainable Civil Infrastructures book series (SUCI), Pages 293-302.
- Samaptika Mohanty, Nagendra Roy, and Suresh Prasad Singh “Treatment of dispersive soil by using flyash (FA) and Granulated Blast Furnace Slag (GGBS)” *Indian Geotechnical Conference 2017,GeoNEst, Indian Geotechnical Society, IIT Guwahati, India*, Pages 312.
- Asha Patel, and G. Prasannajyothei “Study on metakaolin modified concrete” *Sustainable Materials and Technology for better future (SMTBF-2017)*.
- Santosini Sahu, Pradip Sarkar, and Robin Davis P “Supplementary cementitious material from recycled CLC and AAC block dust” *International Conference on Advances in Construction Materials and Structures (ACMS - 2018)*, IIT Roorkee, Roorkee, Uttarakhand, India.
- Suresh Prasad Singh, Adiandra Mohanbabu, and Himanshu Namdeo “Stabilization of thick fly ash slurry using alkali activation” *Indian Geotechnical Conference 2017 GeoNEst, Guwahati, India*.
- Subhashree Samantasinghar, Suresh Prasad Singh, and Prasad Palsule “Synthesis and characterization of geopolymer grout material” *Indian Geotechnical Conference 2017 GeoNEst, IGC, Guwahati, India*.
- Soumya Prakash Sahoo, Suresh Prasad Singh, and Ritesh Das “Effects of delay time on plasticity and compaction characteristics of lime modified expansive soil” *Indian Geotechnical Conference 2017 GeoNEst, IGC, Guwahati, India*.
- Suryaleen Rout, and Suresh Prasad Singh “Effect of moulding moisture content on strength and hydraulic properties of pond ash-bentonite mixes” *Indian Geotechnical Conference 2017 GeoNEst, IIT Guwahati, India*.
- Aparupa Pani, and Suresh Prasad Singh “Stabilization of sedimented fly ash deposits using chemical columns” *Indian Geotechnical Conference 2017 GeoNEst, IIT Guwahati, Guwahati, India*.
- Pradip Sarkar, Robin Davis P, and Haran Pragalath D C “Seismic fragility curves using natural and synthetic ground motions” *IABSE Symposium Report, IABSE Symposium Vancouver 2017: Engineering the Future, Volume: 109, Issue 27, International Association for Bridge and Structural Engineering*, Pages 1266-1272.
- Sovan Sankalp, and Sanat Nalini Sahoo “Identification of urbanization growth trend for Ahmedabad city in India using remote sensing and GIS” *22nd International Conference on Hydraulics, Water Resources and Coastal Engineering (HYDRO-2017)*, Volume 3, Gujarat, India, Pages 1755-1763.
- Pratick Kumar Sethi, and Sanat Nalini Sahoo “Dynamics of urbanisation In Bangalore urban from landsat observations” *22nd International Conference on Hydraulics, Water Resources and Coastal Engineering (HYDRO-2017)*, Volume 3, Ahmedabad, India, Pages 1857-1865.
- Karinki Ravi Kiran, and Sanat Nalini Sahoo “Use of meteorological data for identification of drought” *22nd International Conference on Hydraulics, Water Resources and Coastal Engineering(HYDRO)*, Ahmedabad, Gujarat, India, 21-23 December 2017, Volume 3, Gujarat, India, Pages 2355-2360.

- Asit Kumar Dandapat, and Sanat Nalini Sahoo "Evaluation of different loss models for runoff estimation" 22nd International Conference on Hydraulics, Water Resources and Coastal Engineering (HYDRO-2017), 3, Ahmedabad, Gujarat, India, 2344-2354.
- Mohd.Abdul Saleem, and Sanat Nalini Sahoo "A review on artificial Neural Networks for streamflow prediction" 22nd International Conference on Hydraulics, Water Resources and Coastal Engineering (HYDRO-2017), Volume 2, Pages 1249-1257.
- Vishal Sagar Navane, and Sanat Nalini Sahoo "A review of integrated RS and GIS techniques in ground water potential zone mapping" 22nd International Conference on Hydraulics, Water Resources and Coastal Engineering (HYDRO)-2017, Volume 1, Ahmedabad, Gujarat, Pages 246-255.
- Biswa Manaschintan Sahoo, and Sanat Nalini Sahoo "Effect of land use and land cover change on runoff characteristics in Mumbai city" ICGCE-2018.
- Subhashree Jena, Mahabir Panda, and Prasanta Kumar Bhuyan "Influence of mix parameters on development of sulphur modified bituminous paving mixes with sand" Materials for Sustainable Infrastructure, Springer, Sustainable Civil Infrastructures book series (SUCI), Egypt, Pages 65-79.
- Mahabir Panda, Shubhakanta Barik, and Prasanta Kumar Bhuyan "A study on use of locally available moorum in pavement base and sub-base" International Conference on Highway Pavements and Airfield Technology 2017, American Society of Civil Engineers, Pages 360-369.
- Amiya Pandit, and Kishore Chandra Biswal "Sloshing response of partially filled rectangular tank under periodic horizontal ground motion" 3rd International Conference on Design, Analysis, Manufacturing and Simulation (ICDAMS 2018), Volume 172, EDP Sciences, MATEC Web of Conferences, Pages 1-5.
- Somesh Jena "Characterisation of coke oven wastewater" IOP Conference Series: Earth and Environmental Science, Volume 167, IOP Publishing, IOP Conference Series: Earth and Environmental Science, 012011, Pages 1-6.
- Sambit Kumar Beura, and Prasanta Kumar Bhuyan "Quality of bicycle traffic management at urban road links and signalized intersections operating under mixed traffic condition" Transportation Research Board 97th Annual Meeting compendium of papers CD-ROM, January 7-11, 2018, Washington, DC, Transportation Research Board.
- Suprava Jena, Abhishek Chakraborty, and Prasanta Kumar Bhuyan "Performance assessment of urban streets addressing improvement issues for automobile mode of transport" Transportation Research Board 97th Annual Meeting, January 7-11, 2018, Washington, DC, Transportation Research Board, Washington, DC.
- Rima Sahani, Majji Sai Priya, and Prasanta Kumar Bhuyan "Application of gap acceptance concept to investigate crossing behavior of pedestrians at un-signalized intersections" 4th Conference of Transportation Research Group of India (CTRG), 17-20 December 2017, Mumbai, India, Transportation Research Group of India.
- Suprava Jena, Abhishek Chakraborty, and Prasanta Kumar Bhuyan "Determining urban street levels of service in developing cities: An effective solution for sustainability of automobile users" 4th Conference of Transportation Research Group of India (CTRG), 17-20 December 2017, Mumbai, India, Transportation Research Group of India.
- Ashish Kumar Patnaik, L Ankit Agarwal, Prasanta Kumar Bhuyan, and Dindukurthi Prasanth Kumar "Delay models for roundabouts under mixed traffic flow conditions in developing countries" 4th Conference of Transportation Research Group of India (CTRG), 17-20 December 2017 Mumbai, India, Transportation Research Group of India.
- Sambit Kumar Beura, Veera Leela Manusha, Chellapilla Haritha, and Prasanta Kumar Bhuyan "Defining bicycle levels of service criteria using levenberg-marquardt and self-organizing map algorithms" 4th Conference of Transportation Research Group of India (CTRG), 17-20 December 2017, Mumbai, India, Transportation Research Group of India.
- Sachin Kumar, and Kanhu Charan Patra "Evaluation of empirical equations for dam breach parameters and its application in Indian dam failure cases" 37th IAHR (International Association of Hydraulic Research) World Congress, IAHR Kuala Lumpur, Malaysia.
- Kanhu Charan Patra, Janaki Ballav Swain, and Renu Dawoochund "Adequacy of IHACRES model on streamflow resulting from land use changes in a Mauritius catchment" 22nd International Conference on Hydraulics, Water Resources and Coastal Engineering (HYDRO), Ahmedabad, India.
- Kanhu Charan Patra, and Sachin "Overtopping breach formation process of cohesive dam built with different moisture content" 3rd National Dam Safety Conference, IIT Roorkee, Roorkee, Uttarakhand.

- Kanhu Charan Patra, and Ritusnata Mishra “Dam breach modelling and the propagation of flood waves in the downstream reaches using mike-11” Hydro-2017 Conference (22nd International Conference on Hydraulics, Water Resources and Coastal Engineering), Indian Society of Hydraulics, Ahmedabad, India.

Paper Accepted for Publication

- Beura, S.K. and Bhuyan, P. K. (2018) “Quality of Bicycle Traffic Management at Urban Road Links and Signalized Intersections under Mixed Traffic Conditions”, Transportation Research Record, Transportation Research Board, SAGE publication.
- Jena, S. Pradhan, D.K. and Bhuyan, P. K. (2017) “Modeling Automobile Users’ Response Pattern in Defining Urban Street Level of Service”, Transport, Taylor and Francis Publications.
- Beura, S.K. and Bhuyan, P. K. (2018) “Defining bicycle levels of service criteria using Levenberg-Marquardt and self-organizing map algorithms”, Transportation in Developing Economies, Springer Publications.

Books/Book Chapter

- Saleema Panda, and Manoranjan Barik “Nonlinear transient vibration analysis of arbitrary thin plates using superparametric element” Facing the Challenges in Structural Engineering, Springer, Sustainable Civil Infrastructures book series (SUCI), 366-372.
- Aparupa Pani, and Suresh Prasad Singh “Effect of temperature on strength and microstructure of lime stabilized flyash” Contemporary Issues in Geoenvironmental Engineering, Springer, Sustainable Civil Infrastructures book series (SUCI), 101-114, 8.
- Suryaleen Rout, and Suresh Prasad Singh “Assessing the suitability of compacted bentonite-pond ash mixes as landfill liner” Contemporary Issues in Geoenvironmental Engineering, Springer, Sustainable Civil Infrastructures book series (SUCI), 314-327, 26.
- Suresh Prasad Singh, Subhashree Samantasinghar, and Dummur Sindhuja “Stabilization of red mud using ground granulated blast furnace slag by geopolymerization technique” Contemporary Issues in Geoenvironmental Engineering, Springer, Sustainable Civil Infrastructures book series (SUCI), 338-350.
- Aparupa Pani, and Suresh Prasad Singh “Influences of curing conditions on strength and microstructure of lime-amended fly ash Bearing Capacity of Roads, Railways and Airfields” Proceedings of the 10th International Conference on the Bearing Capacity of Roads, Railways and Airfields (BCRRA 2017), June 28-30, 2017, Athens, Greece, CRC Press, 1083-1090.
- Subhashree Jena, Mahabir Panda, and Prasanta Kumar Bhuyan, ‘Influence of mix parameters on development of sulphur modified bituminous paving mixes with sand’, in Materials for Sustainable Infrastructure, sustainable civil infrastructures book (SUCI), Egypt, 10.1007/978-3-319-61633-9_5.

Patents

- Title: Portable Steam Distribution System Consisting of a Flexible Jacket for Steam Curing
- Inventors: Sidharth Kumar Patra, Dr. Robin Davis P
- Patent Application No. 201831000877A (02/02/2018)

Awards Received/Distinction Achieved

By Faculty:

- Syed Mumtaz Ali Memorial award to Prof S K Sahu, from Institution of Engineers, Odisha state center, Bhubaneswar for the paper titled “Modal analysis of delaminated composite plates exposed to thermal loading

By Students:

- Syed Mumtaz Ali Memorial award to Mr H S Panda from Institution of Engineers, Odisha state center, Bhubaneswar for the paper titled “Modal analysis of delaminated composite plates exposed to thermal loading

Technical Association / Societies

- Dr. Pradip Sarkar is nominated as Fellow of The Institution of Engineers (India) on 31.11.2017 (F-1223668) and authorized as Chartered Engineer (India) by the Institution

Seminar, Symposia, Winterschool, Short Term Course / Workshops Conducted by Department, Participation by Faculty Members

- Prof. S. K. Sahu organized Seminar on “Sustainable Materials and Technology for Better Future” on 11 Nov 2017 at NIT Rourkela.
- Prof. S. K. Sahu organized Seminar on “Hi-Tech and Value Addition to Crop Production in Rourkela” on 29 Apr 2018 at Institution of Engineers, Rourkela.
- Prof. S. K. Sahu organized Seminar on “Earthquake resistant analysis and design of structures in Bhubaneswar” on 26 May 2018 at Institution of Engineers, Bhubaneswar.
- Prof. Pradip Sarkar attended “39th IABSE Symposium: Engineering the Future” during September 19-23, 2017 at Vancouver, Canada.
- Prof. M. Panda attended and presented a technical paper ‘A study on use of locally available moorum in pavement base and sub-base’, in International Conference on Highway Pavements and Airfield Technology 017, August, 10.1061/9780784480939.031, August 27-30, 2017.
- Prof. M. Panda attended and presented a technical paper ‘A Simple Approach for Modification of RAP Bitumen’ by Siddharth Purohit & Mahabir Panda, presented (also published online): International Conference: Advances in Materials and Pavement Performance Prediction April 16-18 2018, Doha, Qatar, Organised by Texas A&M University.
- Prof. M. Panda attended and presented two technical papers in Workshop on ‘Alternative Materials and New Technologies for Construction of Rural Roads’, June 27-28, 2018, IIT Bhubaneswar.
- Prof. M. Panda attended and presented one technical paper in International Road Federation 18th World Road Meeting 2017 ‘Safe Roads and Smart Mobility: The engines of Economic Growth, Greater NOIDA, India, Nov. 14-17, 2017.

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI /Co-PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
A Study on Utilization of Fly-ash and slag in Road Pavement	Works Dept., Govt. of Odisha	Prof. M. Panda and Prof. P. K .Bhuyan	4464000	2015	2018
Fly-ash utilization in structural applications for sustainable construction	Works Dept., Govt. of Odisha	Prof S. K. Sahu	3252000	2015	2018
Development of a relationship between TIA and EIA for urban Indian catchments	SERB, DST	Dr. (Mrs) S. N. Sahoo	27.12	Sep 2016	Sep 2019
Empirical Studies on Level of Service Sensitivity of Railway Footbridges in India and Prediction of Some Safety Measures	SERB, DST	Dr. U.Chattaraj	25.87	21-10-2014	02-10-2017

Consultancy Services

Sponsor Address	Title of the Project	Faculty Name
State Bank of India	Evaluation of Structural Safety of Residential Buildings	Pradip Sarkar and Robin Davis P

Sponsor Address	Title of the Project	Faculty Name
Dineshchandra R Agrawal Infracon Pvt. Ltd.	Structural Design Proof-check of ROB and its Approaches	Pradip Sarkar and Robin Davis P
Katira Construction Limited	Vetting of Structural Drawings and Design of S+4 Apartment for BDA	Pradip Sarkar and Robin Davis P
IRCON International Limited	Structural Vetting of a Steel Bridge of Span 1x30.5m (Br. 16A)	Robin Davis P, K. K. Khatua and Pradip Sarkar
IRCON International Limited	Structural Design Vetting of a Through Steel Bridge of Span 3x30.5m	Pradip Sarkar, K. K. Khatua and Robin Davis P
IRCON International Limited	Proof-checking and Structural Vetting of Proposed Through Steel Girder Bridge (Br. 11) of Span 1x45.7m + 1x12.2m	Pradip Sarkar, K. K. Khatua and Robin Davis P
Dineshchandra R Agrawal Infracon Pvt. Ltd.	Structural Design Proof-checking of ROB on NH-60 in the State of West Bengal	Pradip Sarkar and Robin Davis P
IRCON International Limited	Structural Design Proof-checking of Steel Girder Bridge (Br. 8) for NTPC Dharlipalli Project	Pradip Sarkar, Robin Davis P and KK Khatua
IRCON International Limited	Structural Design Proof-checking of Steel Girder Bridge (Br. 16) for NTPC Dharlipalli Project	Pradip Sarkar, Robin Davis P and K. K. Khatua
NTPC-SAIL Power Company Limited	Condition Assessment of Load Bearing Masonry Building at Rourkela	Pradip Sarkar and Robin Davis P
NRRDA	Scrutiny of DPR of roads under PMGSY Scheme	M. Panda and others
NHAI	Safety Audit of Panikoli-Remuli Section of NH- 215	M. Panda and P. K. Bhuyan
Works Dept., Govt. of Odisha	Quality Testing of Identified Piles for ROB at Jatani	Robin Davis and Pradip Sarkar
NTPC Darlipali, Sundargarh	Design of Coarse filterers based on approved sand filter	Prof.C.R.Patra

Institutional Programme Support / Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date

List of Laboratories Developed

1. Structural Engineering Laboratory
2. Structural Dynamics Laboratory
3. Highway and Concrete Laboratory
4. Pavement Materials Laboratory
5. Traffic Engineering Laboratory
6. Geotechnical Engineering Laboratory (UG)
7. Geotechnical Engineering Laboratory (PG)
8. Environmental Engineering Laboratory
9. Surveying Laboratory
10. Remote Sensing Laboratory
11. Material Testing Laboratory
12. Hydraulic Machine Laboratory
13. Fluid Mechanics Laboratory
14. Computer Laboratory-I
15. Computer Laboratory-II

Ph.D. Degrees Awarded by the Department

Name of the Student	Title of Thesis	Supervisor
Brijesh Kumar	Uncertainties in the Hydrological Modelling using Remote Sensing Data over the Himalayan Region	Prof. K. C. Patra
Rima Sahani	Level of Service Criteria for Pedestrian Facilities in Urban Indian Context	Prof. P. K. Bhuyan
Lasyamayee Garanayak	Development & Characterization of Alkali-Activated Red Mud-Slag Cementitious Material	Prof. S. K. Das
Bandita Naik	Flow Analysis of Compound Channels with Converging Flood Plains	Prof. K. K. Khatua
Naga Chaitanya Kavuri	Source Apportionment and Forecasting of Aerosol of A Steel City - Case Study of Rourkela	Prof. K. K. Paul, Prof. N. Roy

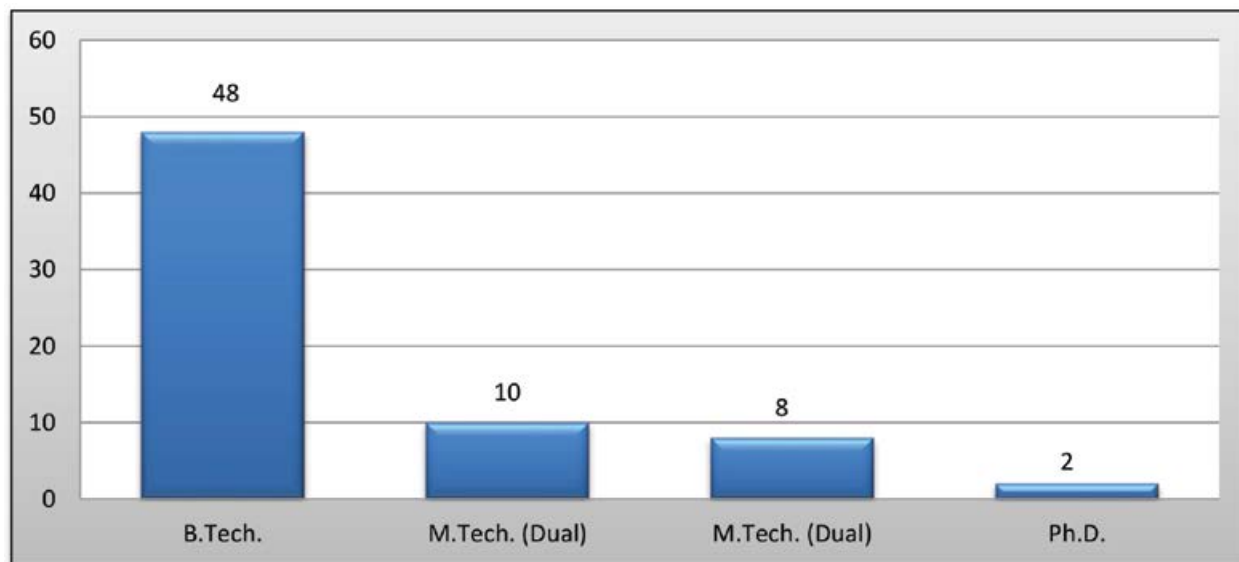
M.Tech. Research Degrees Awarded by the Department

Name of the Student	Title of Thesis	Supervisor
Sipra Barik	Production of Biodiesel from Food Waste	Prof. K. K. Paul
Neha Shukla	Utilization of Moringa Oleifera for Reuse of Treated Domestic Wastewater	Prof. K. K. Paul
Prateek Kumar Dhir	Seismic Performance Assessment of RC Multi-Storeyed Gravity Load Designed Frames	Prof. R Davis P, Prof. P Sarkar

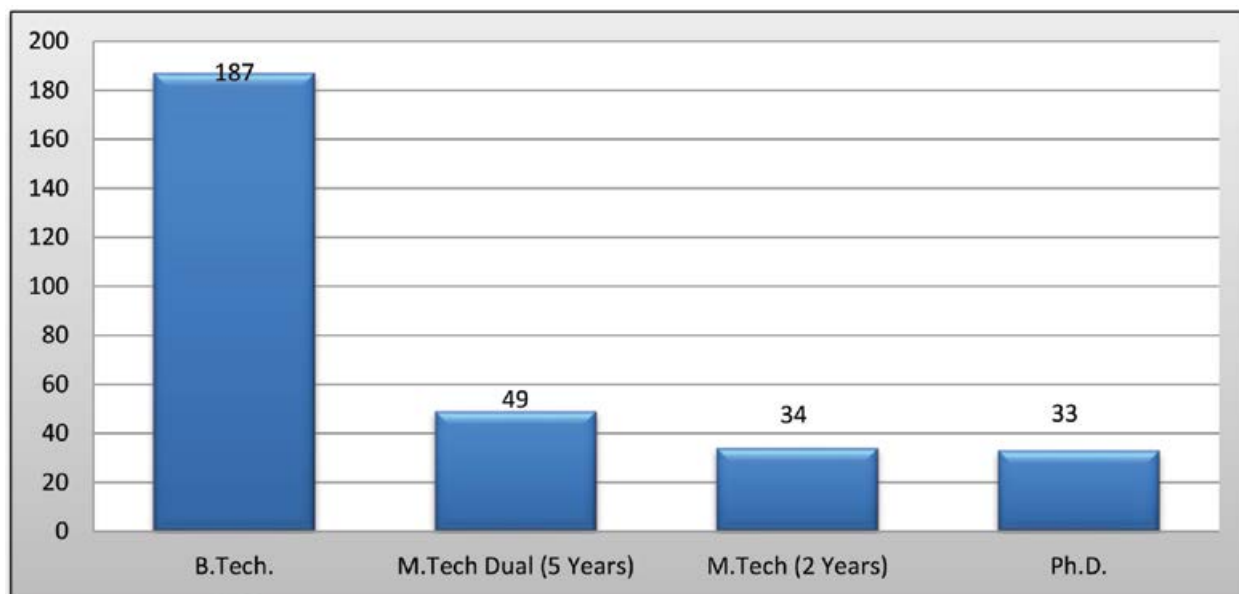


Department of CHEMICAL ENGINEERING

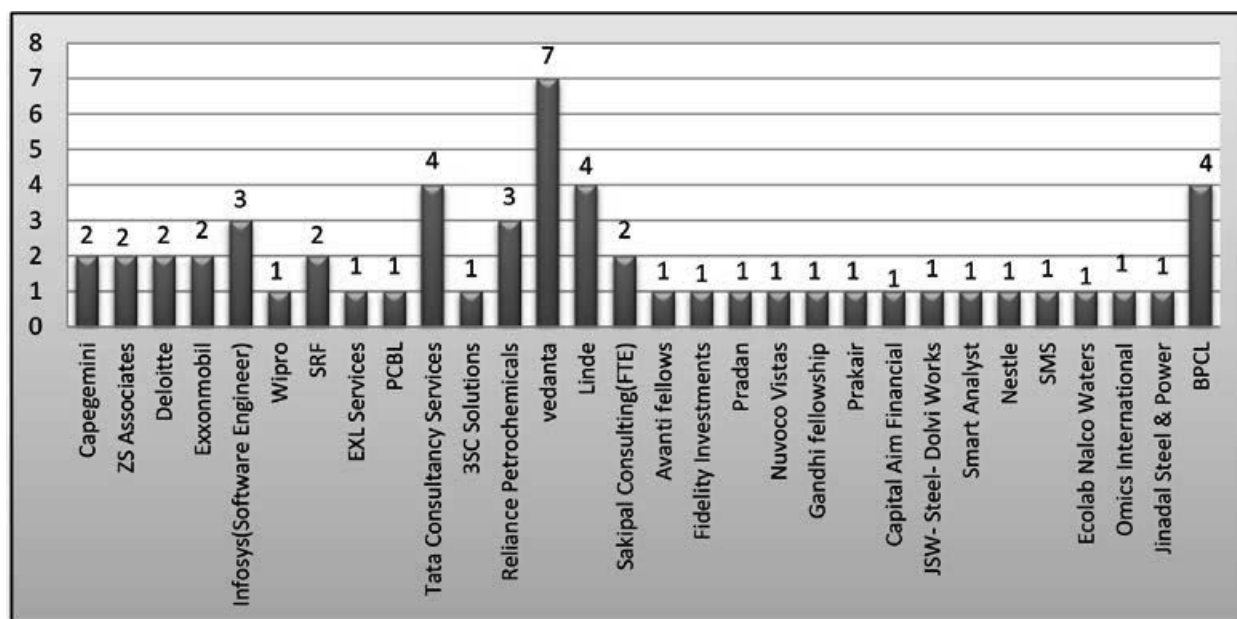
Student Intake in 2017-18



Total Student Strength 2017-18



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof. (Ms.) Madhushree Kundu (mkundu@nitrkl.ac.in) Professor, and HOD, Ph. D. (IIT, Kharagpur) Fluid Phase Equilibrium, Process Modeling; Simulation & Control, Chemometrics
2	Prof. Raghubansh Kumar Singh (rksingh@nitrkl.ac.in) Professor, Ph. D. (Sambalpur University) Fluidization Engg, Thermodynamics and Chemical Reaction Engineering, Bio Fuels
3	Prof. (Ms.) Abanti Sahoo (asahoo@nitrkl.ac.in) Professor, Ph. D. (Sambalpur University) Fluidization and Bioenergy
4	Prof. Santanu Paria (sparia@nitrkl.ac.in) Professor, Ph. D. (IIT, Bombay) Nanotechnology and Interfacial phenomena
5	Prof. (Ms.) Susmita Mishra (smishra@nitrkl.ac.in) Professor, Ph. D. (IIT, Kharagpur) Biochemical Engineering, Adsorption, Environmental Engineering
6	Prof. Basudeb Munshi (basudeb@nitrkl.ac.in) Associate Professor, Ph. D. (BITS, Pilani) Separation Technology (Reactive Distillation), Process Control and CFD
7	Prof. Hara Mohan Jena (hmjena@nitrkl.ac.in) Assistant Professor, Ph. D. (NIT, Rourkela) Process Dynamics and Control, Multiphase Fluidization
8	Prof. Arvind Kumar (arvindkumar@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Roorkee) Industrial Pollution Abatement, Disaster Management, Petroleum Refining
9	Prof. Pradip Chowdhury (chowdhuryp@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Guwahati) Adsorptive gas separation and energy storage; Photocatalysis and polymer degradation; Membrane separation; Modeling, simulation and conceptual designing of distillation processes

Sl. No.	Name & Specialization
10	Prof. Sujit Sen (sensujit@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Kharagpur) Heterogeneous Catalysis, Green Technology and Engineering. Synthesis of fine chemicals, zeolites
11	Prof. Akhilesh Kumar Sahu (sahuak@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Kanpur) Thin-film Dynamics, Interfacial Fluid Mechanics, Non-Newtonian Flows, Computational Fluid Dynamics
12	Prof. Soumya Sanjeeb Mohapatra (mohapatras@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Kharagpur) Heat transfer operations
13	Dr. Krunal M. Gangawane (gangawanek@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Roorkee) CFD, Lattice Boltzmann Method, Heat Transfer in Enclosures, non-Newtonian rheology, Magneto-hydrodynamics
14	Dr. Biswajit Saha (sahab@nitrkl.ac.in) Assistant Professor, Ph.D (NUS Singapore) Biodegradable and wearable electronics, Biosensor, Microfluidic device fabrication, Smart farming.
15	Dr. Naresh Thota (thotan@nitrkl.ac.in) Assistant Professor, Ph.D (NUS Singapore) Molecular Simulations, Process Simulations, Water Desalination, Drug Delivery

Publication

Publications in Journals

- Suneeta Kumari, Srihari Kumar Annamareddy, Abanti Sahoo, Prospectives of Fishery waste-Chitosan for waste water treatment, International Journal of Advances in Science Engineering and Technology, ISSN(p): 2321 –8991, ISSN(e): 2321 –9009 Vol-6, Iss-1, Spl. Issue-1 Feb.-2018.
- Suneeta Kumari , Srihari Kumar Annamareddy and Abanti Sahoo, Recent Advances in the Recovery and Improvement of Functional Chitosan from Fish Processing, International journal of Advance Research in Science and Engineering, Vol 7,ISSN 2319-8354, April-2018
- Anup Kumar Swain, Abanti Sahoo, Hara Mohan Jena and Hemalata Patra, Industrial wastewater treatment by Aerobic Inverse Fluidized Bed Biofilm Reactors (AIFBBRs): A review, Journal of Water Process Engineering 23 (2018) 61–74
- Harjeet Nath and Abanti Sahoo, “Red Mud and Its Applicability in Fluoride Abatement”, Materials Today: Proceedings 5 (2018) 2207–2215, Conference on Materials Science (ICMS2017). <https://doi.org/10.1016/j.matpr.2017.09.220>
- Kundu, M., Sikdar, S. (2017). A Review on Detection and Abatement of Heavy Metals. ChemBioEng.Reviews, Vol. 4, No. 6, 1–13 (DOI: 10.1002/cben.201700005).
- Kundu M. (2017). The Changing Paradigm in Sour Gas Treating Processes. Recent Advances in Petrochemical Science (RAPSCI), Vol. 3(2), (RAPSCI.MS.ID.555608 (2017)).
- Kundu, M., and S. Adak. Vapour-liquid equilibrium and physicochemical properties of novel aqueous blends of (2-Diethylaminoethanol+ Piperazine) for CO₂ appropriation. Journal of Chemical & Engineering Data, 2017, 62 (7), pp 1947–1937. DOI: 10.1021/acs.jced.6b00856
- Kundu, M., and Damarla, Seshu, K. (2017). Generalized mathematical model of chronic Hepatitis C infection, Journal of Fractional Calculus and Applications. Vol. 8(2), pp. 1-19 (DOI: 10.1515/fca-2015-0074).
- Akanksha, Singh, A.K., Mohanty, D., Jena, H.M., 2017. Characterization of lignite for Underground Coal Gasification in India; Energy Sources, Part: A Recovery, Utilization, and Environmental Effects 39:16, 1762-1770.
- Patil, Sangram S., Jena, Hara Mohan, Mishra, Susmita, 2018. Kinetic modeling and metabolite identification of dimethyl phthalate biodegradation by Bacillus sp. KS1 isolated from municipal wastewater contaminated soil. Desalination and Water Treatment, 102, 349–358.
- Swain, Anup Kumar, Sahoo, Abanti, Jena, Hara Mohan, Patra, Hemlata. 2018. Industrial wastewater treatment by Aerobic Inverse Fluidized Bed Biofilm Reactors (AIFBBRs): A review, Journal of Water Process Engineering. 23, 61-74.

- Sivamani Sivalingam, Sujit Sen, "Swift sono-hydrothermal synthesis of pure NaX nanocrystals with improved sorption capacity from industrial resources", Accepted in Appl. Surf. Sci. DOI: 10.1016/j.apsusc.2018.08.019. [In Press].
- Sivamani Sivalingam, Sujit Sen, "Rapid ultrasound assisted hydrothermal synthesis of highly pure nanozeolite X from Fly ash for efficient treatment of industrial effluent", Chemosphere, 2018, 210, 816-823.
- Sivamani Sivalingam, Sujit Sen, "Optimization of synthesis parameters and characterization of coal fly ash derived microporous zeolite X", Appl. Surf. Sci. 2018, 455, 903-910.
- Ujjal Mondal, Sujit Sen, "Highly Selective Room Temperature Monoreduction of Dinitro-arenes by Hydrogen Sulfide under Liquid-Liquid Biphasic Catalysis", Int J Chem Kinet. 2018, 50(1), 15-30.
- Ujjal Mondal, Sujit Sen, "Multivariate Analysis in Selective Nitroacetophenone Conversion by Hydrogen Sulfide under Phase Transfer Catalysis", Org. Process Res. Dev. 2017, 21 (1), 23-30.
- Vikas Kumar, Raghubansh K Singh, Pradip Chowdhury, "Efficient Extraction and Recovery of Lignosulfonate using Sunflower oil as green solvent in liquid membrane transport: Equilibrium and kinetic study," Journal of Industrial and Engineering Chemistry (2018) (doi: 10.1016/j.jiec.2018.06.021) [In press].
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- Shaleka Agarwal, Neerja Shukal and Akhilesh K. Sahu, “Effect of Surface Topography and Rotational Speed on Thin-Liquid-Film Flow over a Cylinder”, *Chemference* 2018, May 19-20, 2018, IIT Bombay.
- Abanti Sahoo, N. V. Phanichandra and S. S. Mohapatra, “Utilization of Waste Plastic-Wrappers for the production of Potential Activated Carbon”, International Conference on Materials, Applied Physics and Engineering (ICMAE-2018) held during 3-4th June in Indore.
- Suneeta Kumari , Srihari Kumar Annamareddy and Abanti Sahoo, Recent Advances in the Recovery and Improvement of Functional Chitosan from Fish Processing, International Conference on Recent Innovations in Science and Engineering, 1st-2nd, April-2018 at Biddha Institute of Technology, Gida, Gorakhpur.
- A Sahoo, G V V Gowthami and S S Mohapatra, Preparation and characterization of chromium-copper supported biogenic catalyst from rice husk, ICESE-2018, held during 11-13th March, 2018 in Barcelona, SPAIN.

- Abanti Sahoo, A Keynote Paper on “Hydrogen from Biomass” National Symposium on “Energy Conservation and Renewable Energy Application in Industries and Transportation”, (ECREAIT – 2017), organized by NRDF, at Bhubaneswar, during 26-27th October, 2017.
- R.K. Singh, Amit U, Suresh Ch “Study of various pretreatments on waste jute caddies for the production of ethanol”, International conference on Life sciences ICLS-2018, IRAJ International conference 1 April 2018 Jodhpur Page No. 60 ISBN: 9788192958018.

Paper Accepted for Publication: N.A.

Books

- Madhusree Kundu, Palash Kundu, Seshu Kumar Damarla (2017). A Chemometric Approach to Monitoring: Product Quality Assessment, Process Fault Detection and Miscellaneous Applications, CRC Press, Taylor & Francis Group (Published 3 October, 2017).
- Madhusree Kundu, Seshu Kumar Damarla (2017). Fractional Order Processes: Simulation, Identification, and Control, CRC Press, Taylor & Francis Group (In press).
- Abanti Sahoo, ‘Wastewater Treatment by Inverse Fluidization Technology’ Chapter-4, “Innovative Technologies For The Treatment Of Industrial Wastewater : A Sustainable Approach”, © 2018 by Apple Academic Press, Inc., Exclusive worldwide distribution by CRC Press, a member of Taylor & Francis Group.

Book Chapter: N.A.

Patent:

- Title: An Electronic Tongue based Arsenic Quantifier.
- Application number: 201831020756, dated 4/6/2018.
- Docket number: 19458.
- Applicants: Sujeevan Kumar Agir and Madhusree Kundu

Awards Received / Distinction Achieved: N.A.

By Faculty:

- SERS (Scientific & Educational Research Society Meerut U.P.) Environmental Protection Research Award-2018 for Prof. Arvind Kumar

By Students:

- Neerja Shukla won best oral presentation award in her session at Chemference 2018 held at IIT Bombay.

Technical Association / Societies

- **H. M. Jena**;- Honorary Regional Secretary of IICChE Rourkela Regional Centre, Executive committee member of the Institution of Engineers (India) Rourkela Local Centre
- **S. Mishra**;- Honorary Treasurer of IICChE Rourkela Regional Centre
- **S.Sen**;- Student Chapter Coordinator, IICChE Rourkela Regional Centre
- Faculty Advisor of AIChE Student Chapter, NIT Rourkela

Seminar, Symposia, Winter School, Short Term Course / Workshops Conducted by Department, Participation by Faculty Members

- GIAN course on Bigdata Applications in Process Operations: Modeling, Monitoring and Control.

PI: Madhusree Kundu

Foreign Expert: Prof. Lakshminarayanan, Samavedham, Department of Chemical and Biomolecular Engineering Department, National University of Singapore (NUS ChBE).

Duration: June 25 – 30, 2018

Sponsored by: MHRD

- GIAN course on Process Safety Engineering

PI: Arvind Kumar and Co-PI: Prof. Debi Prasad Tripathy

Foreign Expert: Prof. Ronald J. Willey, Vice Chair, Department of Chemical Engineering at Northeastern University, Boston, MA, USA.

Duration: May 28 – June 01, 2018

Sponsored by: MHRD.

- 13th Annual Session of the Students' Chemical Engineering Congress (SCHEMCON-2017), Oct 7-8, 2017, Department of Chemical Engineering, NIT Rourkela

Convenor: Prof. H. M. Jena and Prof. Sujit Sen.

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Development of Yolk/Shell or Movable Core/shell Type Novel Nanocatalysts for the Production of Methanol via Photochemical Reduction of CO ₂	BST-SERB	Santanu Paria	38	Sep 2016	Aug 2019
Fundamental Investigations of Cationic Surfactants with Bitumen Product Components	Shell India Pvt. Ltd., Bangalore	Santanu Paria	25	Aug 2014	Jul 2019

Consultancy Services

Sponsors Address	Title of the Project	Faculty Name
Ferro Alloy mineral research division, Tata Steel Work Order No. 3000114379/132, Dated 25/9/2017 Total Budget: 94000 INR	To test the feasibility of destructive crystallization pressure concept in the laboratory	Madhusree Kundu

Institutional Programme Support / Centre of Excellence: N.A.

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date

List of Laboratories Developed : N.A.

Sl. No.	Name of the Laboratories

Ph.D. Degrees Awarded by the Department: N.A.

Name of the Student	Title of Thesis	Supervisor

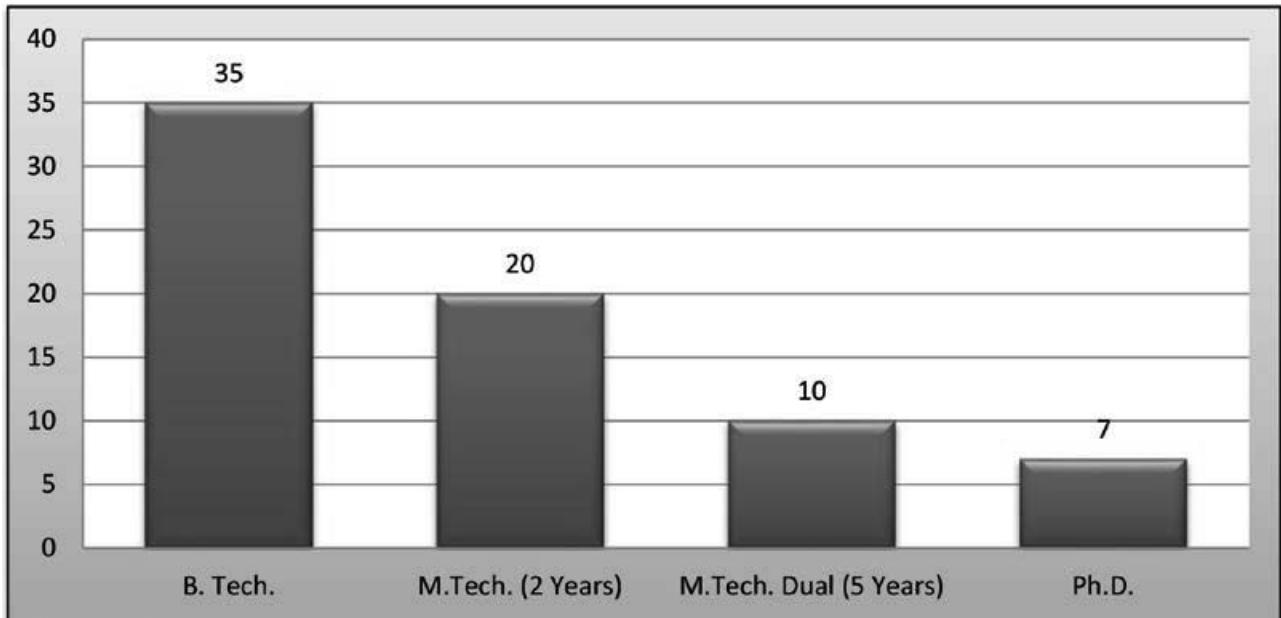
M.Tech. Research Degrees Awarded by the Department: N.A.

Name of the Student	Title of Thesis	Supervisor

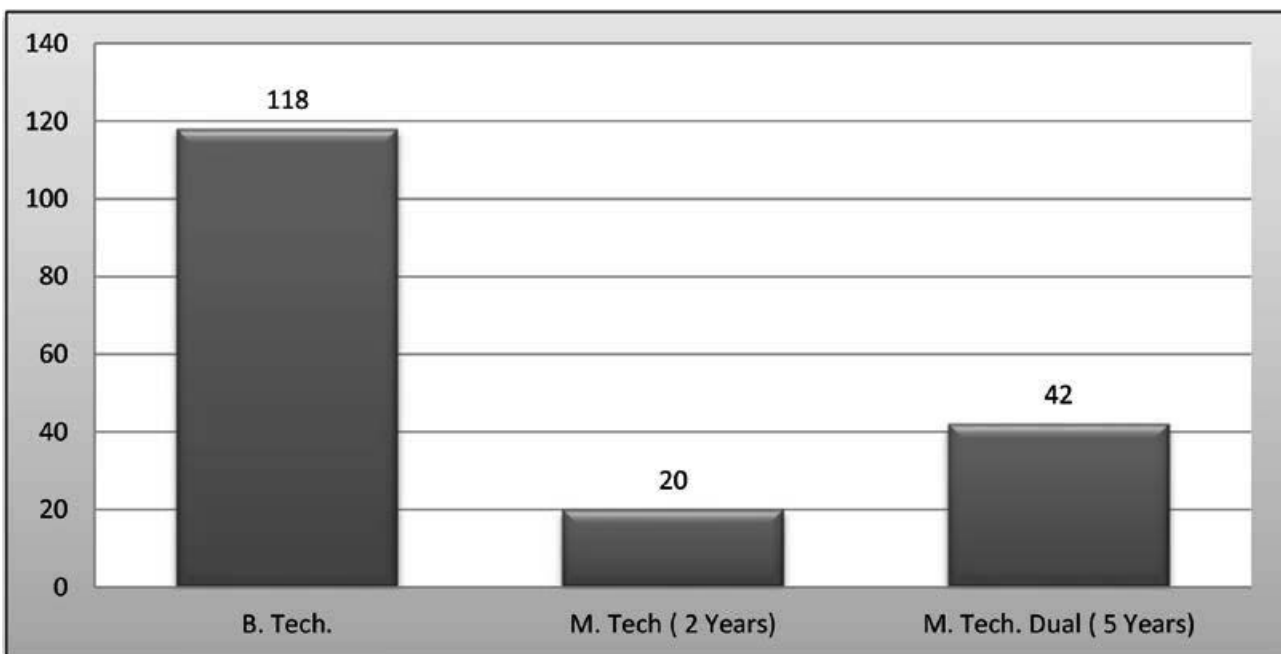


Department of CERAMIC ENGINEERING

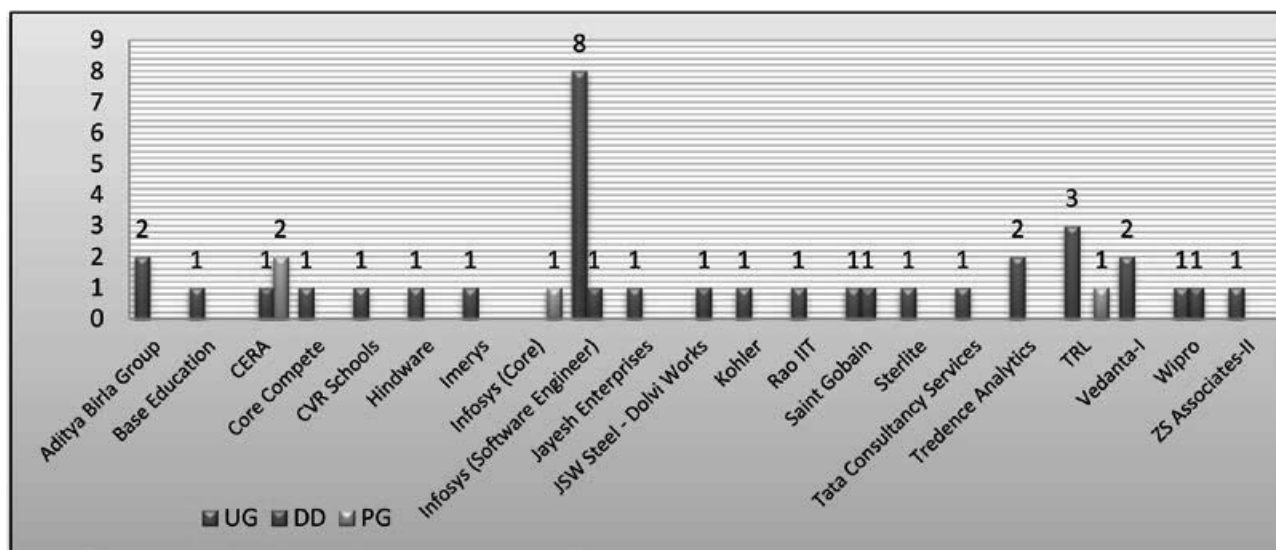
Student Intake 2017-18



Total Student Strength



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof. Santanu Bhattacharyya, (santanub@nitrkl.ac.in) Professor, Ph.D. (IIT Kanpur) Ceramic Processing, Green shape forming, Structural ceramics
2	Prof. Japes. Bera (jbera@nitrkl.ac.in) Professor, Ph.D. (Calcutta University) Ferrite, Ferroelectrics
3	Prof. Ritwik Sarkar, (sarkar[at]nitrkl.ac.in) Professor, Ph.D. (Jadavpur University) Refractory, Castables, Bioceramics, Industrial Solid Waste Management
4	Prof. D. Sarkar, (dsarkar@nitrkl.ac.in) Professor, Ph.D. (NIT Rourkela) Structural Ceramics
5	Prof. Swadesh K. Pratihara, (skpratihara@nitrkl.ac.in) Associate Professor, Ph.D. (Jadavpur University) Electroceramics, Solid Oxide Fuel Cells
6	Prof. Bibhuti B. Nayak, (bbnayak@nitrkl.ac.in) Associate Professor, Ph.D. (IIT Bombay) Phosphor materials, Porous materials, Ferromagnetic, Magnetic-dielectric composite materials, Solid-oxide fuel cell, Nanostructured materials
7	Prof. Ranabrata Mazumder, (ranabrata@nitrkl.ac.in) Associate Professor, Ph.D. (Jadavpur University) Electroceramics
8	Prof. Sumit Kumar Pal, (skpal@nitrkl.ac.in) Associate Professor, Ph.D. (Jadavpur university) Glass and Glass Ceramic
9	Prof. Shantanu K. Behera, (beheras@nitrkl.ac.in) Associate Professor, Ph.D. (Lehigh University, USA) Grain-Boundary Engineering, Li-ion Batteries, Graphene, Polymer Derived Ceramics
10	Prof. (Mrs.) Sunipa Bhattacharyya, (bhattacharyyas@nitrkl.ac.in) Assistant Professor, Ph.D. (Jadavpur University) Processing and Characterisation of ceramic materials, Structural ceramic, Ceramic adsorbents
11	Prof. Sudip Dasgupta, (dasguptas@nitrkl.ac.in) Assistant Professor, Ph.D. (Washington State University, USA) Biomaterials and Drug delivery

Sl. No.	Name & Specialization
12	Prof. Arindam Paul, (paula@nitrkl.ac.in) Assistant Professor, Ph.D. (IISC Banagalore) Structural Ceramics, Mechanical Behavior, Composite Materials, Non-equilibrium Processing of Ceramics
13	Prof. Partha Saha, (sahap@nitrkl.ac.in) Assistant Professor, Ph.D. (The University of Alabama, USA) Light Metal, Ceramics, Batteries, Nanomaterials Synthesis
14	Prof. Arun Chowdhury (arunc@nitrkl.ac.in) Assistant Professor, Ph.D. (NIT Rourkela) Electroceramics

Publication

Publications in Journals

- Rupita Ghosh, Ritwik Sarkar, Soumitra Paul, Hydroxyapatite based machinable bioceramic: an in depth investigation on drilling parameters and bioactivity, *Journal of Alloys and Compounds*, **723** [5] 43–49 (2017).
- Ritwik Sarkar and Megha Acharya, Sintered porous balls from rice husk for thermal insulation in iron and steel industries, *Ironmaking and steelmaking : Processes, Products and Applications*, **44** [9] 649-655 (2017).
- Satyananda Behera and Ritwik Sarkar, Formation of Mg_2C_3 phase in N220 Nanocarbon containing Low Carbon MgO-C Composition, *Bulletin of Materials Science*, **40** [5] 939 – 43 (2017).
- Akhilesh K Singh and Ritwik Sarkar, High alumina castables: a comparison among various sol-gel bonding systems, *Journal of the Australian Ceramic Society*, **53** [2] 553-567 (2017).
- Pallavi Suhasinee Behera, Sunipa Bhattacharyya, Ritwik Sarkar, Effect of citrate to nitrate ratio on the sol-gel synthesis of nanosized $\alpha-Al_2O_3$ powder, *Ceramics International*, **43** [17] 15221-15226 (2017).
- Ritwik Sarkar and Manish Mallick, Formation and densification of mullite through solid oxide reaction technique using commercial grade raw materials, *Bulletin of Materials Science*, **41** [1] 31-38 (2018).
- Venkatesh Pilli and Ritwik Sarkar, Nano-carbon containing $Al_2O_3 - C$ continuous casting refractories: effect of graphite content, *Journal of Alloys and Compounds*, **735** [1] 1730 – 1735 (2018).
- Rupita Ghosh, Ritwik Sarkar, Synthesis and characterization of sintered Hydroxyapatite: A comparative study on the effect of preparation route, *Journal of the Australian Ceramic Society*, **54** [1] 71–80 (2018).
- Akhilesh K Singh and Ritwik Sarkar, Urea based sols as binder for Nano-oxide bonded high alumina refractory castables, *Journal of Alloys and Compounds*, **758**, 140-147 (2018).
- Fly ash containing alkali activated geopolymer concrete : Effect of $Na_2SiO_3:NaOH$ ratio and temperature, Ritwik Sarkar and Swoyang Prakash Routray, *Interceram* **67** [3] 24-29 (2018)
- Aiswarya Dash, Sumit K Pal, Indranil Banerjee, Subhabrata Chakraborty, Rare-earth doped SiO_2-CaF_2 glass ceramic nano-particle with upconversion properties; *International Journal of Applied Ceramic Technology* , Volume15, Issue1; 223–231, 2018.
- R. Vinaykumar, J. Bera, **Characterizations of low-temperature sintered $BaCo_{1.3}Ti_{1.3}Fe_{9.4}O_{19}$ M-type ferrite for high-frequency antenna application**, *Journal of Magnetism and Magnetic Materials*, **451** (2018) 614–619.
- Partha Saha, and Love Dashairya, “Reduced graphene oxide modified melamine formaldehyde (rGO@MF) superhydrophobic sponge for efficient oil–water separation” *Journal of Porous Materials*, Vol 25, Issue 5, (2018), p 1475-1488.
- Love Dashairya, Madhabendra Rout, and Partha Saha, “Reduced graphene oxide-coated cotton as an efficient absorbent in oil-water separation” *Advanced Composites and Hybrid Materials*, Vol 1, Issue 1, (2018), p 135-148.
- Love Dashairya, Manisha Sharma, Soumen Basu, and Partha Saha, “Enhanced dye degradation using hydrothermally synthesized nanostructured Sb_2S_3/rGO under visible light irradiation” *Journal of Alloys and Compounds*, Vol 735, Issue 2, (2018), p 234-245

- G. Jaya Rao, R. Mazumder, S. Bhattacharyya, P. Chaudhuri, "Synthesis, CO₂ absorption property and densification of Li₄SiO₄ powder by glycine-nitrate solution combustion method and its comparison with solid state method" J. Alloys and Compds. 725, 461-471, (2017).
- S. Abhinay, S. Bhukania, R. Mazumder "Microstructure and Electrical Properties of Porous BZT-0.5BCT ceramics: Effect of pore formers (PVA and PVP)", Ferroelectrics, 517 (1), 14-24, (2017).
- Sunipa Bhattacharyya and Pallavi Suhasini Behera "Synthesis and characterization of nano-sized α -alumina powder from kaolin by acid leaching process" Applied Clay Science, 146, p 286-290 (2017).
- Maji K and Dasgupta S, "Effect of β -Tricalcium Phosphate Nanoparticles Additions on the Properties of Gelatin-Chitosan Scaffolds", Maji and Dasgupta, Bioceram Dev Appl 2017, 7:2, DOI: 10.4172/2090-5025.1000103
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- Kanchan Maji, Sudip Dasgupta, Krishna Pramanik, Akalabya Bissoyi, "Preparation and Characterization of Gelatin-Chitosan-nano β -TCP Based Scaffold for Orthopaedic Application", under review in Materials Science and Engineering C, Volume 86, 1 May 2018, Pages 83-94

Publications in Conferences

- R. Vinaykumar, Jyoti, and J. Bera, **Electromagnetic Properties of La-Co Substituted Zn₂Y Type Hexagonal Ferrite for Microwave Device Applications**, IEEE- 2017 Progress In Electromagnetics Research Symposium (PIERS — FALL), Singapore, 19–22 November, 2017.
- R. Vinaykumar and J. Bera, **Low-temperature Sintered SrCo_{1.5}Ti_{1.5}Fe₉O₁₉ Ferrite for High-frequency Antenna Application**, IEEE - 2017 Progress In Electromagnetics Research Symposium (PIERS — FALL), Singapore, 19–22 November (2017).
- Prof. Partha Saha, and Love Dashairya presented in International Symposium on Functional Materials (ISFM-2018): Energy and Biomedical Applications, on "Antimony sulfide nanorods decorated onto reduced graphene oxide based anodes for sodium-ion battery", held at Hotel Shivalik View, Chandigarh, India, April 13-15, 2018,
- Prof. Partha Saha, and Love Dashairya, presented in National conference on challenges in electrochemical energy storage and conversion system (Battery-2017): Beyond Li-ion batteries, on "Reduced graphene oxide decorated Sb nanoparticles: a high-performance anode for sodium-ion batteries" held at Department of chemistry, Kongunadu arts, and science college, Coimbatore, India, December 15-16, 2017
- Prof. Partha Saha, and Love Dashairya, presented in International Conference on Nanotechnology, Ideas, innovative and initiatives (ICN:3I-2017): Synthesis and Characterization of advanced Nanomaterials, on "Flower-like SnS₂ / SnO₂ for photocatalytic dye degradation under visible light" held at Indian Institute of Technology, Roorkee, India, December 06-08, 2017.
- S N Sabat, A Paul, "Fabrication of Bulk Lamellar Porous Ceramic Using Unidirectional Freeze Casting Method", 81st Annual Session of Indian Ceramic Society and International Conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses (EH-TACAG'17), December 2017, Pune.
- Sumit Kumar Choudhary, S. Abhinay, R. Mazumder, "Effect of calcination and sintering temperature on dielectric properties of giant dielectric Ti_{0.9}(In_{0.5}Nb_{0.5})_{0.1}O₂ ceramics", International Conference On Expanding Horizons of Technological Applications Of Ceramics And Glasses (EH-TACAG 17) and Annual Session of Indian Ceramic Society, Dec 14-16, 2017 at College of Engineering Pune, Pune.
- Pragya Dixit, Swetapadma Mahapatra, R. Mazumder, "Fabrication and Characterization of PVDF-PZT (Navy type-VI) composite", International Conference On Expanding Horizons Of Technological Applications of Ceramics And Glasses (EH-TACAG 17) and Annual Session of Indian Ceramic Society, Dec 14-16, 2017 at College of Engineering Pune, Pune.
- S. Abhinay, R. Mazumder "Structural, electrical and optical properties of Ba, Ni modified KNbO₃ semiconducting ferroelectric ceramics", 29th annual general meeting of materials research society of India (MRSI) and national symposium on "Advances in Functional and Exotic Materials" Feb 14-16, 2018 at SRM hotel, Tiruchirappalli.
- Subhra Sourav Jana, Sumit Kumar Choudhary, R. Mazumder, "Synthesis structure and dielectric properties of giant dielectric Ti_{1-x}(Al_{0.5}Nb_{0.5})_xO₂ ceramics", 29th annual general meeting of materials research society of India (MRSI) and national symposium on "Advances in Functional and Exotic Materials" Feb 14-16, 2018 at SRM hotel, Tiruchirappalli.

- Pallavi Suhasinee Behera and Sunipa Bhattacharyya, Effect of processing route for preparation of mullite from kaolinite and alumina. International Conference on Condensed Matter & Applied Physics held at Bikaner, Rajasthan during November 24-25, 2017
- Amit Kumar Yadav and Sunipa Bhattacharyya. Preparation of Boehmite (AlOOH) powder from kaolin by acid leaching. 81st Annual session of Indian Ceramic Society and International conference on “Expanding Horizons of Technological Applications of Ceramics and Glasses”, Pune, India, 14 - 16 December 2017. Poster Presentation.
- Sudip Dasgupta “Preparation and Characterization of Alginate- Hydroxyapatite Paste for Bone Regeneration” Proceedings of IRF International Conference, Hyderabad, Page 1-7, 2018
- Sudip Dasgupta “Gelatin, chitosan and Nanobioactive Ceramic Based Scaffolds for Orthopedic Application”, Healthcare Asia Pacific 2018, Singapore
- Sudip Dasgupta, “Controlled Release of Ibuprofen using Mg Al LDH Nano Carrier” International Conference on Materials, Alloys and Experimental Mechanics(ICMAEM) 2017, IOP

Paper Accepted for Publication

- G. Jaya Rao, R. Mazumder, S. Bhattacharyya, P. Chaudhuri, “Fabrication and characterization of $\text{Li}_4\text{SiO}_4\text{-Li}_2\text{TiO}_3$ composite ceramic pebbles using extrusion and spherodization technique”, J. Eur. Ceram. Soc. (2018) In Press.
- Ritwik Sarkar and Umesh K behera, A study on the phosphate bonded high alumina castable: effect of MgO addition, Accepted in Interceram Refractories Manual

Books/Book Chapter

Patents

- Prashant N. Kumta, Partha Saha, Moni Kanchan Datta, Ayyakkannu Manivannan “Cathodes and electrolytes for rechargeable magnesium batteries and methods of manufacture (US Patent No. 9,947,962,)” granted on April 17, 2018.
- Prashant N Kumta, Da-Tren Chou, Daeho Hong, Partha Saha, “Biodegradable metal alloys (US Patent No. 9,863,020)” granted on 9th January, 2018

Awards Received/Distinction Achieved

By Faculty:

- Prof. Ritwik Sarkar is working as Member, Technical Committee, IRMA (Indian Refractory Makers Association) Journal.
- Prof. Ritwik Sarkar worked as Member, Examination Committee, and Evaluator, AICERAM Exam, Indian Inst. of Ceramics.
- Prof S. Dasgupta is working as Editorial Board Member of Journal of Bioceramic Development and applications, Current trends in Medicinal chemistry and SM Journal of Environmental Chemical Engineering.

By Students:

Technical Association/Societies

Seminar, Symposia, Winter School, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

- Prof. Ranabrata Mazumdar Attended NFP-PFRC vision meeting held at Nirma University, Gandhinagar during 26-28, April 2018 and presented Achievements in developing “Li-based ceramics for fusion reactor” at NIT Rourkela.

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI / Co-PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Borohydride synthesis and photoluminescence properties of lanthanide ions doped and co-doped YBO ₃ phosphor nanomaterials	CSIR	Dr. B. B. Nayak	~ 10	Jan 2015	Dec 2017
Fabrication of porous and hollow metal oxide nanostructured materials via gas bubbles template method for different applications	Nano mission, DST	Dr. B. B. Nayak	~ 51	Mar 2016	Mar 2019
Development of functionally graded bioglass ceramic scaffold for bone tissue engineering	DST-SERB	Dr. S. K. Pal	78	Aug 2017	Aug 2020
Manufacturing of patient-specific Zirconia toughened Alumina based femoral ball head prototype development	DBT, India	Dr. D. Sarkar	52.37	Dec 2015	Dec 2020
Corrosion behaviour of novel Mg- 4wt. % Y- 4wt. % Zn – 0.2wt. % Ca- 0.5 wt. % Zr alloys	DST–SERB (ECRA)	Dr. P. Saha	53	Oct 2016	Oct 2019
Synthesis of surface modified ceramic adsorbent for deflurination of drinking water	DST-SERB	Dr. (Mrs) S. Bhattacharyya	20.36	31-03-2016	30-03-2019
Injectable and Photocurable Alginate-Hydroxyapatite Paste for Bone Regeneration	CSIR	Dr. Sudip Dasgupta	22	03-03-2016	03-03-2019
Injectable Nanocrystalline Hydroxyapatite-Polyanhydride Based Paste for Bone substitution	DBT	Dr. Sudip Dasgupta	45	15-03-2017	15-03-2020
Fabrication of Li ₄ SiO ₄ pebbles with optimized strength and porosity by Extrusion-Spherodization technique	PFRC, BRNS	Dr. S. Bhattacharyya and Dr. R. Mazumder	11.59	Aug 2016	Jan 2018
Fabrication and characterization of Li ₂ TiO ₃ -Li ₄ SiO ₄ pebbles with optimized strength and porosity by novel freeze granulation technique	PFRC, BRNS	Dr. R. Mazumdar	33.8	Apr 2018	Mar 2021
Use of nano carbon black in the development of low carbon containing alumina carbon	CSIR, GOI	Dr. Ritwik Sarkar	15.3	2018	2021
Development of Tough Biomimetic Alumina-Zirconia Composites Inspired by Abalone Nacre Architecture	DST-SERB	Dr. Arindam Paul and Dr. Shantanu K Behera	58 (Approved) Funds awaited		

Consultancy Services

Sponsors Address	Title of the Project	Faculty
Tata Steel, Jamshedpur	Corrosion Kinetics and Atmospheric Influence on Thermo-Mechanical behavior of Non-oxide Refractories	Dr. D. Sarkar

Institutional Programme Support/Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date

List of Laboratories Developed

Sl. No.	Name of the Laboratories

Ph.D. Degrees Awarded by the Department

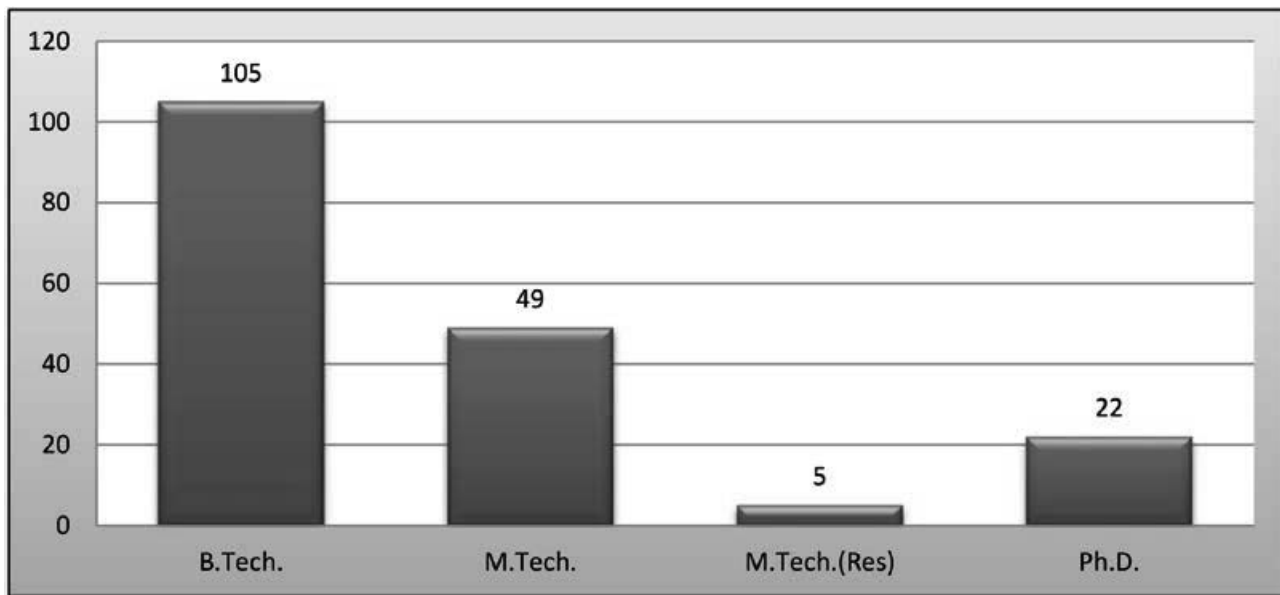
Name of the Student	Title of Thesis	Supervisor
Kanchan maji	Gelatin Chitosan and Bioactive Nanoceramic Based Composite Scaffold for Orthopaedic Application	Prof. Sudip Dasgupta , Prof. S. K. Nandi
Akhilesh kumar singh	Study on the Effect of Different Sols on High Alumina Castable Refractory	Prof. Ritwik Sarkar, Prof. Sumit Kumar Pal
Shubham srivastava	Borohydride Synthesis for Development of Rare Earth Doped and Co-Doped Yttrium Borate Phosphors for Luminescent Applications	Prof. Bibhuti Bhusan Nayak, Prof. Shantanu Kumar Behera
Satyananda behera	N220 Nanocarbon Black Containing Low Carbon MgO-C Refractory	Prof. Ritwik Sarkar
Swarnima kashyap	Interface Strengthened Graphene Oxide Reinforced Polyvinyl Alcohol Nanocomposites	Prof. Shantanu Kumar Behera, Prof. Swadesh Kumar Pratiharr
Nadiya bihary nayak	Borohydride Synthesis for Development of Porous Zirconium Oxide Nanopowders for Novel Applications	Prof. Bibhuti Bhusan Nayak
Arun chowdhury	Synthesis and Characterization of Barium Titanate - Nickel Ferrite Composites	Prof. Swadesh Kumar Pratiharr, Prof. Bibhuti Bhusan Nayak

M.Tech. Research Degrees Awarded by the Department

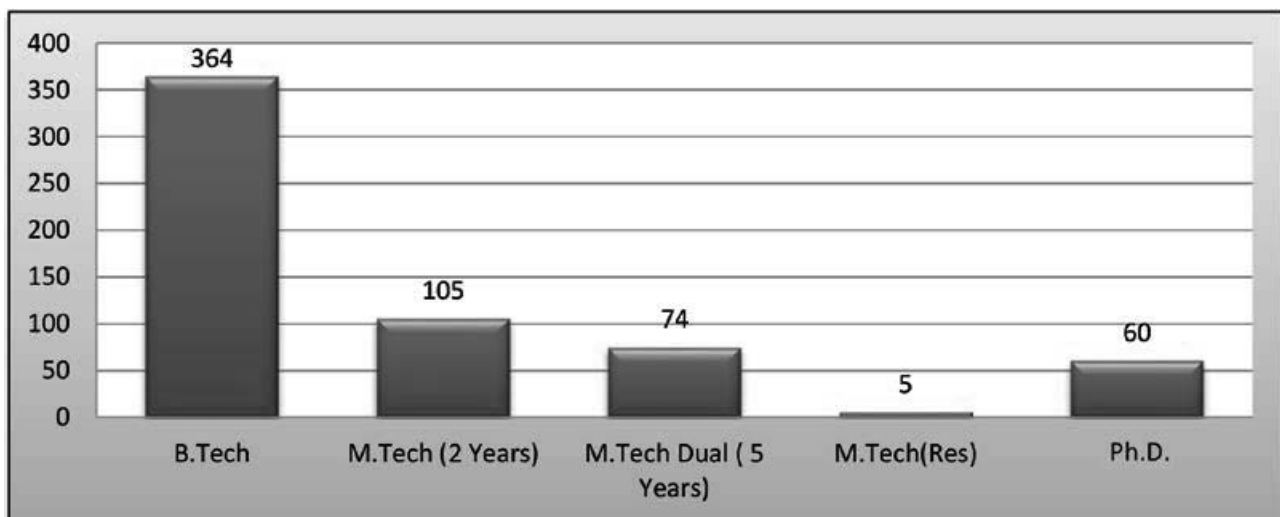
Name of the Student	Title of Thesis	Supervisor
K Sarath Chandra	Processing and Properties of Polycrystalline Nd:YAG Ceramics	Prof. D. Sarkar
Ankit Sharma	Development of solid-state derived strontium aluminate based luminescent materials	Prof. B. B. Nayak

Department of COMPUTER SCIENCE & ENGINEERING

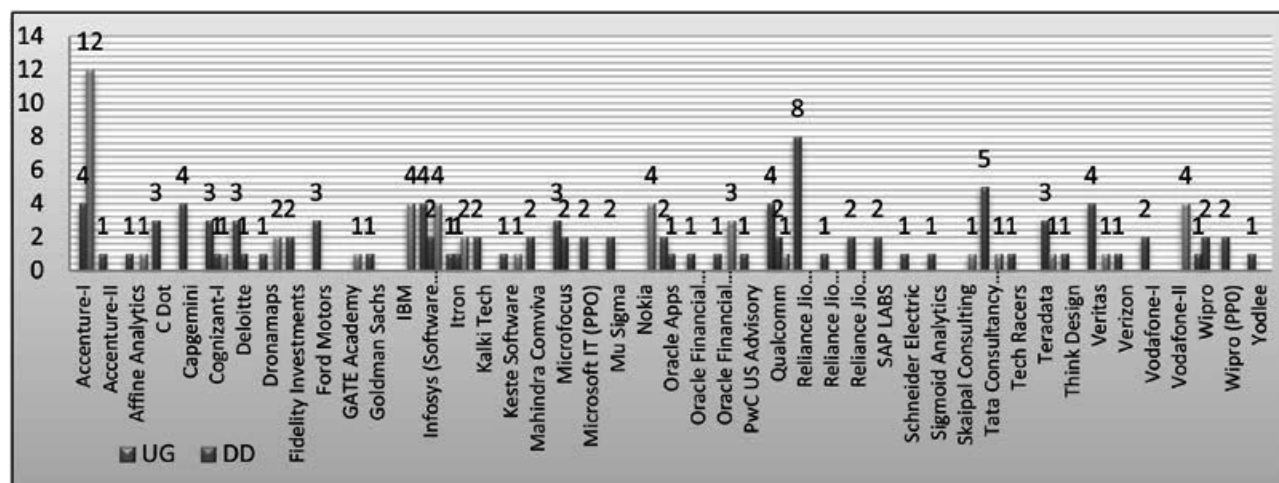
Student Intake 2017-18



Student Intake 2017-18



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof. Santanu Kumar Rath (skrath@nitrrkl.ac.in) Professor, Ph.D. (IIT Kharagpur) Software Engineering, Data Mining, Bio-informatics, IT Strategy
2	Prof. Banshidhar Majhi (bmajhi@nitrrkl.ac.in) Professor, Ph.D. (Sambalpur University) Image Processing, Data Compression, Cryptography and Security, Soft Computing
3	Prof. Durga Prasad Mohapatra (durga@nitrrkl.ac.in) Professor & HOD, Ph.D. (IIT Kharagpur) Software Engineering, Programme Slicing, Software Testing, Distributed Systems, Real-time Systems
4	Prof. Ashok Kumar Turuk (akturuk@nitrrkl.ac.in) Professor, Ph.D. (IIT Kharagpur) Optical Network, Wireless Network, Network Security, Mobile Computing, Embedded Systems
5	Prof. Pankaj Kumar Sa (pankajksa@nitrrkl.ac.in) Associate Professor, Ph.D. (NIT Rourkela) Image Processing, Graphics, Computer Vision
6	Prof. Bibhudatta Sahoo (bdsahoo@nitrrkl.ac.in) Associate Professor, Ph.D. (NIT Rourkela) Data Structure & Algorithm Design, Parallel & Distributed Systems
7	Prof. Pabitra Mohan Khilar (pmkhilar@nitrrkl.ac.in) Associate Professor, Ph.D. (IIT Kharagpur) Parallel & Distributed Processing, Fault-tolerant Computing, Cluster and Grid Computing, Wireless Ad-hoc Networks
8	Prof. Suchismita Chinara (suchismita@nitrrkl.ac.in) Assistant Professor Grade - I, Ph.D. (NIT Rourkela) Wired and Wireless Computer Networks, Data Communications
9	Prof. Ramesh Kumar Mohapatra (mohapatrak@nitrrkl.ac.in) Assistant Professor Grade - I, M.Tech. (NIT Rourkela) Automata Theory, Compiler Design, Optical Character Recognition, Cryptography

Sl. No.	Name & Specialization
10	Prof. Sujata Mohanty (sujatam@nitrkl.ac.in) Assistant Professor Grade - I, Ph.D. (NIT Rourkela) Cryptography, Information Security
11	Prof. Korra Sathyababu (ksathyababu@nitrkl.ac.in) Assistant Professor Grade - I, Ph.D, M.Tech. (NIT Rourkela) Data Engineering, Privacy, Social Computing
12	Prof. Manmath Narayan Sahoo (sahoom@nitrkl.ac.in) Assistant Professor Grade - I, M.Tech.(NIT Rourkela) Fault Tolerant Systems, Distributed Systems, Computer Networks
13	Prof. Ratnakar Dash (ratnakar@nitrkl.ac.in) Assistant Professor Grade - I, Ph.D. (NIT Rourkela) Signal Processing, Image Processing
14	Prof. Bidyut Kumar Patra (patrabk@nitrkl.ac.in) Assistant Professor Grade - I, Ph.D. (IIT Guwahati) Data Mining, Pattern Recognition
15	Prof. Ruchira Naskar (naskarr@nitrkl.ac.in) Assistant Professor Grade - I, Ph.D. (IIT Kharagpur) Digital Forensics, Multimedia Security, Cryptography
16	Prof. Sambit Bakshi (bakshisambit@nitrkl.ac.in) Assistant Professor Grade - II, Ph.D. (NIT Rourkela) Image Processing, Computer Vision, Surveillance Systems
17	Prof. Anup Nandy (nandya@nitrkl.ac.in) Assistant Professor Grade - II, Ph.D. (IIIT Allahabad) Pattern Recognition, Soft Computing, Robotics, Biological Motion Analysis
18	Prof. Sumanta Pyne (pynes@nitrkl.ac.in) Assistant Professor Grade - II, Ph.D. (IIT Kharagpur) Low Power VLSI, Computer Networks
19	Prof. Biri Arun Assistant Professor Grade - II, Ph.D. (JNU) Database Management System, Dataware Housing, Big Data Infrastructure & Analytics
20	Prof. Judhistir Mahapatro Assistant Professor Grade - II, Ph.D. (IIT Kharagpur) Wireless Body Area Networks
21	Prof. Tapas Kumar Mishra Assistant Professor Grade - II, Ph.D. (IIT Kharagpur) Algorithms, Combinatorics, Computational Geometry
22	Prof. Vijay Bhaskar Semwal Assistant Professor Grade - II, Ph.D. (IIIT Allahabad) Machine Learning, Robotics, Data Structure & Algorithm
23	Prof. Arun Kumar Assistant Professor Grade - II, Ph.D. (NTU, Singapore) Internet of Things, Wireless Sensor Networks, Ad-hoc and Mobile Networks

Publication

Publications in Journals

- Deepak Ranjan Nayak, Ratnakar Dash, and Banshidhar Majhi, "Pathological brain detection using curvelet features and least squares SVM", *Multimedia Tools and Applications*, vol. 77, no. 3, pp. 3833-3856, November 2018, 10.1007/s11042-016-4171-y.
- Sonali Mishra, Banshidhar Majhi, Pankaj Kumar Sa, and Lokesh Sharma, "Gray level co-occurrence matrix and random forest based acute lymphoblastic leukemia detection", *Biomedical Signal Processing and Control*, vol. 33, pp. 272-280, March 2017, 10.1016/j.bspc.2016.11.021.
- Aparajita Nanda, Pankaj Kumar Sa, and Suman Kumar Choudhury, "An unsupervised meta-graph clustering based prototype-specific feature quantification for human re-identification in video surveillance", *Engineering Science and Technology, an International Journal*, vol. 20, no. 3, pp. 1041-1053, June 2017, 10.1016/j.jestch.2017.03.001.
- Aparajita Nanda, Pankaj Kumar Sa, Suman Kumar Choudhury, Sambit Bakshi, and Banshidhar Majhi, "A neuromorphic person re-identification framework for video surveillance", *IEEE Access*, vol. 5, pp. 6471-6482, March 2017, 10.1109/ACCESS.2017.2686438.
- Ramesh Kumar Mohapatra, Banshidhar Majhi, and Sanjay Kumar Jena, "Two-stage classification approach for the recognition of handwritten atomic Odia character", *International Journal of Applied Pattern Recognition (IJAPR)*, vol. 4, no. 1, pp. 44-63, 2017, 10.1504/IJAPR.2017.082658.
- Suman Kumar Choudhury, Pankaj Kumar Sa, Ram Prasad Padhy, Saurav Sharma, and Sambit Bakshi, "Improved pedestrian detection using motion segmentation and silhouette orientation", *Multimedia Tools and Applications*, vol. 77, no. 11, pp. 13075-13114, June 2018, 10.1007/s11042-017-4933-1.
- Soubhagya Sankar Barpanda, Pankaj Kumar Sa, Oge Marques, Banshidhar Majhi, and Sambit Bakshi, "Iris recognition with tunable filter bank based feature", *Multimedia Tools and Applications*, vol. 77, no. 6, pp. 7637-7674, March 2018, 10.1007/s11042-017-4668-z.
- Debbrota Paul Chowdhury, Sambit Bakshi, Guodong Guo, and Pankaj Kumar Sa, "On applicability of tunable filter bank based feature for ear biometrics: A study from constrained to unconstrained", *Journal of Medical Systems*, vol. 42, no. 11, January 2018, 10.1007/s10916-017-0855-8.
- Aparajita Nanda, Suman Kumar Choudhury, and Pankaj Kumar Sa, "Multishot person reidentification through inlier orientation and consensus clusters", *Journal of Electronic Imaging*, vol. 26, no. 6, November 2017, 10.1117/1.JEI.26.6.063017.
- Rahul Raman, Larbi Boubchir, Pankaj Kumar Sa, Banshidhar Majhi, and Sambit Bakshi, "Beyond estimating discrete directions of walk: a fuzzy approach", *Machine Vision and Applications*, May 2018, 10.1007/s00138-018-0939-6.
- Soubhagya Sankar Barpanda, Banshidhar Majhi, Pankaj Kumar Sa, Arun Kumar Sangaiah, and Sambit Bakshi, "Iris feature extraction through wavelet mel-frequency cepstrum coefficients", *Optics and Laser Technology*, March 2018, 10.1016/j.optlastec.2018.03.002.
- Sonali Mishra, Banshidhar Majhi, and Pankaj Kumar Sa, "A hybrid classification scheme using 2D-SWT and SVM for the detection of acute lymphoblastic leukemia", *International Journal of Machine Learning and Computing*, vol. 7, no. 6, pp. 218-222, December 2017, 10.18178/ijmlc.2017.7.6.650.
- Deepasikha Mishra, Banshidhar Majhi, Sambit Bakshi, Arun Kumar Sangaiah, and Pankaj Kumar Sa, "Single image super resolution for texture images through neighbor embedding", *Multimedia Tools and Applications*, November 2017, 10.1007/s11042-017-5367-5.
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- Aparajita Nanda, Dushyant Singh Chauhan, Pankaj Kumar Sa, and Sambit Bakshi, "Illumination and scale invariant relevant visual features with hypergraph-based learning for multi-shot person re-identification", *Multimedia Tools and Applications*, June 2017, 10.1007/s11042-017-4875-7.
- Rahul Raman, Pankaj Kumar Sa, Sambit Bakshi, and Banshidhar Majhi, "Kinesiology-inspired estimation of pedestrian walk direction for smart surveillance", *Future Generation Computer Systems*, October 2017, 10.1016/j.future.2017.10.033.

- Ram Prasad Padhy, Feng Xia, Suman Kumar Choudhury, Pankaj Kumar Sa, and Sambit Bakshi, "Monocular Vision Aided Autonomous UAV Navigation in Indoor Corridor Environments", *IEEE Transactions on Sustainable Computing* 2018, 10.1109/TSUSC.2018.2810952.
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- Ram Prasad Padhy, Xiaojun Chang, Suman Kumar Choudhury, Pankaj Kumar Sa, and Sambit Bakshi, "Multi-stage cascaded deconvolution for depth map and surface normal prediction from single image", *Pattern Recognition Letters*, July 2018, 10.1016/j.patrec.2018.07.012.
- Beeren Sahu, Pankaj Kumar Sa, Sambit Bakshi, and Arun Kumar Sangaiah, "Reducing dense local feature key-points for faster iris recognition", *Computers & Electrical Engineering*, January 2018, 10.1016/j.compeleceng.2017.12.048.
- S K Bhoi, Pabitra Mohan Khilar, M Singh, R R Sahoo, and Rakesh Ranjan Swain, "A routing protocol for Urban Vehicular Ad Hoc Networks to support non-safety applications", *Digital Communications and Networks* 2018, 10.1016/j.dcan.2017.08.003.
- Mukesh Kumar, Ransingh B. Ray, and Santanu Kumar Rath, "Spark based classification of microarray data using scalable artificial neural network", *International Journal of Data Mining and Bioinformatics*, vol. 19, no. 4, pp. 312-339 2017, 10.1504/IJDMB.2017.091363.
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- Ashish Kumar Dwivedi, Anand Tirkey, and Santanu Kumar Rath, "Software design pattern mining using classification-based techniques", *Frontiers of Computer Science*, May 2018, 10.1007/s11704-017-6424-y.
- Lov Kumar, Sanjay Mishra, and Santanu Kumar Rath, "An empirical analysis of the effectiveness of software metrics and fault prediction model for identifying faulty classes", *Computer Standards & Interfaces*, vol. 53, pp. 1-32, August 2017, 10.1016/j.csi.2017.02.003.
- Lov Kumar, Aneesh Krishna, and Santanu Kumar Rath, "The impact of feature selection on maintainability prediction of service-oriented applications", *Service Oriented Computing and Applications*, vol. 11, no. 2, pp. 137-161, June 2017, 10.1007/s11761-016-0202-9.
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- Jagannath Singh, Pabitra Mohan Khilar, and Durga Prasad Mohapatra, "Dynamic slicing of distributed aspect-oriented programs: a context-sensitive approach", Computer Standards & Interfaces, vol. 52, pp. 71-84, May 2017, 10.1016/j.csi.2017.01.007.
- Vikas Panthi, and Durga Prasad Mohapatra, "A framework for generating prioritised test scenarios using firefly optimisation technique", International Journal of Computing Science & Mathematics, vol. 8, no. 3, October 2017, 10.1504/IJCSM.2017.085724.
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- Niranjana Panigrahi, and Pabitra Mohan Khilar, "Multi-hop consensus time synchronization algorithm for sparse wireless sensor network: A distributed constraint-based dynamic programming approach", Ad Hoc Networks, vol. 61, pp. 124-138, June 2017, 10.1016/j.adhoc.2017.04.002.
- Rakesh Ranjan Swain, Tirtharaj Dash, and Pabitra Mohan Khilar, "An effective graph-theoretic approach towards simultaneous detection of fault(s) and cut(s) in wireless sensor networks", International Journal of Communication Systems, vol. 30, no. 13, pp. 1-9, September 2017, 10.1002/dac.3273.
- Munesh Singh, and Pabitra Mohan Khilar, "A range free geometric technique for localization of wireless sensor network (WSN) based on controlled communication range", Wireless Personal Communications, vol. 94, no. 3, pp. 1359-1385, June 2017, 10.1007/s11277-016-3686-x
- Munesh Singh, Sourav Kumar Bhoi, and Pabitra Mohan Khilar, "Geometric constraint-based range-free localization scheme for wireless sensor networks", IEEE Sensors Journal, vol. 17, no. 16, pp. 5350-5366, August 2017, 10.1109/JSEN.2017.2725343.
- Pramit Mazumdar, Bidyut Kumar Patra, Korra Sathya Babu, and Russell Lock, "Hidden location prediction using check-in patterns in location-based social networks", Knowledge and Information Systems : An International Journal, pp. 1-312018, 10.1007/s10115-018-1170-5.
- Jagannath Singh, Pabitra Mohan Khilar, and Durga Prasad Mohapatra, "Code refactoring using slice-based cohesion metrics and aspect-oriented programming", International Journal of Business Information Systems, vol. 27, no. 12018, 10.1504/IJBIS.2018.088570.
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- Kshira Sagar Sahoo, Mayank Tiwari, Bibhudatta Sahoo, Ratnakar Dash, and Kshirasagar Naik, "DSSDN: Demand-supply based load balancing in Software-Defined Wide-Area Networks", *International Journal of Network Management*, vol. 28, no. 4, pp. 1-25, May 2018, 10.1002/nem.2022.
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- Primit Mazumdar, Bidyut Kr. Patra, Korra Sathya Babu and Russell Lock. Hidden Location Prediction using Check-in Patterns in Location Based Social Networks, Knowledge and Information Systems (KAIS).
- V. U. Sameer and R. Naskar, "Universal Wavelet Relative Distortion: A New Counter Forensic Attack on Photo Response Non-Uniformity based Source Camera Identification", 14th International Conference on Information Security Practice and Experience (ISPEC) 2018, Tokyo, Japan. Proceedings to be published in Lecture Notes in Computer Science (LNCS). (Accepted.)

Books/Book Chapter

- Pankaj Kumar Sa, Manmath Narayan Sahoo, M. Murugappan, Yulei Wu, and Banshidhar Majhi, Advances in Intelligent Systems and Computing, Springer2018, 10.1007/978-981-10-3373-5.
- Pankaj Kumar Sa, Manmath Narayan Sahoo, M. Muruguppan, Yulie Wu, and Banshidhar Majhi, Advances in Intelligent Systems and Computing Volume 719, Springer2018, 10.1007/978-981-10-3376-6.
- Khalid Saeed, Nabendu Chaki, Bibhudendu Pati, Sambit Bakshi, and Durga Prasad Mohapatra, Advances in Intelligent Systems and Computing, 70, Springer, April 2018, 10.10007/978-981-10-6875-1.
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- Rahul Raman, Pankaj Kumar Sa, Sambit Bakshi, and Banshidhar Majhi, Fusion of shape and texture features for lip biometry in mobile devices, Mobile Biometrics, 6, IET, September 2017, 10.1049/PBSE003E_ch6.

Patents/Copyright

- Pankaj Kumar Sa, Rahul Raman, and Banshidhar Majhi, "Position and time localization of occlusion between two objects using a static camera", Filed, October 2013, 1218/KOL/2013.
- Pankaj Kumar Sa, Kalyan Kumar Hati, and Banshidhar Majhi, "System and method for detecting objects in videos acquired with static camera", Filed, October 2014, 1217/KOL/2013.
- Pankaj Kumar Sa, Ansuman Mahapatra, and Banshidhar Majhi, "System and methods for generating synopsis of multi-view videos", Filed, August 2017, 201731028957.

- R. Naskar, V. U. Sameer, R. S. K. Reddy and S. G. Chandra, "A System for Execution and Evaluation of Forensic Source Identification of Digital Images", Granted, April 2018, SW-10532/2018 Dated: 25/04/2018.

Awards Received/Distinction Achieved

By Faculty:

By Students:

- Rama Shyamala Sreepada, 1.3 L for presenting paper in RecSys 2018 from Flipkart.
- Sangharatna Godbole was selected for Post Doctoral Fellow at NUS, Singapore.

Technical Association/Societies

Seminar, Symposia, Winter School, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

- Dr. Anup Nandy organized National Workshop on Motion Understanding for Medical Applications (MUMApp-2017) August 25 - August 29, 2017.
- Dr. Anup Nandy organized Short Term Course: GIAN course on Innovative Principles of Gait Training: Neuroplasticity Principles, Biomechanics and Computational Methods December 26 - 30, 2017.
- Prof. D. P. Mohapatra organized 10th National workshop on Recent Trends in Software Testing, NIT, Rourkela, 21-23 July 2017.
- Prof. D. P. Mohapatra organized 11th National workshop on Recent Trends in Software Testing KIIT, Bhubaneswar 18-22 May 2018.
- Organized Workshop on MC/DC Testing – A Cost Effective White Box Testing Technique IIIT, Hyderabad 09 February 2018.
- Prof. D. P. Mohapatra attended GIAN Course on Advanced Topics in Software Testing, Debugging & Program Analysis NIT, Durgapur 26-31 July 2017.

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
To augment the PG teaching and research facilities in web engineering and cloud computing	FIST, DST	Prof Ashok Kumar Turuk and Prof. Bibhudatta Sahoo	49.5	2015	2020
Information Security education and awareness (ISEA) Project (phase-II)	DeitY	Dr. Ashok Kumar Turuk	199.04	2015	2020
Visvesvaraya Ph.D Scheme for Media Asia Electronics & IT	Media Asia Lab, DeitY	Prof. Ashok Kumar Turuk	178.54	2015	2020
Visvesvaraya Ph.D. Scheme for Media Asia Electronics and IT	Media Asia Lab, DeitY	Dr. A.K. Turuk and Prof. Bibhudatta Sahoo	94.36	2014	2019
Design of software defined control plane for Optical Burst Switched (OBS) Wavelength Division Multiplexing Networks	SERB, DST	Prof. Ashok Kumar Turuk and Prof. Bibhudatta Sahoo	2606344.00	2017	2020
Human Cognitive State Estimation through Multi-modal Gait Analysis	SERB, DST	Dr. A. Nandy	20.372	2017	2020
Development of a pathological health care system for early detection of neurological gait abnormalities	DST	Prof. A. Nandy and Prof. Bidyut Kumar Patra	6.28	2017	2019

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Development of a Psycho-Cognitive Recommender System for Weak Learners in Flipped Learning Scenario	SERB, DST	Dr. B. K. Patra	20.836	2018	2021
Development of a Digital Forensic System for Blind Source Camera Identification of Contentious Images using Machine Learning	CSIR	Dr. R. Naskar Dr. Snehanshu Pal	6.582	2017	2020
Detection of Cyber Forgery in Multimedia Data through Blind Digital Forensics	YSS, BRNS	Dr. R. Naskar	24	2016	2019
Digitization of steel microstructure images, modelling of plain carbon steel microstructure evolution during heat treatment using cellular automata and phase field modeling methods, and development of a software tool for providing guidance in designing heat treatment process using machine learning based classification techniques	ECR, SERB	Dr. R. Naskar	20.832	2016	2019
Reconfigurable hardware to detect drowsy operator from eye image under spectacles	BRNS	Dr. Supratim Gupta and Prof. Ramesh Kumar Mohapatra	1826650.00	2016	2019

Consultancy Services

Sponsors Address	Title of the Project	Faculty Name
SECL Chhattisgarh	Design and Strata Monitoring of DePillaring Workings of Panel No 122LW - Churcha Mines	Prof. S. Jayanthu & Prof. P.M. Khilar

Institutional Programme Support/Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date

Equipment Acquired

List of Laboratories

Sl. No.	Name of the Laboratories
1	Network Security Laboratory
2	Advanced Software Engineering
3	Information Security
4	Computer Vision Laboratory
5	Microprocessor Laboratory
6	Communication Laboratory
7	Embedded Systems and Robotics Laboratory
8	Computing Laboratory - I
9	Computing Laboratory - II
10	Computing Laboratory - III
11	Parallel and Distributed Computing Laboratory
12	Distributed Object Systems Laboratory

Sl. No.	Name of the Laboratories
13	FIST Laboratory
14	Advanced Networking Laboratory
15	Pattern Recognition Laboratory
16	Recommender Systems and Information Filtering Laboratory
17	Visual Surveillance Research Laboratory
18	Wireless Networks and Computing Laboratory
19	Machine Intelligence and Biomotion Laboratory
20	Cloud Computing Laboratory
21	Knowledge and Data Engineering Laboratory
22	Secured Computing & Advanced Machine Learning Laboratory
23	Cryptography Laboratory
24	Energy Efficient Computing Laboratory
25	Digital Forensic Laboratory

Ph.D. Degrees Awarded by the Department

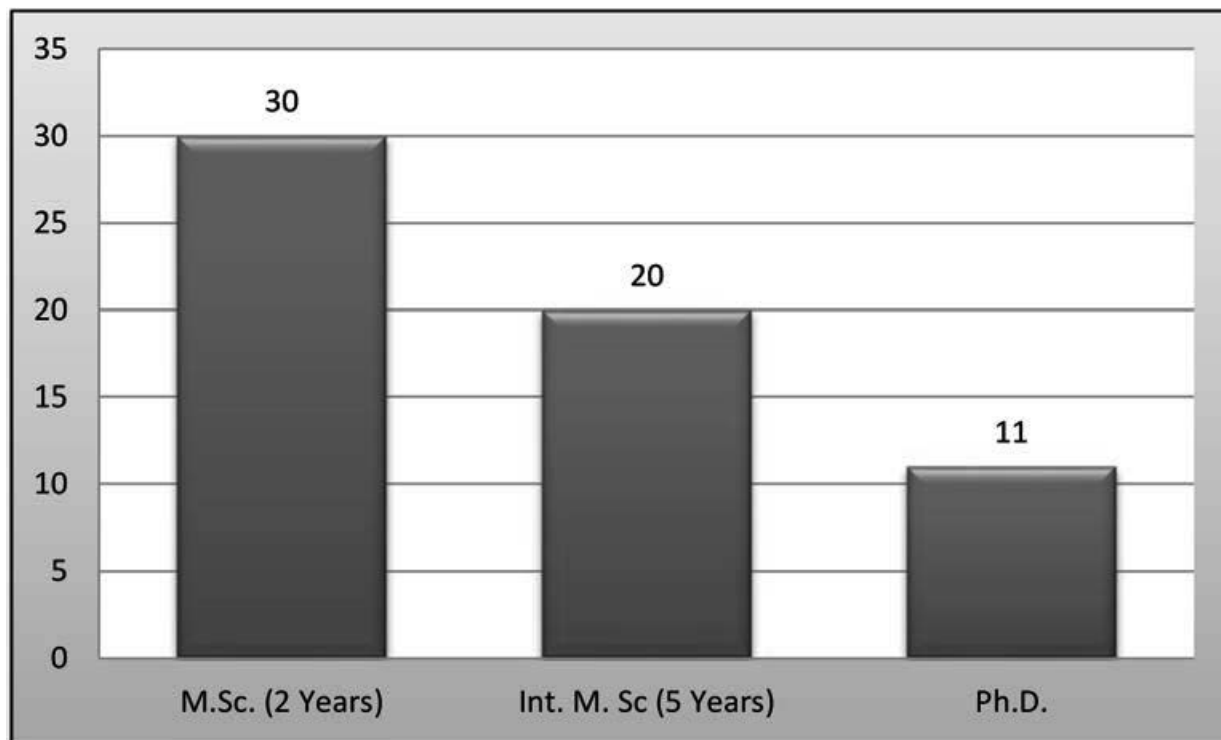
Name of the Student	Title of Thesis	Supervisor
Sukanya Panda	Effects of Organizational Capabilities on Organizational Performance: Empirical Evidences from Indian Banking Industry	Prof. S. K. Rath
Ashish Kumar Dwivedi	Formalization and Detection of Software Design Patterns	Prof. S. K. Rath
Lov Kumar	Predicting Software Quality Parameters using Artificial Intelligence Techniques and Source Code Metrics	Prof. S. K. Rath
Ranjan Kumar Behera	Exploring different algorithms used for big data analytics	Prof. S. K. Rath, Prof. Bibhudatta Sahoo
Vikas Panthi	Generation and Prioritization of Test Scenarios for Object-oriented Software using UML State Machines	Prof. D. P. Mohapatra
Sangharatna Godbole	Driving Concolic Testing to Achieve Higher MC/DC through Source Code Transformations	Prof. D. P. Mohapatra
Aparajita Nanda	Towards Mitigating Visual Ambiguity in Person Re-Identification	Pankaj Kumar Sa
Ansuman Mahapatra	Framework and Algorithms for Multi-View Video Synopsis	Pankaj Kumar Sa
Suman Kumar Choudhury	Pedestrian Detection in Surveillance Videos using Background Modeling and Feature Engineering	Pankaj Kumar Sa
Sourav Kanti Addya	Virtual Machine Placement and Pricing on Cloud Data Center	Ashok Kumar Turuk

M.Tech. Research Degrees Awarded by the Department

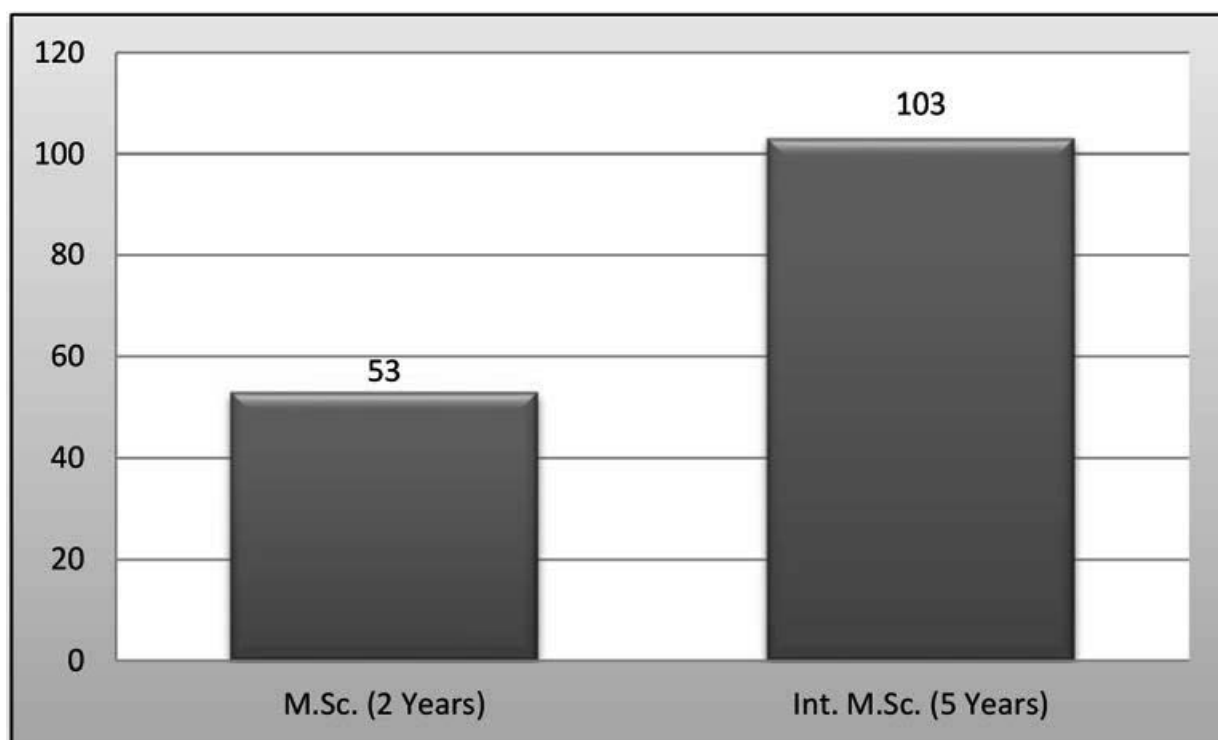
Name of the Student	Title of Thesis	Supervisor

Department of CHEMISTRY

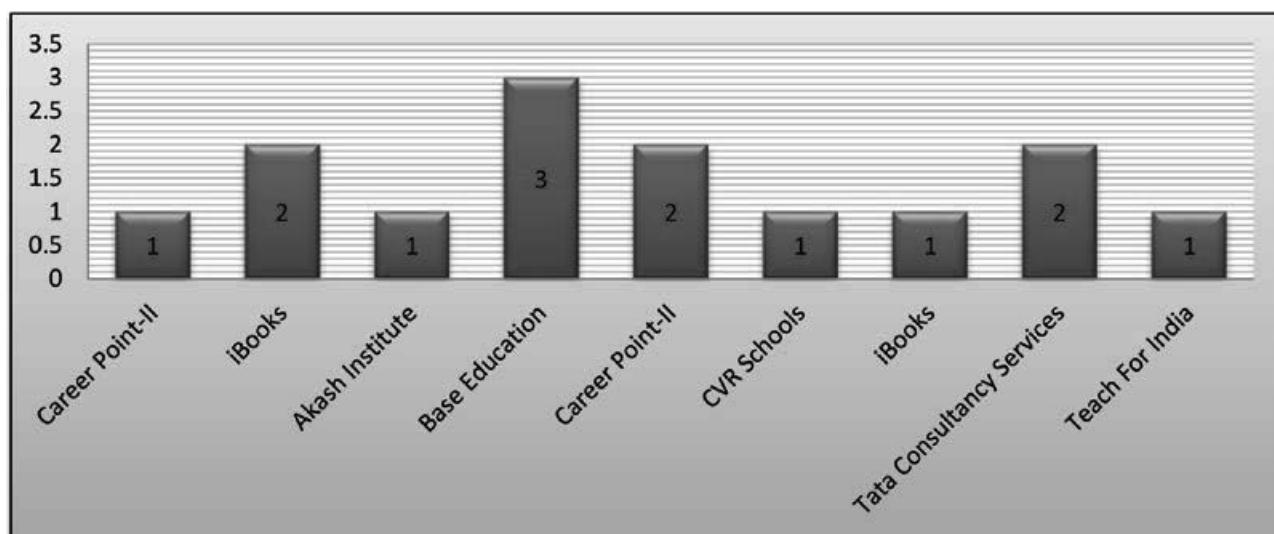
Student Intake in 2017-18



Total Student Strength



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof. Raj Kishore Patel (rkpatel@nitrkl.ac.in) Associate Professor, Ph. D. (Sambalpur University) Organic & Environmental Chemistry.
2	Prof. Rupam Dinda (rupamdinda@nitrkl.ac.in) Associate Professor, Ph. D. (IACS Kolkata) Bioinorganic Chemistry
3	Prof. Braja Gopal Mishra (brajam@nitrkl.ac.in) Associate Professor, Ph. D. (IIT, Madras) Physical Chemistry
4	Prof. Saurav Chatterjee (saurav@nitrkl.ac.in) Associate Professor, Ph. D. (IIT, Bombay) Organometallic Chemistry
5	Prof. Nirajan Panda (npanda@nitrkl.ac.in) Associate Professor, Ph. D. (IIT, Kharagpur) Organic Chemistry
6	Prof. Garudadhvaj Hota (garud@nitrkl.ac.in) Associate Professor, Ph. D. (IIT, Mumbai) Material Chemistry
7	Prof. (Ms.) Aparna Mondal (aparnamondal@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Kharagpur) Materials Chemistry, Inorganic Chemistry
8	Prof. (Ms.) Sabita Patel (sabitap@nitrkl.ac.in) Assistant Professor, Ph. D. (Sambalpur University) Organic Reaction Mechanism, Physical-organic Chemistry
9	Prof. (Ms.) Sasmita Mohapatra (sasmitam@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Kharagpur) Materials Chemistry
10	Prof. (Ms.) Usharani Subuddhi (subudhdhiu@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Madras) Physical Chemistry
11	Prof. Supratim Giri (girisupr@nitrkl.ac.in) Assistant Professor, Ph. D. (Iowa State University, USA) Physical Chemistry

Sl. No.	Name & Specialization
12	Prof. Priyabrat Dash (dashp@nitrkl.ac.in) Assistant Professor, Ph. D. (University of Saskatchewan, Canada) Materials Chemistry/Nano Chemistry
13	Prof. Debayan Sarkar (sarkard@nitrkl.ac.in) Assistant Professor, Ph. D. (IACS, Kolkata) Organic Synthesis and Catalysis
14	Prof. V. Siva Kumar (vsiva@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Madras) Inorganic Chemistry
15	Prof. Harekrishna Sahoo (sahooh@nitrkl.ac.in) Assistant Professor, M.Sc, M.Tech, Ph. D. (Germany) Physical Chemistry
16	Prof. (Ms.) Madhurima Jana (janam@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Kharagpur) Computational Biophysical Chemistry
17	Prof. Jaya Prakash Madda (maddaj@nitrkl.ac.in) Assistant Professor, Ph. D. (University of Hyderabad) Materials Chemistry
18	Prof. Sarojlochan Samal (samalsaroj@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Delhi) Solid State and Materials Chemistry
19	Prof. Rabindra Kumar Behera (beherarabi@nitrkl.ac.in) Assistant Professor, Ph. D. (TIFR, Mumbai) Bio-inorganic Chemistry
20	Prof. Gokarneswar Sahoo (sahoog@nitrkl.ac.in) Assistant Professor, Ph. D. Organocatalysis, Natural Product Synthesis
21	Prof. Santanab Giri (giris@nitrkl.ac.in) Inspire Faculty, Ph. D. (IIT, Kharagpur) Theoretical Computational Chemistry, Metal Cluster, Cluster Assembly, Superatom

Publication

Publications in Journals

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- White-light-emitting NaYF₄ nanoplatfor for NIR upconversion-mediated enhanced photodynamic therapy and bioimaging, Balmiki Kumar, Sharan Rathnam V.S, Subhankar Kundu, Nainsi Saxena, Indranil Banerjee, Supratim Giri*, *ChemNanoMat*, 2018, 4, 583-595
- CsMn₄As₃: A Layered Tetragonal Transition-Metal Pnictide Compound with an Antiferromagnetic Ground State, Abhishek Pandey, Saroj L. Samal, David C. Johnston, *Inorg. Chem.* 57, 3206(2018).
- Trivalent rare-earth activated hexagonal lanthanum fluoride (LaF₃:RE³⁺, where RE = Tb, Sm, Dy and Tm) nanocrystals: Synthesis and optical properties., S Kasturi, R Marikumar, S Vaidyanathan., *Luminescence*. 2018;1–10.
- Structural Mimics of Phenyl Pyridine (ppy)–Substituted, Phosphorescent Cyclometalated Homo and Heteroleptic Iridium (III) Complexes for Organic Light Emitting Diodes–An Overview., AB Kajjam, S Vaidyanathan., *The Chemical Record.*, 2018 (3), 293-349.
- Efficient non-doped bluish-green organic light emitting devices based on N1 functionalized star-shaped phenanthroimidazole fluorophores., J Tagare, H Ulla, MN Satyanarayan, S Vaidyanathan., *Journal of Photochemistry and Photobiology A: Chemistry* 353, 53-64.

- Triphenylamine based yellowish-orange light emitting organic dyes (donor–acceptor) for hybrid WLEDs and OLEDs: synthesis, characterization and theoretical study., AB Kajjam, PSV Kumar, V Subramanian, S Vaidyanathan., *Physical Chemistry Chemical Physics* 20 (6), 4490-4501.
- Tuning the photophysical properties of heteroleptic Ir (III) complexes through ancillary ligand substitution: Experimental and theoretical investigation., AB Kajjam, S Vaidyanathan., *Journal of Photochemistry and Photobiology A: Chemistry* 350, 130-141.
- Controlled Energy Transfer from a Ligand to an Eu(III) Ion: A Unique Strategy To Obtain Bright-White-Light Emission and Its Versatile Applications., R Boddula, K Singh, S Giri, S Vaidyanathan., *Inorganic chemistry* 56 (17), 10127-10130.
- Versatile Luminescent Europium (III)–Diketonate-imidazo-bipyridyl Complexes Intended for White LEDs: A Detailed Photophysical and Theoretical Study., K Singh, R Boddula, S Vaidyanathan., *Inorganic chemistry* 56 (15), 9376-9390.
- Li₃BaSrLa₃(WO₄)₈:Eu³⁺ and Its Solid Solutions: A New Red Emitting Phosphor Structure, Synthesis and Appraisal of Optical Properties., K Singh, S Vaidyanathan., *ChemistrySelect* 2 (18), 5143-5156.
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- Effects of electron-withdrawing groups in imidazole-phenanthroline ligands and their influence on the photophysical properties of Eu(III) complexes for white light-emitting diodes., Boddula Rajamouli,^a Rachna Devi,^a Abhijeet Mohanty,^a Venkata Krishnan^b and Sivakumar Vaidyanathan., *New J. Chem.*, 2017,41, 9826-9839.

Publications in Conferences

- Rupam Dinda*, 'Variable valence oxidometal (Mo and V) complexes of mono- and dibasic ligands: Exploring solution behaviour biological activities', National Symposium on Recent Advances in Chemistry and Industry (2017), Department of Chemistry IEST, Shibpur, India, 2-3 August, 2017.
- Rupam Dinda*, 'Chemistry of Oxidometal (Mo and V) Complexes: Metal Assisted Organic Transformation and Novel Solution Behavior', National Symposium on Modern Trends in Chemistry (MTIC-XVII), CSIR-NCL Pune, India, 11-14 December, 2017.
- M. Mohanty, S. Majumder, A. Banerjee and Rupam Dinda*, 'Monomeric and Dimeric Oxidomolybdenum (V and VI) Complexes of Salophen Ligands: Synthesis, Characterization, DNA Interaction and Cytotoxicity', 22nd CRSI National Symposium in Chemistry and 12th CSIR-RSC Symposium, Raipur, Pt. Ravishankar Shukla University, Chhattisgarh, India, 1- 4 February, 2018.
- Rupam Dinda*, 'Chemistry of Oxidometal (Mo and V) Complexes Featuring O-N Donor Ligands', *Frontiers in Chemistry-II*, 2018.
- CuS modified Bismuth subcarbonate photocatalyst for chlorpyrifos degradation from aqueous sources, D. Majhi, B.G. Mishra, 21st CRSI National symposium in Chemistry (CRSI NCS-21), IICT, Hyderabad, July 14-16, 2017.
- Single step combustion synthesis, characterization and environmental application of α -Fe₂O₃-Bi₂S₃ heterojunction photocatalysts, Y.P. Bhoi, B.G. Mishra, 21st CRSI National symposium in Chemistry (CRSI NCS-21), IICT, Hyderabad, July 14-16, 2017.
- CuS modified Bismuth subcarbonate photocatalyst for environmental application, D.Majhi, B.G. Mishra, Third International Conference on Nanomaterials (ICN 2018), May 11-13, 2018.
- Synthesis, Characterization and Photocatalytic Application of CuS/Bi₄Ti₃O₁₂ Heterojunctions for Hydrogen Transfer Reduction Reaction, K. Das, B.G. Mishra, Third International Conference on Nanomaterials (ICN 2018), May 11-13, 2018.
- Design and synthesis of Dy(III) based complex for single molecule magnet, Rachna Devi, V.Sivakumar*, 17th biennial symposium, 'Modern Trends in Inorganic chemistry' 11 – 14 December 2017, CSIR – NCL, Pune.
- Structural and luminescence properties of Eu³⁺ doped self-activated Ba₂LaV₃O₁₁ phosphor for solid state lighting. R. Marikumar, S. Kasturi and V. Sivakumar*, 8th East Asia Symposium on Functional Dyes and Advanced Materials 20 – 22 September 2017, NIIST Trivandram.
- Jairam Tagare and V. Sivakumar, "Synthesis, Photophysical and Electrochemical Studies of di-triphenylamine-1, 10 Phenanthroline based fluorophore for Organic Light Emitting Diodes" Optics & Photonics Taiwan, the International Conference (OPTIC) 2017- Oral presentation.

Paper Accepted for Publication

- Shabna Patel, G. Hota, "Synthesis of novel surface functionalized electrospun PAN nanofibers matrix for efficient adsorption of anionic CR dye from water" J. Env. Chem. Engg., Accepted

Books/Book Chapter

- XYLOKETALS – UNIQUE BENZOXACYLCES – Book Chapter by Debayan Sarkar, Nilendri Rout, Barnali Roy ; Studies in Natural Products Chemistry (Bioactive Natural Products), Elsevier 2018.
- Molecular Designing of Luminescent Europium-Metal Complexes for OLEDs: An Overview., V Sivakumar, B Rajamouli., Phosphors, 325-404.
- Eu³⁺-Based Orange-Red-Emitting Inorganic Color Convertors: An Overview., V Sivakumar, S Kasturi., Phosphors, 219-324.
- Phenanthroimidazole-Based Organic Fluorophores for Organic Light-Emitting Diodes: An Overview., V Sivakumar, T.Jairam., Emerging Synthesis Techniques for Luminescent Materials, 305-388.
- White Light Emitting Phosphors for Solid State Lighting., V Sivakumar, R. Marikumar, S. Kasturi, S.Sathish., Emerging Synthesis Techniques for Luminescent Materials, 150-250.

Patent: NA

Awards Received/Distinction Achieved

By Faculty:

Dr. D. Sarkar

- DAAD Research Stay for University Academics and Scientists 2018 at University of Leipzig, Germany.
- VIFA International Young Scientist Award 2017.
- Tohoku University Visiting Professor – Awarded (Dec 2017 – June 2018).
- "Certificate of Appreciation" by Education Expo-FBA- 2017 (Young Scientist Category).

Dr. M Jana

- Received BRNS Young Scientist Research Award

Dr. P. Dash

- (Invited Speaker) Graphene oxide as a Novel Material in Materials Science, Recent Trends in Chemical Science and its Industrial and Biological Relevance (RTCSIBR-2018) 16 Feb 2018 NIT Rourkela.
- (Invited Speaker) Graphene oxide as a potential material in Materials Science and Engineering Faculty Development Programme (FDP) on "Advances in Materials Science & Engineering" (AMSE 2017)", 21 Nov 2017, C.V. Raman College of Engineering (CVRCE).
- Acted as Treasurer in national conference (in association with Indian Photobiology Society) on Biomolecular Dynamics (BDETP), December 18-20, 2017, NIT Rourkela, Odisha.

Dr. R. Dinda

- DFG, Visiting Scientist, German Science foundation DFG (Deutsche Forschungsgemeinschaft), May 2018 – July 2018.
- DAAD Fellow (Visiting Scientist) (Academic host: Prof. Winfried Plass) Friedrich-Schiller-Universitat Jena, Germany May 2017 – July 2017.

Dr. R. K. Behera

- Prof. R.C. Tripathy Young Scientist Award by Orissa Chemical Society.

By Students:

- Commonwealth scholarship by Mr. Nishesh Gupta.
- Mr. Santanu Santra received “Acharya P.C. Ray Memorial Young Scientist Award” in the International Seminar on “Recent Advances in molecules & materials” (RA2M-2018) organized by Haldia Institute of Technology and The Indian Chemical Society.
- Best poster award to Sushree Arpitabala Yadav in the 22nd CRSI National Symposium in Chemistry (CRSI-NSC-22) at IICT Hyderabad.
- Mr. G. Naresh Reddy has been awarded by Indian Chemical Society as “Acharya P. C. Ray memorial Young Scientist Award” 2018

Technical Association/Societies

Dr. H. Sahoo

- Became a member of Indian Photobiology Society

Dr. N. Panda

- Became a life member of CRSI

Dr. R. Dinda

- Life Member of Chemical Research Society of India.

Dr. Santanab Giri

- Became a life member of Indian Photobiology Society

Seminar, Symposia, Winterschool, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

Dr. D. Sarkar

- Invited Talk at Lady Brabourne College, in National Symposium – 31st July 2018.
- Paper Presentation on “Asymmetric Dearomatisation” at International Conference on Organometallic Chemistry, Florence, Italy, 15th-20th July 2018.
- Invited Speaker at Institute of Chemistry, University of Rennes, 10th-14th July 2018.
- Invited Talk at Rajabazar Science College, Kolkata, August 2017.
- Oral Presentation at National Conference at IEST 2017- August.

Dr. H. Sahoo

- Organized a national conference of Indian Photobiology Society (18th to 20th Dec 2017)

Dr. M. Jana

- Acted as a Co-Convener in Biomolecular Dynamics: Experimental and Theoretical Perspectives (BDETP- 2017), during 18-20th December 2017.

Dr. R. Dinda

- Organized a TEQIP III Sponsored Workshop on ‘Recent Trends in Chemical Science and its Industrial and Biological Relevance’ as a convener from February 14th–18th 2018.
- Invited talk at Inorganic Chemistry Colloquium, Ruhr Universitat Bochum, Germany 22nd June 2018.

Dr. S. Chatterjee

- Conducted Workshop on “Recent Trends in Chemical Science and its Industrial and Biological Relevance” (RTCSIBR), February 14-18, 2018

Dr. S. Samal

- Biomolecular Dynamics: Experimental and Theoretical Perspectives (BDETP-2017) held at NIT Rourkela during December 18-20, 2017

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Novel iron based hybrid nanoadsorbents for removal of arsenic from aqueous stream	BRNS	Dr. G. Hota	25	Feb 2018	Feb 2021
Exploring Molecular Intricacy – Developing Facile Catalytic Asymmetric Oxidative Dearomatisation Reactions (CAODRs)	DST	Dr. D. Sarkar	42	2017	2020
Ruthenium catalysed Non-Metathesis Couplings.	DST INSPIRE	Dr. D. Sarkar	35	2014	2019
Nitrogen rich Covalent Organic Cage molecule based materials for Carbon Dioxide Capture applications.	DST-SERB	Dr. M. Jayaprakash	28.11	Mar 2016	Mar 2019
In-silico Studies of Structural Diversity of Glycosaminoglycans and their Interactions with Protein	BRNS	Dr. M. Jana	24.94	2018	2021
Transition-metal catalyzed C-H activation and functionalization: Synthesis of newer heterocycles	CSIR	Dr. N. Panda	25.46	2017	2020
Evaluation of biological potential of transition metal complexes of dithiocarbazates incorporating bioactive derivatives	CSIR, Sanctioned	Dr. Rupam Dinda	15	2018	2020
Molecular design, synthesis and evaluation of novel hydrazone derivatives and their transition metal complexes as potential anticancer agents	DBT Sanction No: 6242- P112/ RGCB/PMD/DBT/ RPDA/2015	Dr. Rupam Dinda	27	2015	2019
Engineering of the Ferritin Nanocage with Relevance to Health and Disease.	DST - INSPIRE	Dr. R. K. Behera	35	Oct 2013	Oct 2018
Unravelling the Role of Heme in Bacterioferritin.	DST-SERB	Dr. R. K. Behera	45	Aug 2017	July 2020
Exploiting the Potential Usage of Ferritin Cage as Nanosink, Nanoreactor and Nanocarrier for Biomedical Applications.	DBT	Dr. R. K. Behera	46	July 2017	July 2020
Synthesis, characterization and reactivity of transition metal clusters and their potential towards metal nanoparticles	DST-SERB	Dr. S. Chatterjee	38	2014	2017
Investigation of functionalized sandwich and half-sandwich organometallic molecules as optical sensing and molecular switching devices	CSIR	Dr. S. Chatterjee	14	2018	2020

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Exploration of Mn/Fe based ternary chalcogenides for possible applications in magnetic refrigeration	SERB, DST	Dr. S. Samal	29.9	Mar 2016	Mar 2019
Investigation of the magnetic structure of gold based intermetallics and FeSb ₂ Se ₄ related compounds	UGC-DAE CSR	Dr. S. Samal	11	Jan 2016	Jan 2019
Theoretical Investigation on Magnetic All Metal and Organo-Zintl Clusters	DST, INSPIRE FACULTY SCHEME	Dr. Santanab Giri	35	2014	2019
Insights into the mechanism of chemical reactions: A conceptual density functional and ab-initio molecular dynamics study	DST	Dr. Santanab Giri	20	2016	2019
Catalytic application of zirconia based functional heterogeneous catalytic materials	BRNS	Dr. B. G. Mishra	22.5	April 2015	Jan 2019
Study to complete mineralization of pesticides found in water resources of eastern India by heterogeneous photocatalytic ozonation route using visible light active bismuth based semiconducting nanoparticles as photocatalyst.	DST-WTI	Dr. B. G. Mishra	26.5	April 2016	Mar 2019
Development of novel visible light assisted photocatalytic route for degradation of emerging pharmaceutical contaminants from aqueous sources using Aurivillius phase complex oxides and their modified analogues as photocatalyst	CSIR	Dr. B. G. Mishra	6.5	April 2018	Mar 2021
Development of colon specific drug delivery system using natural carbohydrate polymer capped, photoluminescent mesoporous silica nanoparticles	DST-WOS	Dr. Supratim Giri	16.5	May 2016	May 2019
Metal free deep blue emitting fluorophores for organic light emitting diodes: approaching NTSC standard	DST	Dr. V. Sivakumar		Sep 2017	Sep 2020
Molecular designing of Iridium complexes for organic electronics	Inspire, DST.	Dr. V. Sivakumar		Jan 2013	Dec 2018

Consultancy Services

Sponsors Address	Title of the Project	Faculty Name
NA	NA	NA

Institutional Programme Support/Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date
NA	NA	NA	NA		

List of Laboratories Developed

Sl. No.	Name of the Laboratories
1.	Organocatalysis and natural product laboratory (G Sahoo)
2.	Nanochemistry laboratory
3.	Molecular simulation and computational chemistry research laboratory
4.	Cell culture laboratory (Prof. R. Dinda)
5.	Bio-organometallic research laboratory (Dr. S Chatterjee)

Equipment Acquired

Sl. No.	Name of the Equipment	Amount (Rs. In Lakhs)
1.	IR Spectrometer	13.5
2.	Micro-melting Apparatus	4.5
3.	Glove box unit with regeneration system	14
4.	Spin coater	
5.	Rota evaporator	

Ph.D. Degrees Awarded by the Department

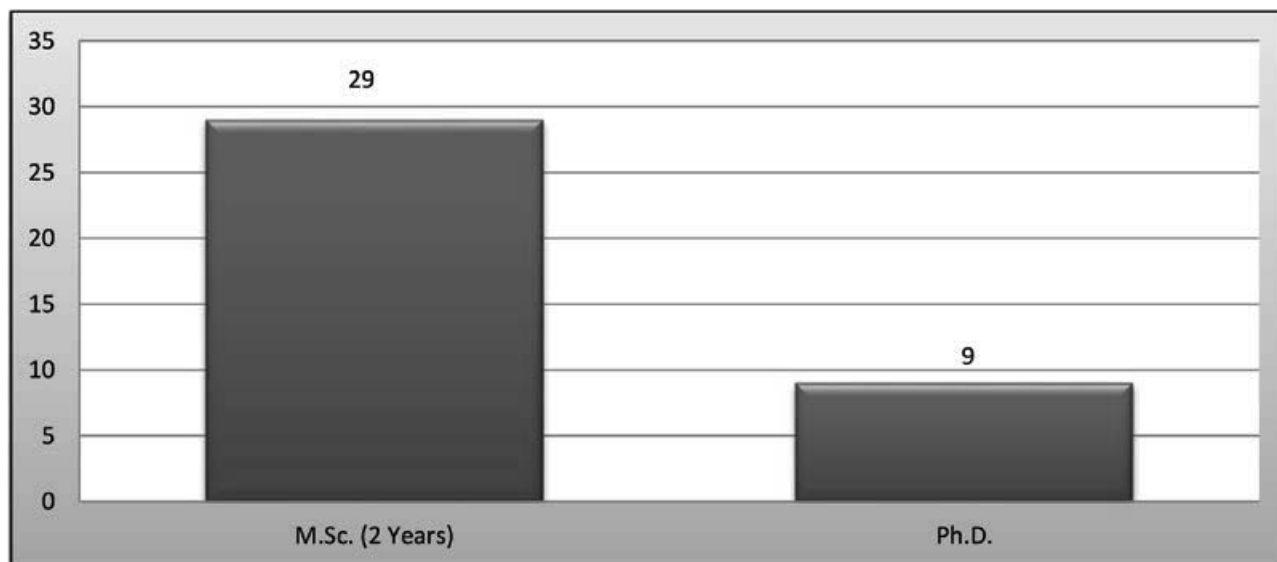
Name of the Student	Title of Thesis	Supervisor
Dayanidhi Mohanta	Molecular Dynamics Studies of the Effects of Alcohols on Chymotrypsin Inhibitor 2	Dr. M. Jana
Dinesh Kumar Nayak	C-N and C-O Bond Formation Reactions: Synthesis of N-Aryl Amides, Benzoxazoles and 3(2H)-Furanones	Dr. N. Panda
Lipeeka Rout	Metal Oxide-Decorated Graphene Oxide Nanocomposites for Catalytic and Photocatalytic Applications.	Dr. P. Dash
Aniket Kumar	Metal Oxide-Decorated Graphene Oxide Nanocomposites for Catalytic and Photocatalytic Applications.	Dr. P. Dash
Basanti Ekka	Synthesis of Nanoporous Materials for Abatement of Inorganic and Organic Contaminants in Water	Dr. R. K. Patel
Sudarshana Majumder	Oxidomolybdenum complexes of mono- and dibasic polydentate ligands: Characterization, biological and catalytic evaluation	Dr. R. Dinda
Sasmita Mishra	Synthesis and reactivity of cyclopentadienyl based organometallic compounds and their electrochemical and biological properties	Dr. S. Chatterjee
Vijalakshmi Tirkey	Synthesis, characterization and reactivity of ferrocene containing organometallic compounds	Dr. S. Chatterjee
Sagnika Pradhan	Catalytic Applications of Surface and Structurally Modified Zirconia Nanoparticles for Synthesis of Biologically Important Molecules	Dr. B. G. Mishra Dr. Supratim Giri (Co-supervisor)
B. Rajamouli	Rational design and synthesis of optoelectronic lanthanide based molecular materials for OLEDs.	Dr. V. Sivakumar
K. Aravind Babu	Molecular designing and synthesis of highly efficient red emitting Ir based dendrimers for OLED applications	Dr. V. Sivakumar

M.Tech. Research Degrees Awarded by the Department

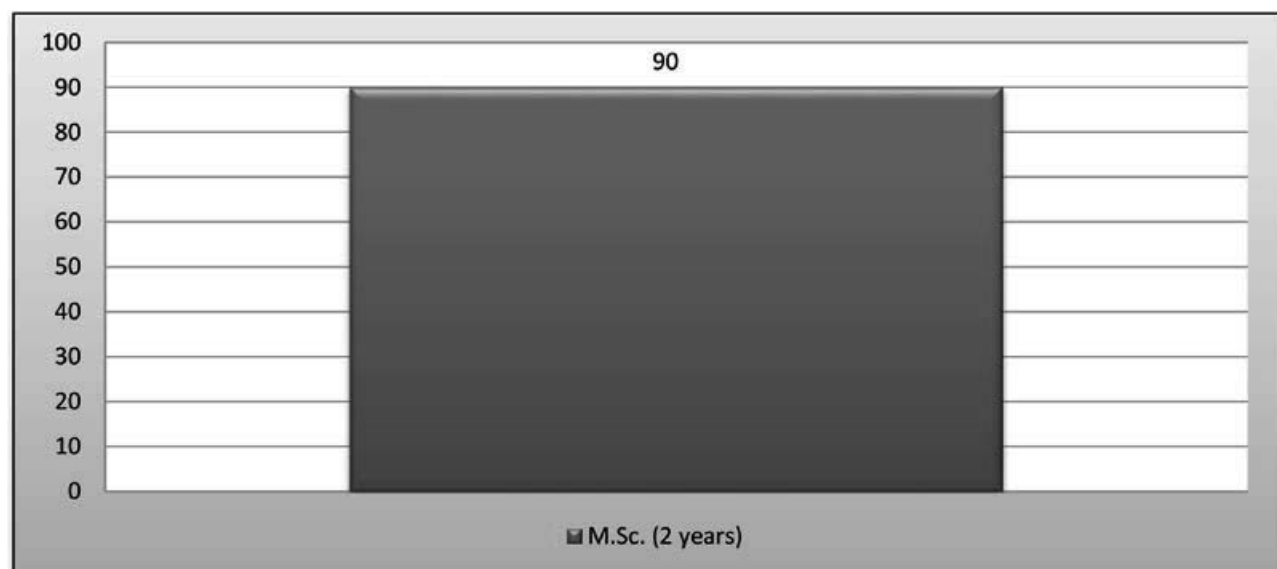
Name of the Student	Title of Thesis	Supervisor
NA	NA	NA

Department of EARTH & ATMOSPHERIC SCIENCES

Student Intake in 2017-18



Total Student Strength



Faculty

Sl. No.	Name & Specialization
1	Prof. Sk. Md. Equeenuddin (equeen@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT, Kharagpur) Aqueous Geochemistry, Hydrogeology, Nanogeosciences, Metal Mobilization, Application of Remote Sensing
2	Prof. Jagabandhu Panda (pandaj@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT, Delhi) Mesoscale and Regional Scale Modelling, Urbanization Effects, Tropical cyclones, Remote Sensing Applications in Atmospheric Science, Aerosol-Cloud Interaction

Sl. No.	Name & Specialization
3	Prof. Sakthi Saravana Chinnasamy (chinnasamys@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Kharagpur) Ore Geology, Metamorphic Petrology, Fluid Inclusion Studies
4	Prof. Bhaskar Kundu (kundub@nitrkl.ac.in) Assistant Professor, Ph.D (CSIR-NGRI, Hyderabad) Tectonic Geodesy (Seismology, Crustal Deformation study, Active Tectonics)
5	Prof. Naresh Krishna Vissa (vissan@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT, Kharagpur) Air-Sea Interactions, Physical Oceanography
6	Prof. Rekha S (srekha@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Kharagpur) Metamorphic Petrology, Structural Geology, Geochronology
7	Prof. Bhishma Tyagi (tyagib@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Kharagpur) Dynamics of Atmospheric Boundary Layer, Air Pollution Study, Atmospheric Modeling
8	Prof. Krishna Kishore Osuri (osurik@nitrkl.ac.in) Assistant Professor, Ph. D. Numerical Weather Prediction, Data assimilation, Tropical Cyclone and Monsoon Rainfall, Land Surface Processes, Climate Studies

Publication

Publications in Journals

- Yadav, A., Chatterjee, S., Equeenuddin, Sk. Md., "Suspended sediment yield estimation using genetic algorithm-based artificial intelligence models in Mahanadi river", *Hydrological Sciences Journal*, doi.org/10.1080/02626667.2018.1483581, 2018.
- Bhoi, Y.P., Behera, C., Majhi, D., Equeenuddin, Sk. Md., Mishra, B. G., "Visible light-assisted photocatalytic mineralization of diuron pesticide using novel type II CuS/Bi₂WO₆ heterojunctions with a hierarchical micro-spherical structure", *New Journal of Chemistry*, Vol. 42, pp. 281-292, 2018.
- Equeenuddin, Sk. Md., Pattnaik, B. K., "Assessment of heavy metal contamination in sediment at Sukinda Ultramafic Complex using HAADF STEM", *Chemosphere*, Vol. 185, pp. 309-320, 2017.
- Equeenuddin, Sk. Md., Panda, A., Singh, V., Sahoo, P.K., Sahu, S., Basantray, S.K., "Geochemical appraisal of mine discharge and tailing at Malanjkhand copper mine, India", *Journal of the Geological Society of India*, Vol. 90, pp. 209-216, 2017.
- Anandh, P. C., Vissa, N. K., & Broderick, C., "Role of MJO in modulating rainfall characteristics observed over India in all seasons utilizing TRMM" *International Journal of Climatology*, vol. 38(5), pp. 2352-2373, 2018.
- Chinnasamy, S.S., Mishra, B., "Genetic implications of disordered graphite in the Jonnagiri granodiorite-hosted gold deposit, Eastern Dharwar Craton", India. *Ore Geology Reviews*, Vol.89 pp. 587-593, 2017.
- Mishra, B., Prusetha, K. L., Hazarika, P., Chinnasamy, S. S., "Nature and source of the ore-forming fluids associated with orogenic gold deposits in the Dharwar Craton", *Geoscience Frontiers*, Vol.9, pp.715-726, 2018.
- Semeena V. S., Payra, S., Srivastava, S. K., Panda, J., "Air Pollution: Why does it matter?", *International Journal of Earth and Atmospheric Science*, 05, pp. 1-12, 2018.
- Rath, S. S., Panda, J., Annadurai, R., Nanda, S., "A Study on Land Suitability for Rice Cultivation in Khordha District of Odisha (India) Using Remote Sensing and GIS", *Earth Systems and Environment*, 02, pp 119-132, 2018.
- Igri, P. M., Tanessong, R. S., Vondou, D. A., Panda, J., Garba, A., Mkankam, F. K., Kamga, A., "Assessing the performance of WRF model in predicting high-impact weather conditions over central and western Africa: an ensemble-based approach", *Natural Hazards*, pp 1-23, 2018. Available at <https://doi.org/10.1007/s11069-018-3368-y>
- Kant, S., Panda, J., Pani, S. K., Wang, P. K., "Long-term study of aerosol-cloud-precipitation interaction over the eastern part of India using satellite observations during pre-monsoon season", *Theoretical and Applied Climatology*, pp 1- 22, 2018. Available at <https://doi.org/10.1007/s00704-018-2509-2>

- Chawla, I., Osuri, K. K., Mujumdar, P. P., Niyogi, D., "Assessment of the Weather Research and Forecasting (WRF) Model for Extreme Rainfall Event Simulations in the Upper Ganga Basin", *Hydrol. Earth Syst. Sci.* 22, pp 1095-1117, 2018.
- Reddy, N. K. B., Venkatesan, R., Osuri, K. K., Mathew, S., Kadiyam, J., Joseph, K. J., "Comparison of AMSR-2 wind speed and sea surface temperature with moored buoy observations over the Northern Indian Ocean", *Journal of Earth System Science*, 127, 2018. Available at <https://doi.org/10.1007/s12040-017-0902-3>.
- Reddy, N. K. B., Osuri, K. K., Sivareddy, S., Venkatesan, R., "An observational analysis of the evolution of a mesoscale anti-cyclonic eddy over the Northern Bay of Bengal during May–July 2014", *Ocean dynamics*, pp 1-11, 2018. Available at <https://doi.org/10.1007/s10236-018-1202-4>
- Tyagi, B, Magliulo, V., Finardi, S., Gasbarra, D., Carlucci, P., Toscano, P., Zaldei, A., Riccio, A., Calori, G., Allura, A. D', Gioli, B., "Performance Analysis of Planetary Boundary Layer Parameterization Schemes in WRF Modeling Set Up over Southern Italy", *Atmosphere*, 9(7), 272: 1-22, 2018. Available at <https://doi.org/10.3390/atmos9070272>
- Kundu, B., Vissa, N. K., Panda, D., Jha, B., Asaithambi, B Tyagi, S Mukherjee, "Influence of a meteorological cycle in mid-crustal seismicity of the Nepal Himalaya", *Journal of Asian Earth Sciences*, 146, 317–325, 2017. Available at <https://doi.org/10.1016/j.jseaes.2017.06.003>
- Dibyashakti Panda, Bhaskar Kundu, Vineet K Gahalaut, Claude Rangin "Crustal deformation, spatial distribution of earthquakes and along strike segmentation of the Sagaing Fault, Myanmar" *Journal of Asian Earth Sciences*, Vol.166, pp.89-94, 2018.
- Dibyashakti Panda, Bhaskar Kundu, M Santosh "Oblique convergence and strain partitioning in the outer deformation front of NE Himalaya" *Scientific reports*, Vol.6, article number.10564, 2018.
- Kalpna Gahalaut, Vineet K. Gahalaut, Rajeev Kumar Yadav, Bhaskar Kundu "The 12 May 2015 Kodari earthquake (Mw 7.3) in Central Nepal: delayed triggering by the 25 April 2015 Gorkha earthquake (Mw 7.8)" *Current Science*, Vol.114, pp. 1534-1539, 2018.
- Bhaskar Kundu, Naresh Krishna Vissa, Dibyashakti Panda, Birendra Jha, Renuhaa Asaithambi, Bhishma Tyagi, Sohinee Mukherjee "Influence of a meteorological cycle in mid-crustal seismicity of the Nepal Himalaya" *Journal of Asian Earth Sciences*, Vol.146, pp.317-325, 2017.

Publications in Conferences

- Equeenuddin, Sk. Md., "Influence of mineralogy on acid mine drainage", National Conference on Water Technology Innovation and Solution, Faridabad, 23rd March, 2018.
- Equeenuddin, Sk. Md., Pattnaik, B. K., "Geochemistry of hexavalent chromium in Sukinda ultramafic complex", National Workshop on Groundwater Challenges in India, Raipur, 13th January, 2018.
- Bastia, F., Equeenuddin, Sk. Md.. "Chemical weathering of continental rocks and its impact on global climate: a review", International Soil and Water Assessment Tool Conference, IIT Madras, 10-12 January, 2018.
- Raymahashay, B. C., Equeenuddin, Sk. Md., Bastia, F.. "Estimation of CO₂ pressure from river and groundwater composition", 7th International Groundwater Conference (IGWC -2017), New Dehi, India, 11-13, December 2017.
- Vissa, N.K., Gulakaram, V.S., Bhaskaran P.K., "Sea level anomalies variability during contrasting summer monsoon seasons over Bay of Bengal", OSICON 2017, NCESS, Trivandrum, 28th – 30th August, 2017.
- Anandh, P.C., Vissa, N.K., "Characterization of intraseasonal rainfall extremes over India", INTROMET-2017, Indian Metrological Society –Ahmedabad Chapter and Space Applications Centre (ISRO), Ahmedabad, 7th-10th November 2017.
- Vissa, N.K., Anandh, P.C., "Impact of MJO in modulating rainfall characteristics observed over east coast of India utilizing TRMM", National seminar on "Impact of Climate Change on Extreme Weather Events and Indian Ocean (EWEIO2017), Andhra University, Visakhapatnam, 27-29 November, 2017.
- Praharaj, P., Rekha, S., "Structure, Petrology and Chronology of the Trivandrum block of Southern Granulite Terrain, South India", National Seminar on Dynamics of Surface and Subsurface Geological Processes, Pondicherry University, 8-9 February 2018.

- Chinnasamy, S.S., “Ore fluid characteristics of orogenic gold deposits: An overview”, National Symposium on Challenges and Strategies on Mineral Exploration and Mining, Nagpur India Journal of Geosciences Research, Vol.1, pp 279-280, 2017.
- Pal, D., Chinnasamy, S. S., “Fluid inclusion and stable isotope study from Chigargunta gold deposit Dharwar Craton, India” Dynamics of Surface and Subsurface Geological Processes. 2018
- Mohanty, U C, Nadimpalli, R., Osuri K. K., Gopalakrishnan, S. G., 2017, Predictability of Tropical Cyclones over Bay of Bengal using high resolution meso-scale models, 4th International Workshop on Tropical Cyclone Landfall Processes (IWTCLP) Macau, People’s Republic of China, 5-7 December 2017.
- J. Panda and K. Singh, “A Climatological Perspective of Tropical Cyclone Activity and Landfalling Trend in North Indian Ocean Region”, 14th Annual Meeting of the Asia Oceania Geosciences Society, Suntec, Singapore, 6-11 August 2017.
- J. Panda and S. S. Rath, “Analysing Hydro-Meteorological Scenario During 2015 Chennai Flood Event and Possible Role of Urbanization”, 14th Annual Meeting of the Asia Oceania Geosciences Society, Suntec, Singapore, 6-11 August 2017.
- Gogikar P., Tyagi B., “Spatial and temporal variation of rspm and spm over an industrial site”, International Tropical Meteorological Symposium on Advancements in Space-Based Earth Observations and Services for Weather and Climate (INTROMET 2017), Ahmedabad, India, 07-10 November 2017.

Paper Accepted for Publication

- Kar, S., **Equeenuddin, Sk. Md.**, “Adsorption of Hexavalent Chromium using Natural Goethite: Isotherm, Thermodynamic and kinetic Study”. *Journal of the Geological Society of India*, 2018.
- Dibyashakti Panda, Bhaskar Kundu, Vineet K Gahalaut “Non tectonic signals in tectonic geodesy” Current Science, 2018.
- Dibyashakti Panda, Bhaskar Kundu, Vineet K Gahalaut, Roland Burgmann, Birendra Jha, Renuha Asaithambi, Rajeev Kumar Yadav, Naresh Krishna Vissa, Amit kumar Bansal “Seasonal modulation of dip slow-slip earthquakes on the Main Himalayan Thrust” Nature Communications, 2018.

Books/Book Chapter

- Rafiq M., A. K. Mishra, **J. Panda** and S. K. Sharma, 2018: Monitoring convective clouds over India and nearby regions using multi-spectral satellite observations. Chapter 6 (51 – 60) of the book entitled “Proceedings of International Conference on Remote Sensing for Disaster Management”. The Springer Netherlands, Eds. **Rao P. J.**, **K. N. Rao**, **S. Kubo**. ISBN 978-3-319-77275-2, eBook ISBN 978-3-319-77276-9, DOI: 10.1007/978-3-319-77276-9.
- Gogikar, P., and B. **Tyagi**, 2017: Air Quality Assessment over Mining area of Chandrapur during 2012-2016, Sustainable Mining Practices (book published by Narosa Publication, India), Gorai, A.K., Nimaje, D.S. (Ed.), ISBN: 978-81-8487-604-8, 260 pp.

Patent

Awards Received/Distinction Achieved

By Faculty:

- Sk. Md. Equeenuddin received the Young Scientist Award in Ground Water Studies-2017 from the Indian National Committee of the International Association of Hydrogeologists.
- Bhaskar Kundu: Outstanding contribution in Reviewing (by Journal of Asian Earth Sciences), 2017

By Students:

Technical Association/Societies

- Life member (J. Panda): Indian Aerosol Science and Technology Association
- Life member (J. Panda): Indian Society of Remote Sensing
- Life member (J. Panda, K. K. Osuri and S. S. Rath): Indian Meteorological Society
- Member (J. Panda): Asia Oceania Geosciences Society

- Member (J. Panda): American Meteorological Society
- Member (S. S. Chinnasamy): Association of Genesis of Ore Deposits
- Member (S. S. Chinnasamy): Society of Economic Geologist, USA

Seminar, Symposia, Winter School, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

Conducted

Attended:

- 06-11 August 2017: Participation of Prof. J. Panda in the 14th annual meeting of the Asia Oceania Geosciences Society held at the Suntec Convention and Exhibition Centre, Singapore.
- 21- 22 September 2017: Prof. K. K. Osuri as a resource person in DST's national workshop on "Urban Climate: Science, Impact and Adaptation", held at IIT Bhubaneswar, Odisha, India.
- 15 – 16 December, 2017: Prof. K. K. Osuri as a resource person in Indo-US Workshop on "Prediction of Heavy Rainfall associated with Extreme Weather Events" held at IIT Bhubaneswar, Odisha, India.
- 18- 25 June, 2018: Prof. K. K. Osuri as a resource person in GIAN program on Extreme Weather Events over India: "Observations, Assimilation and Modeling with special focus on Tropical Cyclones" held at IIT Bhubaneswar, Odisha, India.

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Recoverable reserve estimation using non-gaussian copula-based ore body simulation along with open pit and stope optimization techniques	Ministry of Mines, Govt. Of India	Sk. Md. Equeenuddin	12.3	01-09-2014	31-08-2017
Structure, metamorphism and chronology of melting and deformation in the Kerala Khondalite Belt and across the Achankovil Shear Zone: relevance to Gondwanaland assembly	SERB, Department of Science & Technology, Govt. of India	Dr. Rekha S.	31.2	23-02-2015	23-08-2018
Stable isotopic and fluid inclusion studies on orogenic gold deposits in the Dharwar Craton: Implications on source of gold transporting fluids and metals.	SERB, Department of Science & Technology, Govt. of India	Dr. Sakthi Saravanan Chinnasamy	23.00	16-10-2015	15-10-2018
Petrology and geochemistry of the Nidar Ophiolite Complex, Ladakh Himalaya	DST-SERB	PI :Dr. Ranjit Nayak, Co-PI : Prof. Sakthi Saravanan Chinnasamy	33.00	01-03-2015	Continuing
Genesis of gold mineralization in the Gadag greenstone belt, western Dharwar Craton: Constrains from metamorphism, ore mineralogy, geochemistry and fluid evolution	DST-SERB	Prof. Sakthi Saravanan Chinnasamy	36.00	Granted	-
Interaction of urban boundary layer with mesoscale weather in coastal and continental city environment	SERB, Department of Science & Technology, Govt. of India	Dr. Jagabandhu Panda	34.232	09-09-2016	08-09-2019

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Analysing Martian atmospheric characteristics pertaining to dust storms, dust devils and clouds using MOM observations and a numerical model	SAC-ISRO	Dr. Jagabandhu Panda	18.332	01-10-2016	30-09-2016
Preparing a size based database of North Indian Ocean cyclones and studying their meteorological characteristics using scatterometer products and two numerical models during warming climate scenario	Space Applications Centre, Ahmedabad	Dr. Jagabandhu Panda	21.132	May 2017	May 2020
Process identification of pre-monsoon season convective activity genesis and response of thermodynamics under a climate change scenario over Eastern and Northeastern India	SERB, Department of Science & Technology, Govt. of India	Dr. Bhishma Tyagi	23.622	Aug 2017	Aug 2020
Aerosol-Cloud interaction and response for extreme weather events over the Himalayan region	SPLICE, Department of Science & Technology, Govt. of India	Dr. Bhishma Tyagi	23.296	Mar 2018	Mar 2021
Bay of Bengal mesoscale eddies role on rainfall, convection and winds: A multi-sensor study	Ministry of Earth Sciences, Govt. of India	Naresh Krishna Vissa	22.482	Dec 2016	Dec 2019
Probing the changes in the frequency and intensity of short-duration extreme rainfall events over east coast of India	SERB, Department of Science & Technology, Govt. of India	Naresh Krishna Vissa	23.902	Mar 2017	Mar 2020
Advancing prediction skill of rapid intensity changes of Tropical cyclones over North Indian Ocean.	SERB, Department of Science & Technology, Govt. of India	Dr. Krishna Kishore Osuri	44.912	17-03-2017	17-03-2020
Improvement in heavy rainfall prediction over Eastern sector of India using high resolution mesoscale analysis and modelling system	Ministry of Earth Sciences, Govt. of India	Dr. Krishna Kishore Osuri	57.90	30-05-2017	30-05-2020
Crustal deformation study across Narmada-Son Failed rift Zone, Central India.	Ministry of Earth Sciences (MoES)	Dr. Bhaskar Kundu	100.00	2018	2023

Consultancy Services

Sponsors Address	Title of the Project	Faculty Name
Indrani Patnaik	Ultimate Pit Slope Stability at Unchabali Iron mines	Sk. Md. Equeenuddin Sarat K. Das (Co-PI)
Kamaljeet Singh Ahluwalia, Barbil	Surface run-off management study at Nuagaon iron ore mines, Guali	Sk. Md. Equeenuddin H. B. Sahu (Co-PI)
Sainik Mining Pvt. Ptd	Petrography and Alkali Aggregate Reactivity test of rock and sand	Sk. Md. Equeenuddin
Brahmani Developers Ltd	Alkali Aggregate Reactivity test of rock and sand	Sk. Md. Equeenuddin
GKC, Hyderabad	Alkali Aggregate Reactivity test of rock and sand	Sk. Md. Equeenuddin

Institutional Programme Support/Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date

Equipment Acquired

Sl. No.	Name of the Equipment	Amount (Rs. in Lakhs)
1	Laser precipitation monitor	4.8
2		
3		
4		
5		
6		
7		

List of Laboratories

Sl. No.	Name of the Laboratories
1	Atmospheric Instrumentation
2	Modelling and Simulation Laboratory
3	Petrology
4	Fluid Inclusion microthermometry lab Equipment: LINKAM THMSG600 Heating freezing stage.
5	Structural Geology: Equipped with Olympus-BX-43 state of the art Petrological Microscope with transmitted and reflected light facility
6	Optical Microscope
7	Established Coal Geology
8	Modelling and Simulation
9	Geochemistry
10	Hydrogeology

Ph.D. Degrees Awarded by the Department

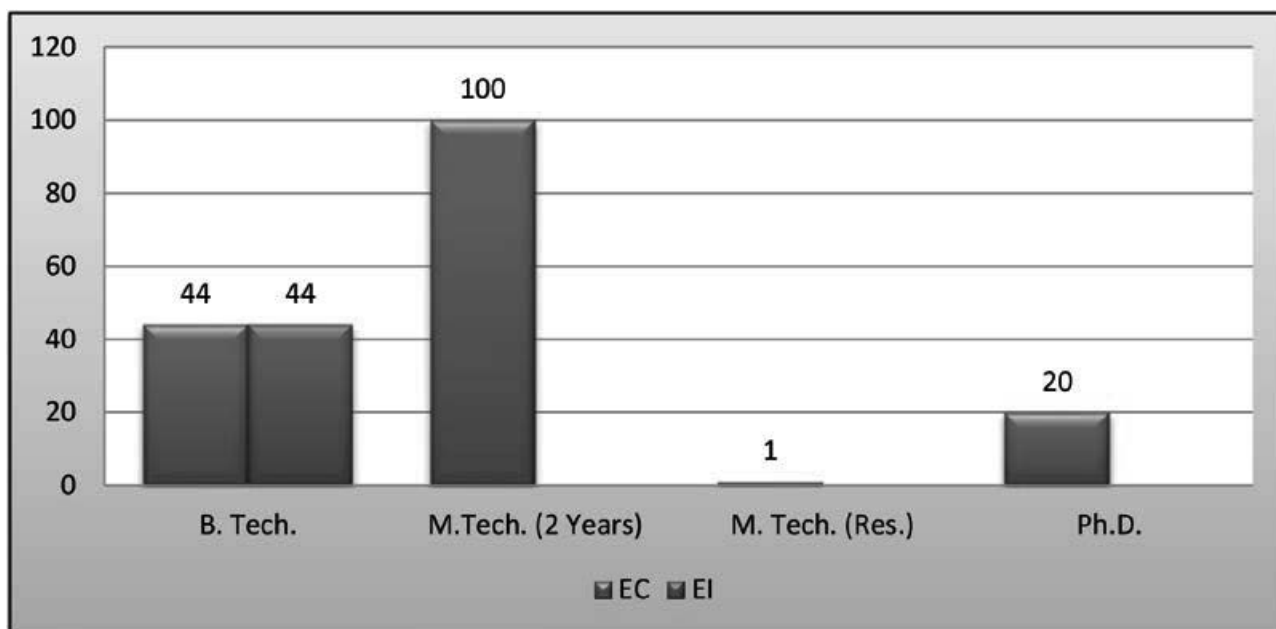
Name of the Student	Title of Thesis	Supervisor
Binaya K Pattnaik	Geochemistry of Water, Soil and Sediment with Special Reference to Hexavalent Chromium at the Sukinda Ultramafic Complex, India	Sk. Md. Equeenuddin

M.Tech. Research Degrees Awarded by the Department

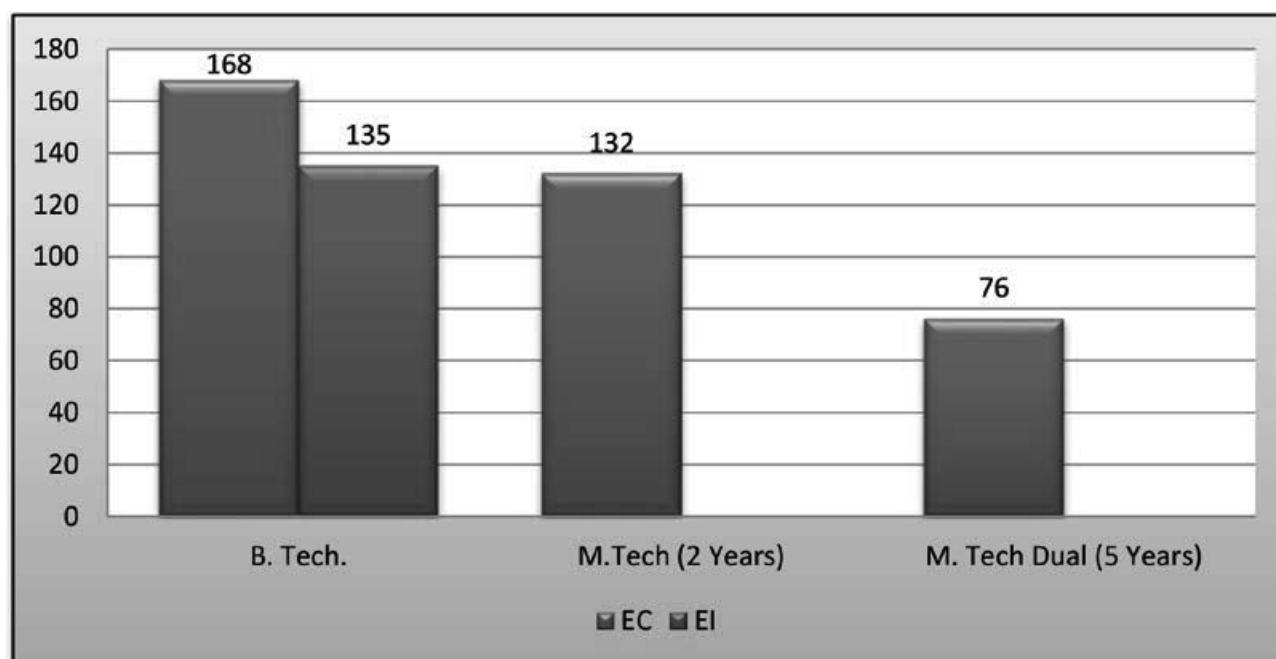
Name of the Student	Title of Thesis	Supervisor

Department of ELECTRONICS & COMMUNICATION ENGINEERING

Student Intake in 2017-18

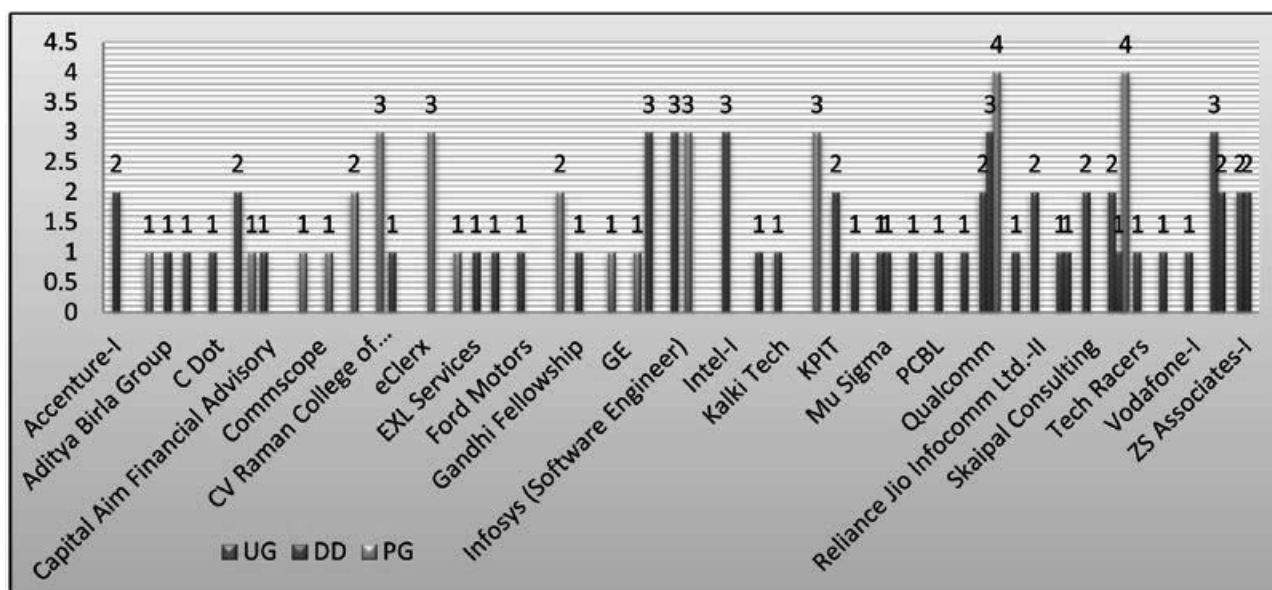


Total Student Strength

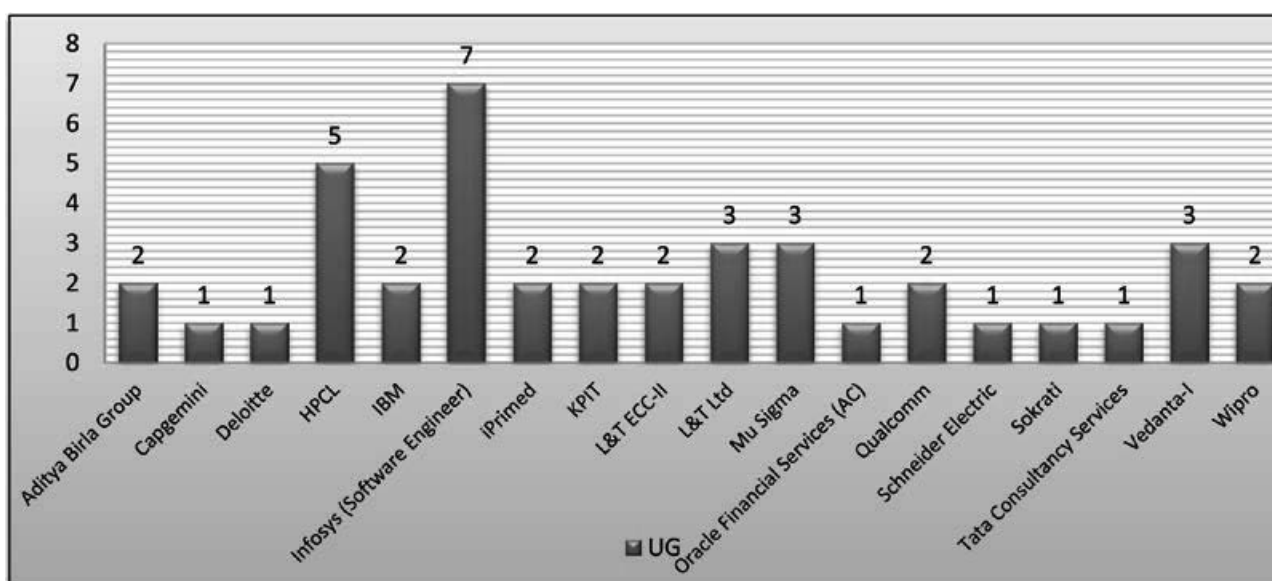


Placement Statistics

Electronics & communication Engineering



Electronics & Instrumentation Engineering



Faculty

Sl. No.	Name & Specialization
1	Prof. Kamalakanta Mahapatra (kkm@nitrrkl.ac.in) Professor, Ph.D. (IIT Kanpur) Power Electronics, Electronic Circuits & Design, VLSI Design, Embedded Systems, IOT for critical application
2	Prof. Sarat Kumar Patra (skpatra@nitrrkl.ac.in) Professor, Ph.D. (Edinburgh) Signal Processing, Fuzzy Systems, Mobile Communication

Sl. No.	Name & Specialization
3	Prof. Sukadev Meher (smeher@nitrkl.ac.in) Professor, Ph.D. (NIT Rourkela) Digital Image Processing, Digital Signal Processing, computer vision, electronics instrumentation
4	Prof. Santanu Kumar Behera (skbehera@nitrkl.ac.in) Associate Professor , Ph.D. (Jadavpur) Microwave Engg., Microstrip Antenna, Active Integrated Antenna
5	Prof. Tarun Kumar Dan (tkdan@nitrkl.ac.in) Instrumentation
6	Prof.(Mrs.) Poonam Singh (psingh@nitrkl.ac.in) Associate Professor, Ph. D. (IIT, Kharagpur) Wireless Communication
7	Prof. Umesh Chandra Pati (ucpati@nitrkl.ac.in) Associate Professor, Ph.D. (IIT, Kharagpur) Digital Image Processing, Instrumentation
8	Prof. Debiprasad Priyabrata Acharya (dpacharya@nitrkl.ac.in) Associate Professor, Ph.D. (NIT Rourkela) Digital & Analog Integrated Circuits, Embedded Hardware & Software, Internet of Things (IoT), VLSI Signal Processing, Wireless Integrated Circuits,
9	Prof. Samit Ari (samit@nitrkl.ac.in) Assistant Professor, Ph.D (IIT, Kharagpur) Digital Signal Processing, Image Processing, Pattern Recognition, Biomedical Signal Processing, Computer Vision and Neural Network
10	Prof. Siddharth Deshmukh (deshmukhs@nitrkl.ac.in) Assistant Professor, Ph.D. (Kansas State University USA) Wireless communication, Statistical Signal Processing, Optimization theory, Networked Controlled Systems
11	Prof. Manish Okade (okadem@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT, Kharagpur), M.Tech (IIT, Kharagpur) Video Analysis, Image Forensics
12	Prof. Ajit Kumar Sahoo (ajitsahoo@nitrkl.ac.in) Assistant Professor, Ph.D. (NIT Rourkela) Digital Signal Processing, Radar Signal Processing, Evolutionary Computation, Neural Network
13	Prof. Lakshi Prosad Roy (royl@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT, Kharagpur) Detection and Estimation, DSP, Statistical Signal Processing, MIMO Radar technology, GPR
14	Sudipta Maity, Assistant Professor Microwave Engg., Microstrip Antenna
15	Prof. Santos Kumar Das (dassk@nitrkl.ac.in) Assistant Professor, MS (IISc. Bangalore), Ph.D.(NIT Rourkela) Computer Networking, Sensor Networking, Optical Networking, Smartcard and Biometric technology
16	Prof. Sougata Kumar Kar (kars@nitrkl.ac.in) Assistant Professor, Ph.D.(IIT Kharagpur) Analog integrated circuit, Sensor interfacing circuits, Instrumentation, Biomedical circuits
17	Prof. Santanu Sarkar (sarkars@nitrkl.ac.in) Assistant Professor, MS. (IIT Kharagpur) VLSI, Analog and Mixed Signal Design, High Speed data Converter Design, and Radiation Hardening by Design
18	Prof. Subrata Maiti (smaiti@nitrkl.ac.in) Assistant Professor , M Tech (IIT Kanpur) Radio frequency engineering, Electromagnetic modelling, inverse scattering, ground penetrating radar modelling, GPR signal processing
19	Prof. Ayas Kanta Swain (swaina@nitrkl.ac.in) Assistant Professor, M.Tech (NIT Rourkela) Network on Chip Design, VLSI Design and Embedded Systems
20	Prof. Upendra Kumar Sahoo (sahooupen@nitrkl.ac.in) Assistant Professor, Ph.D. (NIT Rourkela) Digital Signal Processing

Sl. No.	Name & Specialization
21	Prof. Shrishailayya Mallikarjunayya Hiremath (hiremaths@nitrrkl.ac.in) Assistant Professor, M.Tech (NIT Rourkela) Wireless Communication with prospective signal processing cognitive radio.
22	Prof. Banibrata Mukherjee, (mukherjeeb@nitrrkl.ac.in) Assistant Professor, Ph.D. (IIT, Kharagpur) Electrostatically actuated MEMS and NEMS, Design and fabrication of microsensors, Energy Harvesting.
23	Hemant Sharma, Assistant Professor Signal Processing
24	Prasun Chongder, Assistant Professor Microwave Engg., Microstrip Antenna.

Publication

Publications in Journals

- Nayak, Rashmiranjan, and Subrata Maiti. "A Review of Bow-Tie Antennas for GPR Applications." IETE Technical Review(2018): 1-16.
- Govinda Rao Locharla , Kamala Kanta Mahapatra , Samit Ari; "Variable length mixed radix MDC FFT/IFFT processor for MIMO-OFDM application"; IET Computers & Digital Techniques(2018), 12 (1):9.
- Samoju, Visweswara Rao; Mahapatra, Kamalakanta; Tiwari, Pramod Kumar; " Analytical modeling of subthreshold characteristics by considering quantum confinement effects in ultrathin dual-metal quadruple gate (DMQG) MOSFETs"; Superlattices and Microstructures; Volume 111, November 2017, Pages 704-713.
- S. R. Sahoo; Sudeendra Kumar K and K. K. Mahapatra; "A novel current controlled configurable RO PUF with improved security metrics"; Integration, the VLSI Journal; Volume 58, June 2017, Pages 401-410.
- Sudeendra Kumar K S., G. H. Rao R. Sahoo; and K. K. Mahapatra; "Secure split test techniques to prevent IC piracy for IoT devices" Integration, the VLSI Journal; Volume 58, June 2017, Pages 390-400.
- Vijay K Sharma, KK Mahapatra; "MIL based visual object tracking with kernel and scale adaptation"; Signal Processing: Image Communication; Volume 53, April 2017, Pages 51-64.
- Rajesh Kumar Patjoshi , Kamalakanta Mahapatra; "High-performance unified power quality conditioner using non-linear sliding mode and new switching dynamics control strategy "; IET Power Electronics(2017), 10 (8):863.
- Debasish Nayak, Debiprasad Priyabrata Acharya , Kamalakanta Mahapatra; "Current Starving the SRAM Cell: A Strategy to Improve Cell Stability and Power"; Circuits Syst Signal Process (2017) 36:3047–3070.
- Debasish Nayak, Debiprasad Priyabrata Acharya , Kamalakanta Mahapatra; "A read disturbance free differential read SRAM cell for low power and reliable cache in embedded processor"; AEU - International Journal of Electronics and Communications Volume 74, April 2017, Pages 192-197.
- S. Padhee, U. C. Pati, and K. Mahapatra; Overview of high-step-up DC–DC converters for renewable energy sources; IETE Technical Review; 1-17.
- Vijay K Sharma, K K Mahapatra; "Visual object tracking based on sequential learning of SVM parameter", Digital Signal Processing Volume 79, August 2018, Pages 102-115.
- Sauvagya Ranjan Sahoo, Sudeendra Kumar and Kamalakanta Mahapatra; "A novel configurable ring oscillator PUF with improved reliability using reduced supply voltage", Microprocessors and Microsystems Volume 60, July 2018, Pages 40-52.
- Subhransu Padhee , Umesh Chandra Pati and Kamalakanta Mahapatra; " Closed-loop Parametric Identification of DC-DC Converter"; Journal of Systems and Control Engg.
- Nandita Dalmia, Manish Okade, "Robust First Quantization Matrix Estimation based on Filtering of Recompression Artifacts for Non-Aligned Double Compressed JPEG Images", Signal Processing: Image Communication, Elsevier, vol. 61, pp. 9-20, Feb. 2018.

- Debakanta Behera, Biswajit Dwivedy, Debasis Mishra, Santanu Behera, "Design of A CPW Fed Compact Bow-Tie Microstrip Antenna With Versatile Frequency Tunability", IET Microwaves and Antenna Propagation, DOI: 10.1049/iet-map.2017.0421, pp 1-8, 2017.
- Biswajit Dwivedy, Ayaskanta Panigrahi & Santanu Kumar Behera, "An Enhanced Gain Dual-Polarized Dielectric Resonator Antenna Array with High Isolation for C-Band Applications", IETE Journal of Research, DOI: 10.1080/03772063.2017.1367263, 2017.
- B Dwivedy, S K Behera and D Mishra, "Wideband Multiple Phase Shift Quad Feed Network for Polarization Reconfigurable Antennas" Electromagnetics, (Taylor & Francis), Electromagnetics, Volume 37, 2017- Issue 8.
- Yogesh Kumar Choukiker and Santanu Kumar Behera, "Wideband Frequency Reconfigurable Koch Snowflake Fractal Antenna", IET Microwaves, Antennas and Propagation 2017, Vol. 11, Issue 2, pp. 203– 208.
- Banibrata Mukherjee, K.B.M Swamy and Siddhartha Sen, "Study on Dynamic Actuation for Double Microcantilever based Comb Drives with an In-house Experimental Set-up", Journal of Micro/Nanolithography, MEMS, and MOEMS, vol.17, issue 1, pp. 015004, (2018).
- Banibrata Mukherjee and Siddhartha Sen, "Generalized Closed form Solutions for Feasible Dimension Limit and Pull-in Characteristics of Electrostatically Actuated Nanocantilever under Influences of van der Waals and Casimir Force", Materials Research Express, (IOP) vol. 5, no. 4, 045028 (2018).
- Mithlesh Kumar, Banibrata Mukherjee, K.B.M Swamy and Siddhartha Sen, "A Novel Design for Enhancing the Sensitivity of a Capacitive MEMS Device", IEEE Journal of Microelectromechanical Systems, volume. 27, issue 4, pp. 656-666, (2018).
- S. Gupta, A. K. Sahoo, U. K. Sahoo, "Nonlinear space-time varying parameter estimation using consensus-based in-network distributed strategy," Digital Signal Processing-Elsevier, Vol. 79, pp.175-189, 2018.
- Bibhuti Bhusan Pradhan and Lakshi Prosad Roy, "Performance assessment of correlated rayleigh-inverse gaussian fading channel over distributed MIMO systems with ZF Detectors", IET Communications, May 2018 (Article in Press), 10.1049/iet-com.2018.0146.
- Dheeren Ku Mahapatra, Soumya Shubhra Ray, and Lakshi Prosad Roy, "Maximum a posteriori-based texture estimation by despeckling of SAR clutter amplitude data", IET Image Processing, vol.11, no.8, pp.656-666, July 2017, 10.1049/iet-ipr.2017.0344.
- Dheeren Ku Mahapatra and Lakshi Prosad Roy, "Empirical model for SAR ground clutter data", IET Signal Processing, vol.11, no.7, pp.805-813 2017, 10.1049/iet-spr.2016.0351.
- Shweta B Thomas and Lakshi Prosad Roy, "Signal processing for coal layer thickness estimation using high-resolution time delay estimation methods", IET Science, Measurement & Technology, vol.11, no.8, pp.1022-1031 2017, 10.1049/iet-smt.2017.0136.
- Jyoti P. Patra and Poonam Singh, "Efficient Signal Detection Methods for High Mobility OFDM System with Transmit Diversity", Arabian Journal for Science and Engineering, pp 1–10, Feb, 2018.(Springer).
- Anoop Kumar Mishra, and Poonam Singh, "Performance analysis of opportunistic transmission in downlink cellular DF relay network with channel estimation error and RF impairments," IEEE Transactions on Vehicular Technology.
- Jyoti P. Patra, and Poonam Singh, "On Signal Detection for OSTBC-Based Amplify-and Forward Cooperative Relaying System Over Time Selective Channel", Wireless Personal Communication, Springer, Volume 101, Issue 4, pp 2209–2226, August 2018.
- Sougata Kar, Procheta Chatterjee, Banibrata Mukherjee, K. B. M. Swamy, and Siddhartha Sen, "A Differential Output Interfacing ASIC for Integrated Capacitive Sensors", IEEE Transactions on Instrumentation and Measurement, vol. 67, no. 1, pp. 196-203, Jan. 2018.
- Amitava Banerjee, Aritra Bhaduri, Subhrojit Roy, Sougata Kar and Arindam Basu, "Spiking Neural Classifier with Lumped Dendritic Nonlinearity and Binary Synapses: A Current mode VLSI Implementation and Analysis," Neural Computation, MIT Press, vol. 30, no. 3, pp. 723-760, March 2018.
- Hemant Sharma and K. K. Sharma, "ECG-derived respiration based on iterated Hilbert transform and Hilbert vibration decomposition," Australas Phys Eng Sci Med, 41, pp. 429-443, 2018.
- Sudipta Maity, Rinki Ghosal, Malay Gangopadhyaya and Bhaskar Gupta, "The Complete Modal Chart of Cylindrical Dielectric Waveguide," Accepted for publication to IET Electronic Letters, vol. xx, pp. xx-xx, Aug. 2018 (<https://doi.org/10.1049/el.2018.5871>).

- Sudipta Maity, Malay Gangopadhyaya and Bhaskar Gupta, "45°–45°–90° Triangular Dielectric Resonator Antenna with Broadside Radiation Patterns," *AEÜ International Journal of Electronics and Communications* (Elsevier), vol. 94, pp. 51–54, Sept. 2018 (<https://doi.org/10.1016/j.aeue.2018.06.040>) (ISSN: 1434-8411, SCI indexed, Impact Factor: 0.89 in 2016).
- Sudipta Maity and Bhaskar Gupta, "Approximate Theoretical Investigations on Isosceles Triangular Dielectric Resonator Antennas and Experimental Validation," *IEEE Trans. on Antennas and Propagation*, vol. 66, pp. 2640–2643, May 2018.
- Sudipta Maity and Bhaskar Gupta, "Theory and Experiments on Horizontally Inhomogeneous Rectangular Dielectric Resonator Antenna," *AEÜ International Journal of Electronics and Communications* (Elsevier), vol. 76, pp. 158–165, June 2017 (<https://doi.org/10.1016/j.aeue.2017.04.001>) (ISSN: 1434-8411, SCI indexed, Impact Factor: 0.89 in 2016).
- Kundu, Sourav, and Samit Ari. "P300 Detection with Brain–Computer Interface Application Using PCA and Ensemble of Weighted SVMs." *IETE Journal of Research* (2017): 1–9.
- Prusty, S. B., Pati, U. C., & Mahapatra, K. K. , " Model based Predictive Control of the Four Tank System."
- S. Paul, and Umesh Chandra Pati, " Coarse-to-Fine Registration of Remote Sensing Optical Images Using SIFT and SPSA Optimization." In *Advances in Intelligent Systems and Computing*, vol. 583, pp. 771–781, , Springer India, 2017.
- S. Paul, UK Durgam, and Umesh Chandra Pati, " Multimodal Optical Image Registration Using Modified SIFT", In *Progress in Intelligent Computing Techniques: Theory, Practice, and Applications*, vol. 518, pp. 123–129, Springer India, 2017.
- K. V. Kiran, VS Sarath, V. Kumar, A.K. Turuk, and Santos Kumar Das, "Performance Analysis of Inter-Satellite Optical Wireless Communication" *International Journal of Computer Network and Information Security*, vol. 9, no. 4, pp. 22–23, 2017.
- Maiti, Subrata, Sarat Kumar Patra, and Amitabha Bhattacharya. "A Modified Plane Wave Model for Fast and Accurate Characterization of Layered Media." *IEEE Transactions on Microwave Theory and Techniques* (2017).
- Chithra, R., Robert Bestak, and Sarat Kumar Patra. "Efficient resource allocation for network-assisted multi-link device-to-device communication." *International Journal of Communication Systems* 30, no. 7 (2017).
- Acharya, Aditya, and Sukadev Meher. "Efficient fuzzy composite predictive scheme for effectual 2-D up-sampling of images for multimedia applications." *Journal of Visual Communication and Image Representation* 44 (2017): 156–186.
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- Pandey, Achala, and Umesh Chandra Pati. "Development of saliency-based seamless image compositing using hybrid blending (SSICHB)." *IET Image Processing* 442–433 :(2017) 11.6.
- Nanda, Umakanta, and Debiprasad Priyabrata Acharya. "Adaptive PFD selection technique for low noise and fast PLL in multi-standard radios." *Microelectronics Journal* 64 (2017): 92–98.
- Nayak, Debasish, Debiprasad Priyabrata Acharya, and Kamalakanta Mahapatra. "A read disturbance free differential read SRAM cell for low power and reliable cache in embedded processor." *AEU-International Journal of Electronics and Communications* 74 (2017): 192–197.
- Nayak, Debasish, Debiprasad Priyabrata Acharya, and Kamalakanta Mahapatra. "Current Starving the SRAM Cell: A Strategy to Improve Cell Stability and Power." *Circuits, Systems, and Signal Processing* 36.8 (2017): 3047–3070.
- Nanda, Umakanta, Debiprasad Priyabrata Acharya, and Sarat Kumar Patra. "Design of an efficient phase frequency detector to reduce blind zone in a PLL." *Microsystem Technologies* 23.3 (2017): 533–539.
- R. K. Patjoshi, V. R. Kolluru, and K. Mahapatra, "Power quality enhancement using fuzzy sliding mode based pulse width modulation control strategy for unified power quality conditioner," *International Journal of Electrical Power & Energy Systems*, vol. 84, pp. 153–167, 2017.
- J. P. Sahoo, S. Ari, and D. K. Ghosh, "Hand Gesture Recognition using DWT and F-ratio Based Feature Descriptor", *IET Image Processing*, DOI: 10.1049/iet-ipr.2017.1312, April 2018.
- N. Gupta, G. V. Pillai and S. Ari, "Change Detection in Optical Satellite Images Based on Local Binary Similarity Pattern Technique," *IEEE Geoscience and Remote Sensing Letters*, vol. 15, no. 3, pp. 389–393, 2018.

Publications in Conferences

- Sudeendra Kumar K; Sauvagya Sahoo; Abhishek Mahapatra; Ayas Kanta Swain; K. K. Mahapatra; Security Enhancements to System on Chip Devices for IoT Perception Layer ; 2017 IEEE International Symposium on Nanoelectronic and Information Systems (iNIS); 2017 ; Pages: 151 – 156.
- Sauvagya Ranjan Sahoo; Sudeendra K; A. Mahapatra; A. K. Swain; K. K. Mahapatra; “On-chip RO-Sensor for Recycled IC Detection “ 2017 IEEE International Symposium on Nanoelectronic and Information Systems (iNIS) ; Year: 2017 ; Pages: 252 – 256.
- Sudeendra kumar K; Sauvagya Sahoo; Abhishek Mahapatra; Ayas Kanta Swain; K. K. Mahapatra; “Microprocessor Based Physical Unclonable Function” 2017 IEEE International Symposium on Nanoelectronic and Information Systems (iNIS) ; Year: 2017 ; Pages: 246 – 251.
- Sudeendra Kumar K; Sauvagya Sahoo; Abhishek Mahapatra; Ayas Kanta Swain; K. K. Mahapatra; “Analysis of Side-Channel Attack AES Hardware Trojan Benchmarks against Countermeasures “; 2017 IEEE Computer Society Annual Symposium on VLSI (ISVLSI) ; Year: 2017 ; Pages: 574 – 579.
- Sudeendra Kumar K.; Sauvagya Sahoo; Abhishek Mahapatra; Ayas Kanta Swain; K. K. Mahapatra ; “A Flexible Pay-per-Device Licensing Scheme for FPGA IP Cores”; 2017 IEEE Computer Society Annual Symposium on VLSI (ISVLSI) ; Year: 2017; Pages: 677 – 682.
- Brinda N, Manish Okade, “Fast Camera Motion Estimation utilizing Mode and Directional Self Information in the Compressed Domain” in Proceedings of INDICON-2017, IIT Roorkee, December 15-17, 2017.
- Bhavana Kakde, Manish Okade, “A Novel Technique for Fast Content-Based Image Retrieval using Dual-Cross Patterns” in Proceedings of International Conference for Convergence in Technology, Pune, India, April 6-8, 2018.
- V. Saideep, and Santanu Kumar Behera, “Compact Dual-Mode Single-Band Microstrip Antenna for Body Area Network applications,” IEEE International Conference on Wireless Communications Signal Processing and Networking (WiSPNET), Chennai, 2018.
- Chandan Kumar Chaman, Tanmaya Kumar Das, and Santanu Kumar Behera, “Design of a Stacked Dielectric Resonator Antenna for X-band Applications,” IEEE International Students’ Conference on Electrical, Electronics and Computer Sciences (SCEECS), Bhopal, 24th-25th Feb, 2018.
- Tanmaya Kumar Das, and Santanu Kumar Behera, “Design of a wideband Unidirectional Antenna for Microwave Head Imaging System,” IEEE 3rd International Conference on Microwave and Photonics (ICMAP), Dhandbad, 2018.
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- Vineeth Muppalla, Suraj N, Krishna, Suman D, Banibrata Mukherjee, “Implementation of an Arrhythmia detection scheme with cellular based alert framework”, 2017 IEEE Calcutta Conference (CALCON), pp., 438-442, Kolkata, December 1-2, (2017).
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- S. Modalavalasa, U. K. Sahoo, A. K. Sahoo “Incremental Modified Leaky LMS” 14th IEEE India Council International Conference (INDICON-2017), Roorkee, Uttarkhand, India, 15 - 17 December, 2017 .
- S. Modalavalasa, U. K. Sahoo, A. K. Sahoo “Robust Label Consistent Dictionary Learning for Face Recognition” 14th IEEE India Council International Conference (INDICON-2017), Roorkee, Uttarkhand, India, 15 - 17 December, 2017 .
- S. Gupta, A. K. Sahoo, U. K. Sahoo, “Parameter Estimation of Wiener Nonlinear Model Using Least Mean Square (LMS) Algorithm” IEEE Region Ten Conference (TENCON-2017), Penang, Malaysia, pp. 1399-1403, November, 5-8 , 2017.
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- Kappala Vinod Kiran, Vikram Kumar, Ashok Kumar Turuk and Santos Kumar Das, "Estimation of Link Margin for Performance Analysis of FSO Network", 3rd International Conference on Next Generation Computing Technologies (NGCT 2017), 30th – 31st Oct 2017 (Presented).
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- Achala Pandey, and Umesh Chandra Pati, "Panorama Generation Using Feature-Based Mosaicing and Modified Graph-Cut Blending." *In Proceedings of 3rd International Conference on Advanced Computing, Networking and Informatics*, pp. 477-488, Springer India, 2017.
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- R. Tiwari and S. Deshmukh, "Maximum likelihood estimator for velocity estimation in HetNets based on handoff count," *9th International Conference on Communication Systems and Networks (COMSNETS)*, Bengaluru, India, 2017, pp. 152-157.
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- S. Kundu, and S. Ari, "P300 Detection using Ensemble of SVM for Brain-Computer Interface Application", in *9th international conference on computing, communication and networking technologies (ICCCNT)*, Bengaluru, India, IEEE, 9-12 July, 2018, pp. 1-5.
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- N. Gupta, G. V. Pillai, and S. Ari, "Unsupervised Change Detection in Optical Satellite Images using Binary Descriptor," in *international Conference on Wireless Communications, Signal Processing and Networking (WiSPNET)*, Chennai, India, Mar. 2017.
- G. V. Pillai, N. Gupta, and S. Ari, "Descriptors based Unsupervised Change Detection in Satellite Images," in *IEEE International Conference on Communications and Signal Processing (ICCSP)*, Chennai, India, Apr. 2017, pp. 1629-1633.

Paper Accepted for Publication

- N. Gupta, G. V. Pillai and S. Ari, "Change detection in Landsat images based on local neighborhood information," accepted in IET Image Processing, 2018.

Books/Book Chapter

- Kappala Vinod Kiran, Vikram Kumar, Ashok Kumar Turuk and Santos Kumar Das, "Estimation of Link Margin for Performance Analysis of FSO Network," ISBN 978-981-10-8657-1, Vol 827, Smart and Innovative Trends in Next Generation Computing Technologies, Springer, pp. 444-458, 2018.

Patent

Awards Received/Distinction Achieved

By Faculty:

Technical Association/Societies

Faculty Name	Membership
Prof. K. K. Mahapatra	Member IEEE
Prof. Sarat Kumar Patra	1. Senior Member IEEE 2. Life Member; Institute of Electronic and telecommunication Engineers, India (IETE) 3. Life Member; Institute of Engineers (India) 4. Life Member; Compute Society of India 5. Life member; Indian Society of Technical Education, India (ISTE)
Prof. Poonam Singh	1. Life Member of ISTE 2. Senior Member of IEEE 3. Member of IEEE Communications Society 4. Member of selection Committee of UPSC 5. Editorial Board Member of Journal of Communications, Science PG, International Journal of Signal and Imaging Systems Engineering, 6. Reviewer of International Journal of Communications, Science PG Journal of The Institution of Engineers (India), Academicians' Research Center (ARC), International Journal of Signal and Imaging Systems Engineering, InderScience Publication, IEEE Communications Letters
Prof. Umesh Chandra Pati	Reviewer, IET Image Processing, EURASIP Journal on Advances in Signal Processing, International Journal of Distributed Sensor Networks, Hindawi, International Journal of Computational Vision and Robotics, Inderscience, Advances in Computer Engineering, Hindawi, Guest Editor, International Journal of Signal and Imaging Systems Engineering, Editor, International Journal of Emerging Trends in Electrical and Electronics, Advisory Board Member, International Journal of Advanced Computer Research, Reviewer, Virtual Instrumentation using LabVIEW, Sanjay Gupta and Joseph John, 2nd Edition, Tata McGraw Hill, New Delhi, Reviewer, Optical Fiber Communication, Optical Fiber Communication, Cambridge University Press India,
Prof. Debiprasad Priyabrata Acharya	Professional Membership in IETE Member VLSI Society of India
Prof. Ajit Kumar Sahoo	Professional Membership IEEE.
Prof. Santanu Kumar Behera	1. Senior Member: Institute of Electrical and Electronics Engineers(IEEE) 2. Member: Institution of Engineering and Technology(IET) 3. Fellow: Institution of Electronics and Telecommunication Engineers(IETE) 4. Fellow: Institute of Engineers (IE) 5. Member: Computer Society of India(CSI) 6. Member: Indian Society for Technical Education(ISTE) 7. Member: Society of EMC Engineers(SEMCEI) 10. Faculty serving in Editorial Board STM-Journal of Microwave Engg and Technologies

Faculty Name	Membership
Prof. Samit Ari	Professional Membership IEEE, IEEE Signal Processing Society
Prof. Lakshi Prosad Roy	Professional Membership IEEE.
Prof. Sidharta Deshmukh	Professional Membership IEEE.
Prof. Manish Okade	Professional Membership IEEE.
Prof. Sougata Kumar Kar	Member, IEEE Member, IEEE CAS Society Member, IEEE I & M Society
Prof. Santanu Sarkar	IEEE (Solid State Circuit, Circuits and Systems and Instrumentation Society)
Prof. Santos Kumar Das	Professional Membership IEEE, IEEE Optical communication Society, Reviewer of AITIJ Journal article Editorial Board Member of AITIJ Journal
Prof. Banibrata Mukherjee	IEEE Instrumentation and Measurement society
Prof. Subrata Maiti	Professional Membership IEEE.
Prof. S. Hiremath	Professional Membership IEEE. Technical Association: Under Texas Instruments University Program, DRISHTI Online Contest-2017
Prof. A. K. Swain	Professional Membership IEEE.
Prof. Sudipta Maity	Professional Membership IEEE.

Seminar, Symposia, Winterschool, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

Sl. No.	Event	Date, year	Sponsoring agencies
1	Short Term course on "Sparse Signal Processing and Random Sampling"	Dec 11-15, 2017 (1 Week)	MHRD, India
2	Workshop on "Internet of Things"	Aug 19, 2017	
3	Short term Course on "Design and Simulation of Antennas and Microwave Devices"	Dec 11 – 15, 2017	
4	iNIS 2017	Dec 17 – 19, 2017	IEEE
5	10th International Conference on Communication Systems & Networks (COMSNETS), Bengaluru, 2018	Jan 3 – 7, 2018	IEEE
6	Expert talk on " Introduction to VLSI and High Speed Data Converters" in the department of Electronics Engineering at Aligarh Muslim University	Mar 23, 2018	TEQIP-III, AMU
7	Invited talk in the National workshop on "Recent Trends in VLSI Devices and Circuits" in the ECE Department of Silicon Institute of Technology	Feb 23, 2018	IEEE, EDS Bhubaneswar-Kolkata
8	International Symposium Frontiers of Research on Speech and Music (FRSM - 2017)	Dec 15-16, 2017	Taraspan Solutions, TEQIP-III, SBI Rourkela

Research Projects

Sl. No.	Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
1	Chip to system Initiative SMDP VLSI	Deity, GOI	Prof. K. K. Mohapatra	149	Dec 2014	Mar 2020
2	Development of a Hand Gesture Based Interface System for Remote Controlled Surveillance Mobile Robot (3 yrs)	DRDO	Prof. Samit Ari	28.598	2016	2019
3	Development of a Brain controlled Robotic wheel chair for Amyotrophic Lateral Sclerosis (ALS) patient (5 yrs)	Young Faculty Research Fellowship award, Visvesvaraya Ph.D Scheme for Electronics & IT, DeitY	Prof. Samit Ari	37	2016	2019
4	Development of Advanced Holter Monitor with extended recording and episode detection (3 yrs)	IMPRINT INDIA Project, MHRD, Govt. of India	Prof. Samit Ari	16.8	2017	2020
5	Role of camera motion cue in determining visual saliency and its applications to surveillance using TI DaVinci vision board. (3 years)	SERB, DST	Prof. Manish Okade	24	2016	2019
6	Low Power Analog Front-end ASIC for Portable Bio-potential Acquisition Systems. (3 Years)	SERB, DST	Prof. Sougata Kumar Kar	18.46	2016	2019
7	Application of Cognitive Radio Technology for Smart Grid Communication (3 yrs)	SERB, DST	Prof. Siddharth Deshmukh	18.85	2016	2019
8	Embedded System for Real Time Mine Process Monitoring (2 Yrs)	Jindal Steel and Power Ltd	Prof D. P. Acharya	12		
9	Design and Synthesis of 32-bit ALU and High Speed IO (2 Yrs)	Sankalp Semiconductors	Prof D. P. Acharya	3		
10	Embedded System for Compressed Air Consumption Monitoring in Smelter Plant. (2 Yrs)	NALCO	Prof D. P. Acharya	31	2016	2018
11	Design of FSO Link for high quality connection set-up in wireless optical network (5 yrs)	Visvesvaraya Ph.D Scheme for Electronics & IT, DeitY	Prof. S. K. Das	30	2016	
12	Intelligent Surveillance Data Retriever (ISDR) for Smart city Applications. (3 yrs)	Imprint-I, MHRD, Govt. of India	Prof. S. K. Das	386	2017	2020
13	Development of Self-Powered MEMS Accelerometer using Piezoelectric Energy Harvester	DST	Prof. Banibrata Mukherjee	37.24	2017	2020
14	Development of pH based portable arsenic biosensor by exploiting arsenite oxidizing bacteria. (3 Years)	DST	Prof. Sougata Kumar Kar	44.73	2017	2020

Consultancy Services

Sponsors Address	Title of the Project	Faculty Name
SECL, Coal India Limited, Churcha, Chhattisgarh	Design of mining methods, strata monitoring at Churcha mine	Prof. Singam Jayanthu (MN) Prof. P.M.Khillar (CS) Prof. L.P.Roy (ECE)

Institutional Programme Support/Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date
FIST	DST	Prof. U. C. Pati	64	Jan 2012	Jan 2017
SMDP (C2SD)	DEITY	Prof. K. K. Mahapatra and Prof. A. K. Swain	147	Dec 2014	Mar 2020
Visvesvaraya Ph.D Scheme	DEITY	Prof. Santosh K. Das and Prof. Samit Ari	60	Aug 2015	Aug 2020

List of Laboratories Developed

Sl. No.	Name of the Laboratories
1.	ISDR Lab
2.	Radar, Sonar and Acoustic Signal Processing Laboratory

Ph.D. Degrees Awarded by the Department

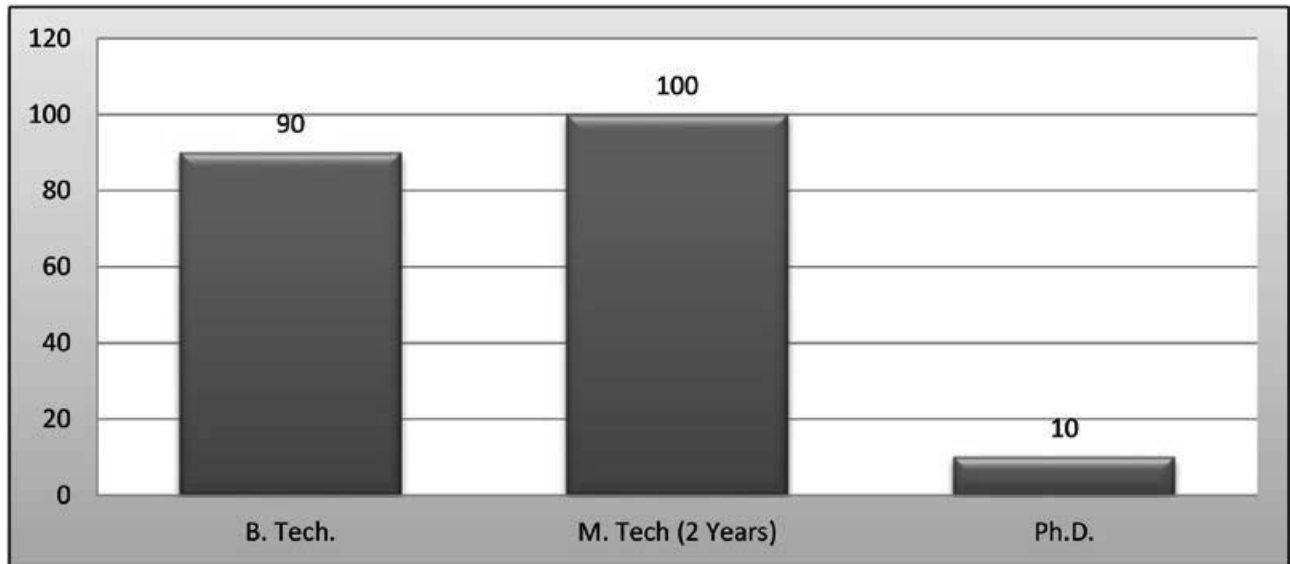
Name of the Student	Title of Thesis	Supervisor
Debasish Nayak	Novel Techniques for SRAM based Memory Performance Enhancement	D. P. Acharya and K. K. Mahapatra
Govinda Rao Locharla	Variable Length FFT/IFFT Processor: Algorithm to Architecture Mapping and Implementation	K. K. Mahapatra and Samit Ari
Gokulananda Sahu	Design and Development of FPGA based Controllers for DSTATCOM in Grid Connected Power Systems	K. K. Mahapatra
Aditya Acharya	Development of Some Spatial-domain Pre-processing and Post-processing Algorithms for Better 2-D Up-scaling	Sukadev Meher
Bhaskara Rao Jammu	Development of FPGA based Standalone Tunable Fuzzy Logic Controllers	Sarat Kumar Patra and K. K. Mahapatra
Jyoti Prasanna Patra	Signal Detection and Channel Estimation for Space-Time Block Coded Mobile Communication Systems	Poonam Singh
Achala Pandey	Development of Efficient Algorithms for Seamless Image Mosaicing	Umesh Chandra Pati
Sankata Bhanjan Prusty	Design and Development of Efficient Control Strategies for Liquid Level Tank Systems	Umesh Chandra Pati and K. K. Mahapatra

M.Tech. Research Degrees Awarded by the Department

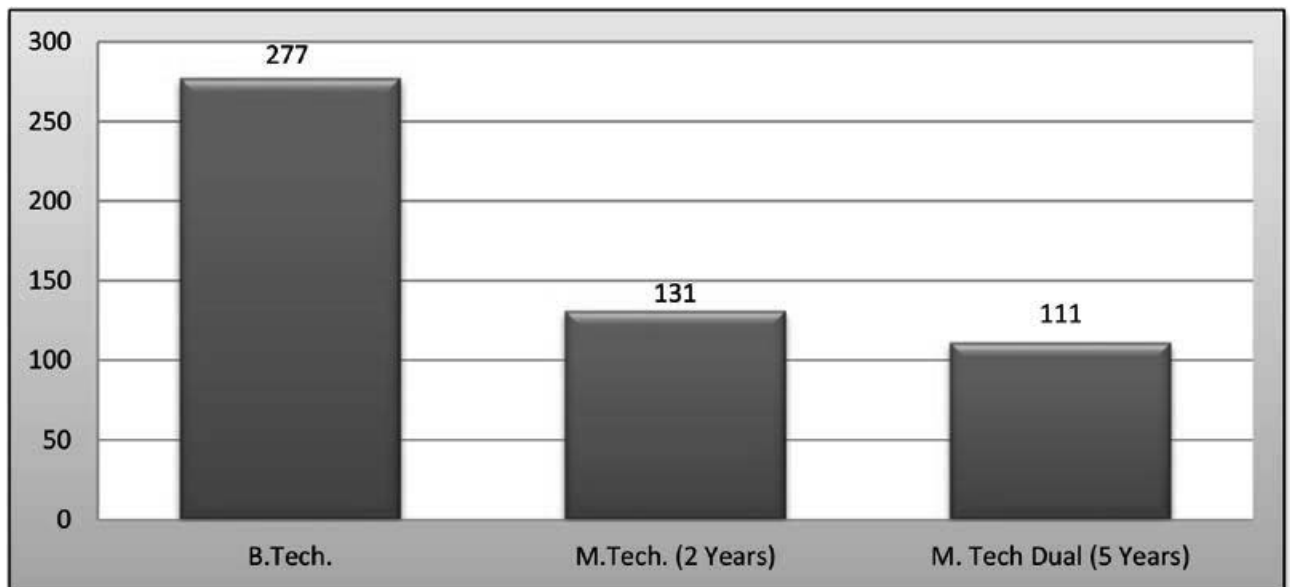
Name of the Student	Title of Thesis	Supervisor

Department of ELECTRICAL ENGINEERING

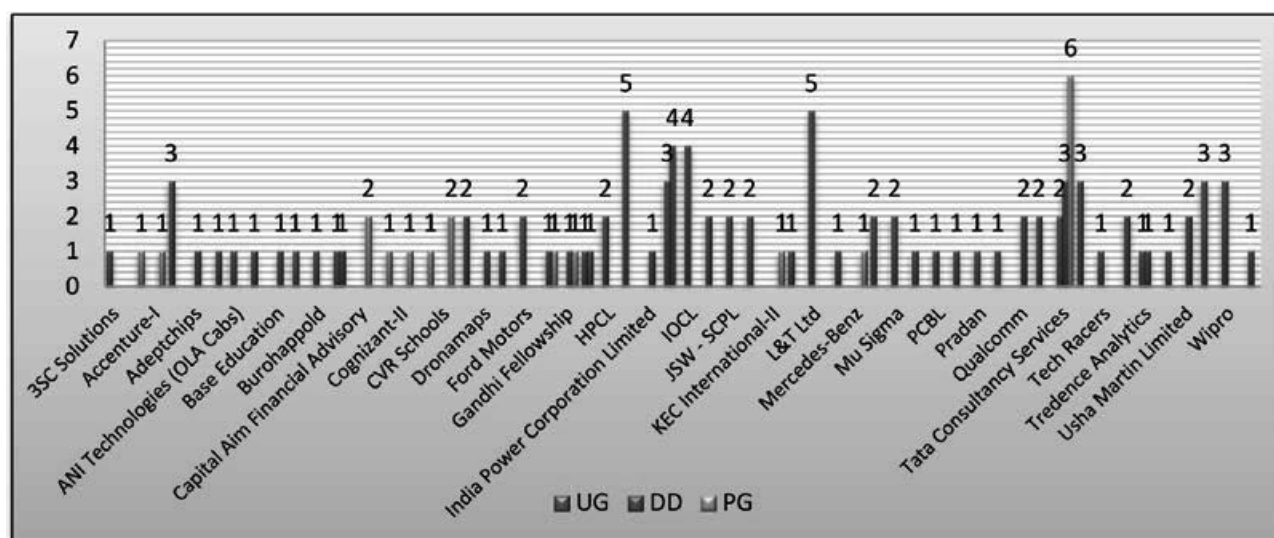
Student Intake in 2017-18



Total Student Strength



Total Student Strength



Faculty

Sl. No.	Name & Specialization
1	Prof. Jitendriya Kumar Satapathy, (jksatapathy@nitrkl.ac.in) Professor, Ph.D (Bradford) Power Electronics and Drives
2	Prof. Bidyadhar Subudhi Control and Automation
3	Prof. Anup Kumar Panda, (akpanda@nitrkl.ac) Professor & HOD, Ph.D (Utkal University) Power Electronics and Drives
4	Prof. Kanungo Barada Mohanty, (kbmohanty@nitrkl.ac.in) Associate Professor, Ph.D (IIT Kharagpur) Power Electronics and Drives
5	Prof. Susmita Das, (susmita.das@nitrkl.ac.in) Associate Professor, Ph.D (NIT Rourkela) Electronics System and Communication
6	Prof. Dipti Patra Electronics System and Communication
7	Prof. Prasanna Kumar Sahu Electronics System and Communication
8	Prof. Sanjeeb Mohanty Power System
9	Prof. K. Ratna Subhashini Electronics System and Communication
10	Prof. Somnath Maity, (somnathm@nitrkl.ac.in) Assistant Professor, Ph.D (IIT Kharagpur), Postdoc (Ben Gurion University) Control System
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- Amit Kumar and S. Gopalakrishna, "TLBO optimized FOPI Controller for Active Front End Rectifier using ZDPC technique," *Arabian Journal for Science and Engineering* (Minor revision submitted).
- robinda Bag, Bidyadhar Subudhi and Pravat Kumar Ray, "A Combined Reinforcement Learning and Sliding Mode Control Scheme for Grid Integration of a PV System", *IEEE CSEE Journal of Power and Energy Systems* (Accepted).
- radipta Kumar Sahoo, Pravat Kumar Ray and Pranati Das "Active and Reactive power control of Three phase grid connected PV System" *International Journal of Smart Grid and Green Communication*, Inderscience (Accepted).

- Aly, N., R.K. Tarai, P.G. Kale and P. Balasubramanian, "Modeling microalgal biofuel production and carbon dioxide sequestration potential in fixed and trackable photobioreactor in the Odisha state of India", Current Science, 2017, Accepted for publication.

Books/Book Chapter

- Smita Pradhan, Dipti Patra, Ajay Singh. "Image Registration of Medical Images using Ripplet Transform.", Book Title: Computer Vision & Image Processing (CVIP), ISBN: 978-981-10-2106-0 (Print) 978-981-10-2107-7, vol. 2, pp. 487-494, Springer India, 2017.
- Smita Pradhan, Ajay Singh and Dipti Patra, "Enhanced Mutual Information-based Multimodal Brain MR Image Registration Using Phase Congruency" Book Title: Progress in Intelligent Computing Techniques: Theory, Practice, and Applications, Springer, DOI: 978-981-10-3373-5_19, 2018. ISBN 978-981-10-3373-5.
- Rajashree Nayak, Venkata Sai Krishna Lakinepally, and Dipti Patra, "Enhanced Super-Resolution Image Reconstruction Using MRF Model", Book Title: Progress in Intelligent Computing Techniques: Theory, Practice, and Applications, Springer, DOI: 978-981-10-3373-5_20, 2018. ISBN 978-981-10-3373-5.
- Inhibition assays of Urease for Detecting Trivalent Chromium in Drinking Water, Rushikesh Fopase, Suman Nayak, Monalisha Mohanta, Paresh Kale, P. Balasubramanian, Green Buildings and Sustainable Engineering - Proceedings of GBSE 2018, Accepted for publication.

Patent

- Multi-level Inverter Fed Induction Motor Drive, Lap Lambert Academic Publisher through Omniscript, Aug. 2017, ISSN/ ISBN: 978-620-2-00652-1.

Awards Received/Distinction Achieved

By Faculty:

- Best paper award for the research paper "network based control of 2-dof serial flexible link manipulator" in IEEE Region 10 conference tencon, Penang, Malaysia, Nov. 2017.
- K.P. Pradhan and P.K. Sahu "rf and noise performance exploration of double gate fin fet", proc. of the sixth intl. conf. on advances in computing, control and networking - accn 2017, isbn: 978-1-63248-117-7 doi: 10.15224/ 978-1-63248-117-7-54, pp 142-144.
- Elsevier's reviewer recognition award for August 2017 in superlattices and microstructures.

By Students:

- Best paper award for the research paper "Analysis of Myocardial Infarction Using Wavelet Transform and Multiscale Energy Analysis", in IEEE Region 10 Conference TENCON, Penang, Malaysia, Nov. 2017.
- Students from Plugged_in club under the guidance Prof. P. K Sahu have bagged prizes in Technical Events conducted at IIT, Kanpur and IIT, Kharagpur.
- Gold Medal Award for Best Ph.D thesis (Convocation 2018).

Technical Association/Societies

Sl. No.	Name of Faculty	Technical Association / Societies
1	Prof. J. K. Satapathy	Senior Member of IEEE(USA).
2	Prof. B. Subudhi	FIET(UK), Senior Member of IEEE(USA), IEEE Technical Committee on Intelligent Control (Adaptive Control Group), FIE (India), FIETE(India), Life Member SSI, Life Member ISTE, Member, ACODS, Member, IAENG.

Sl. No.	Name of Faculty	Technical Association / Societies
3	Prof. Anup Kumar Panda	FIET (UK), FIE, FIETE, Senior Member IEEE (USA).
4	Prof. K. B. Mohanty	Senior Member of IEEE (USA), FIE (India), FIETE.
5	Prof. S. Das	Senior Member of IEEE (USA), Member of IEEE Communication Society, Fellow, Institution of Electronics and Telecom Engineers (IETE), India, Life Member of Indian Society of Technical Education (ISTE), India, Fellow, Institution of Engineers (IE), India.
6	Prof. D. Patra	Senior Member of IEEE (USA), Fellow IEI, Fellow IETE.
7	Prof. P. K. Sahu	Senior Member of IEEE, Member of IETE, FIE, Member of ISTE.
8	Prof. S. Mohanty	Member of IEEE (USA).
9	Prof. K. R. Subhashini	Member of IEEE (USA), Member of Antenna and Propagation society
10	Dr. Somnath Maity	IEEE TCAS-I, IEEE TPE, IEEE TIAS, IEEE TIE, European Transactions on Electrical Power.
11	Dr. Susovon Samanta	Member IEEE (USA)
12	Dr. Subrata Karmakar	Member of IEEE (USA), Member of IEEE Dielectrics and Electrical Insulation Society, Member of IEEE Power & Energy Society, Member of CIGRE, an International Council of Large Electrical System, Associate member of IE (India), Life Member of Indian Laser Association (ILA).
13	Dr. Supratim Gupta	Member IEEE (USA).
14	Dr. Gopalakrishna Srungavarapu	Member IEEE, USA.
15	Dr. Pravat Kumar Ray	Member IEEE, USA, Life member ISTE, Life member I.E. (I).
16	Dr. Monalisa Pattnaik	Member of Institute of Electrical and Electronics Engineers (IEEE), USA, Member of IEEE Industrial Electronics Society, USA, Member of IEEE Power Electronics Society, USA, Member of IEEE Power & Energy Society Membership, USA.
17	Dr. Paresh Govind Kale	Member – IEEE and Power and Energy Society, Life Member: Indian Society of Technical Education (ISTE), Member Institution of Engineers (India), Member, Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEEES).
18	Dr. Asim Kumar Naskar	Member IEEE (USA).
19	Dr. Ananyo Sengupta	Member IEEE (USA).
20	Dr. Venkata Ramana Naik N	Member IEEE (USA), Member IES.

Seminar, Symposia, Winterschool, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

- “Recent Trends in Medical Signal and Image Processing (RTMSIP 2017)”, 25-26 March, 2017.
- Conducted MHRD, Govt. of India approved program: Global Initiative of Academic Networks (GIAN) on “Characterizing and Modeling Wireless Channels (CMWC-2017)”- 06 Jun, 2017 to 10 Jun, 2017 as coordinator.
- Conducted “Recent Trends in Medical Signal and Image Processing (RTMSIP-2017)” - 25 Mar 2017 to 26 Mar 2017 as co-coordinator.
- Short Term Course on Artificial Intelligence, Signal and Image Processing using NI LabVIEW under Continuing Education Program from 15.06.2017 to 24.06.2017.
- SRICCE controlled Short Term Course: Artificial Intelligence, Signal and Image Processing Using NI LabVIEW from 15.06.2017 to 24.06.2017.
- Short Term Course: Recent Trends in Medical Signal and Image Processing, 25-26 March, 2017.
- Paper presented in conference: Stress Management at Workplace for Working Women Executives, Goa, 16-20 Jan, 2017, organized by National Productivity Council, New Delhi.
- Presented a paper and chaired a session at the 15th International Workshop on Advanced Motion Control (IEEE AMC 2018), Tokyo, Japan in March 2018.
- Prof. Dipti Patra participated in IEEE Region 10 conference TENCON 2017 at Penang, Malaysia, 5-8 Nov. 2017.
- Prof. S. Karmakar given key lecture in short term course on “Controlling Strategies using Mechatronics Equipment in Steel Industry”, entitled ‘Application of LabVIEW on Diagnostic Monitoring of High Voltage Power Equipment’ NIT Rourkela, Senate Hall, 13th June, 2018.
- Prof. S. Karmakar participated in workshop on “Awareness Generation on Intellectual Property Rights” Senate Hall, NIT Rourkela, 17th December, 2017.
- Prof. S. Karmakar participated in workshop on “Workshop on e-Procurement” NIT Rourkela, Senate Hall, 30th January, 2018.
- Prof. Pravat Kumar Ray participated in IEEE 5th International Conference on Renewable Energy: Generation and Applications (ICREGA 2018) at Al Ain, UAE, 26 - 28 February, 2018.
- Prof. Pravat Kumar Ray delivered a talk on “Power quality improvement in Distributed generations using UPQC” on 5th Dec. 2017 at IGIT Sarang on a short term training program on “Application of Advanced Signal Processing for Operation, Control and Protection of Modern Power System with Integration of Large Scale Sustainable Energy Sources” sponsored by AICTE New Delhi.
- Prof. Pravat Kumar Ray delivered a talk on “Short term solar irradiance forecasting using ground based sky images” on 8th Dec. 2017 at SNIST, Hyderabad on a short term course on “Recent advances in DG and Power quality” sponsored by SNIST Hyderabad.
- Delivered invited lecture “MPPT Design for PV system with PSC” on 4th July 2018 in the Short Term Course Design and Control of Photovoltaic Systems, at Dept. of Electrical Engg., NIT Rourkela.
- Participated in International Conference TENCON 2017 at Penang, Malaysia during 5th -8th Nov. 2017 and IEEE ISGT 2018 at Singapore during 22nd-25th May, 2018.

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Development of grid integration strategies for photovoltaic system.	DST	B. Subudhi (PI) P. K. Ray (Co-PI) S. Ghosh (Co-PI)	112.00 (approx)	2015	2018
Development of new control strategies for autonomous underwater robots in uncertain environment.	DST-RFBR	B. Subudhi (PI) P. K. Ray (Co-PI) S. Ghosh (Co-PI) Dr. Vladimir Filaretov, Head of Robotic Laboratory, Institute of Automation and Control Processes, 5, Radio str., Vladivostok	35.00	2015	2018
Development of communication and control strategies for new generation Autonomous Underwater Vehicles.	DST-RMES (Indo-Russia)	B. Subudhi (PI) S. Ghosh (Co-PI) Dr. Vladimir Filaretov, Head of Robotic Laboratory, Institute of Automation and Control Processes, 5, Radio str., Vladivostok	56.00	2014	2017
Shunt Active Power filter based On Cascaded Multilevel Inverter with Single DC Source.	CSIR	Prof. Anup Kumar Panda	25.68	Oct 2014	Nov 2017
Augmentation of Power Electronics and Drives Lab.	FIST, DST	Prof. Anup Kumar Panda	67.00	Oct 2015	Nov 2020
Design and Development of Registration & Super Resolution Reconstruction Techniques for Remotely Sensed Images.	ISRO	Dipti Patra	18.00	Dec 2016	Dec 2019
On-chip efficient power delivery systems for portable mobile appliances.	DST & National Science Council (NSC), Taiwan	Dr. Somnath Maity	19.71	01-04-2014	31-03-2017
Design and Development of a Bidirectional DC-DC Converter with Power & Energy Management of Battery and Ultracapacitor for an Electric Bike with Regenerative Braking.	SERB, DST	Dr. Susovon Samanta	17.028	03-03-2015	31-07-2018
Modeling and Controller Design for Active Clamp Forward Converter with Multiple Outputs used as Electronic Power Conditioner (EPC).	ISRO	Dr. Susovon Samanta	15.48+ 5.08 =20.56	May 2015	May 2018
Hybrid Optimization Based Fractional Order Fuel Cell Modeling and Online Parameter Estimation with Design of Adaptive Controller for Integrated Power Converters.	NRB, DRDO	Dr. Susovon Samanta	12.98	Oct 2015	July 2019

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Design and Development of a Standalone PV system using Three Port DC/DC Converter and H-Bridge Inverter for Home Application.	DST-IPHEE	Dr. Susovon Samanta	47.55	Jan 2017	Jan 2020
Reconfigurable Hardware to Detect Drowsy Operator from Eye Image under Spectacles.	BRNS	Supratim Gupta	18.27	April 2016	Continuing
Design and development of porous Silicon based biosensor for Chromium detection in and around of Sukinda Mines Valley, Odisha.	DST	Prof. Paresh Kale and Prof. P. Balasubramaniam	29.09	01-04-2015	01-04-2018

Consultancy Services

Sponsors Address	Title of the Project	Faculty Name

Institutional Programme Support/Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date
Establishment of Centre of Excellence on Renewable Energy System.	NPIU	B. Subudhi (PI) P. K. Ray (Co-PI)	500	2013	2017

Equipments Acquired

Sl. No.	Name of the Equipment	Amount (Rs. in Lakhs)
1	Multi-level Inverter based Multiphase Induction Motor Drive.	20,77,760.00
2	Configurable Matrix Converter for Induction Motor Drive.	17,41,990.00
3	Universal software radio peripheral (USRP), National Instruments.	12.0

List of Laboratories

Sl. No.	Name of the Laboratories
1	Partial Discharge Laboratory
2	Advanced Instrumentation Laboratory

Ph.D. Degrees Awarded by the Department

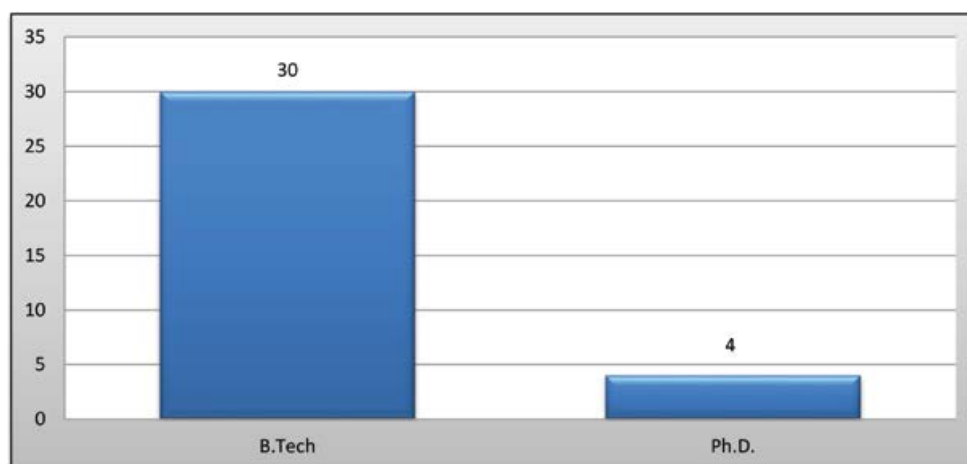
Name of the Student	Title of Thesis	Supervisor
Ranjeeta Patel	Interleaved Buck Converter Based Shunt Active Power Filter with Shoot-Through elimination for Power Quality Improvement.	Prof. A. K. Panda
Nishant Patnaik	Investigation on Performance Improvement Efficient Utilization of Unified Power Quality Conditioner.	Prof. A. K. Panda
Joseph Sanam	Planning and Operation of DSTATCOM in Electrical Distribution Systems.	Prof. A. K. Panda
Mrutyunjaya Mangaraj	Optimal Location and sizing of DSTATCOM in the Distribution System using optimization Techniques.	Prof. A. K. Panda
Alivarani Mohapatra	Optimized parameter estimation, array configuration and MPPT control of standalone photovoltaic system.	Prof. K. B. Mohanty
Aditi Chatterjee	Development of efficient control strategies for single phase grid integrated inverters for photovoltaic applications.	Prof. K. B. Mohanty
Rabi Narayan Mishra	Development and implementation of some controllers for performance enhancement and effective utilization of induction motor drive.	Prof. K. B. Mohanty
G. Kiran Kumar	Efficient Power allocation Scheme in Hybrid Decode Amplify Forward Relay based Wireless Cooperative Network.	Prof. S. Das
Deepa Das	Intelligent Approaches for Energy-Efficient Resource Allocation in the Cognitive Radio Network.	Prof. S. Das
Prajna Parimita Dash	Development of Efficient Methods for Visual Object Tracking.	Prof. D. Patra
Yogananda Pattnaik (QIP Scholar)	Development of Efficient Scalable Video Compression Schemes for H.264/SVC Platform.	Prof. D. Patra
Rajashree Nayak	Development of Efficient Methodologies for Image Super-resolution Reconstruction.	Prof. D. Patra
Kumar Prasannajit Pradhan	Exploration of Novel Attributes of Hybrid FinFETs towards Analog/RF and Reliability Aspects.	Prof. P. K. Sahu
Smita Rani Parija	Investigations on Location Prediction and Resource Management of Cellular Network.	Prof. P. K. Sahu
Padarbindo Samal	Planning of unbalanced radial distribution systems with reactive and distributed energy sources using evolutionary computing techniques.	Prof. Sanjeeb Mohanty
Soumya Mishra	Performance Analysis of Photovoltaic fed Distributed Static Compensator for Power Quality Improvement.	Prof. Pravat Kumar Ray
Sushree Diptimayee Swain	Design and Experimental Realization of Robust and Adaptive Control Schemes for Hybrid Series Active Power Filter.	Prof. Pravat Kumar Ray Prof. Kanungo Barada Mohanty
Satyajit Mohanty	Development of Maximum Power Extraction Algorithms for PV system with Non-Uniform Solar Irradiances.	Prof. Bidyadhar Subudhi Prof. Pravat Kumar Ray

M.Tech. Research Degrees Awarded by the Department

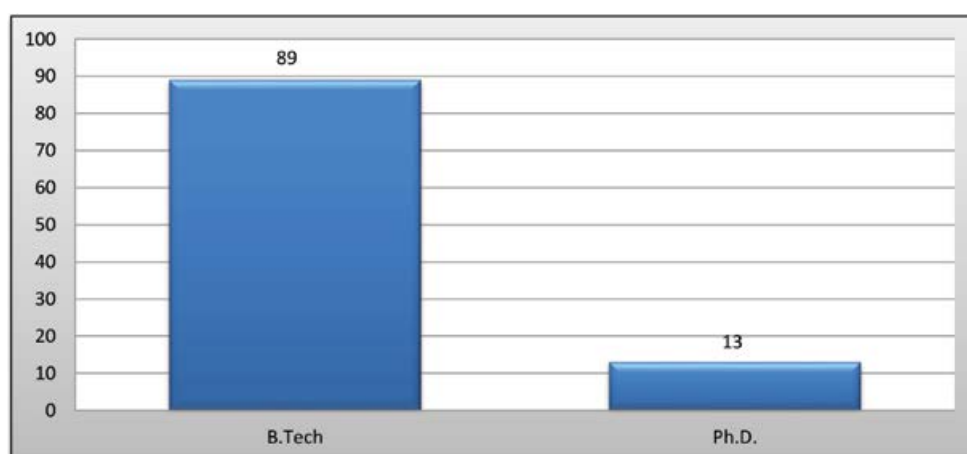
Name of the Student	Title of Thesis	Supervisor
Gyana Manjari Sahoo	Effect and Analysis of Partial Discharge in Cross Linked Polyethylene Underground Cable Insulation.	Dr. Subrata Karmakar
Aeturi Penchala Ratnam	Online Detection and Localization of Partial Discharge inside the Power Transformer by using Acoustic Emission Technique.	Dr. Subrata Karmakar
Soumya Ranjan Behera	Influence of Silica Nano particles (SiO ₂) on Electrical and Physical Properties of Mineral Oil and Vegetable Oils.	Dr. Subrata Karmakar
Harish Dora Mongam	Performance Analysis of Shunt Active Power Filter (SAPF) using p-q and d-q theories.	Venkata Ramana Naik N
Eslavath Lakpathi	Performance Analysis of Shunt Active Power Filter Using Different Switching Signal Generation Techniques.	Venkata Ramana Naik N
Banoth Suresh	Sensorless Vector Control of Induction Motor Based on MRAS Control.	Venkata Ramana Naik N
Prakash Kumar	Control of Single Phase Photovoltaic Grid Connected System.	Venkata Ramana Naik N

Department of FOOD PROCESS ENGINEERING

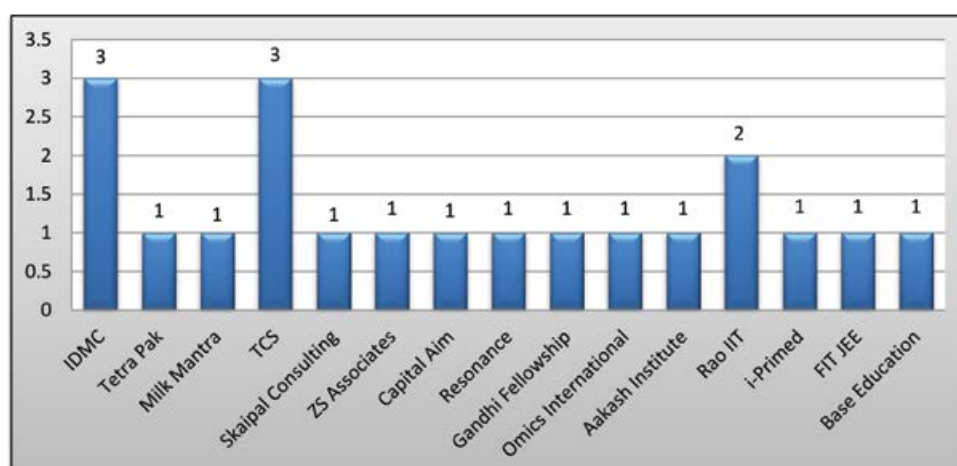
Student Intake in 2017-18



Total Student Strength



Placement Statistics



Faculty

Sl. No.	Name & Specialization	
1.		Prof. Sabyasachi Mishra (mishrasa@nitrkl.ac.in) Head & Assistant Professor, PhD (Univ. of Saskatchewan, Canada) Specialization : Food and Bioprocess Engineering
2.		Prof. Rama Chandra Pradhan (pradhanrc@nitrkl.ac.in) Associate Professor, PhD (IIT, Delhi) Specialization : Post Harvest Engineering and Value Addition
3.		Prof. Parag Prakash Sutar (sutarp@nitrkl.ac.in) Assistant Professor, PhD (IIT, Kharagpur) Specialization : Drying and Dehydration, Microwave Processing of Food
4.		Prof. Preetam Sarkar (sarkarpreetam@nitrkl.ac.in) Assistant Professor, PhD (Purdue University, USA) Specialization : Food science and technology, Food Quality and Safety
5.		Prof. Sushil Kumar Singh (singhsk@nitrkl.ac.in) Assistant Professor, PhD (South Dakota State University, USA) Specialization: Food Extrusion; Membrane Filtration; Dairy Processing; Modelling.
6.		Prof. Madhuresh Dwivedi (dwivedim@nitrkl.ac.in) Assistant Professor, PhD (IIT, Kharagpur) Specialization: Transport Process, Food Properties, Modelling and Simulation

Publication

Publications in Journals

- S. Mohanty, S. Mishra, R.C. Pradhan, 2018. Optimisation of enzymatic extraction and characterization of Palm (*Borassus flabellifer*) juice. *Journal of Food Measurement and Characterization*. DOI: 10.1007/s11694-018-9882-5.
- B. Z. Hmar, S. Mishra, R.C. Pradhan, 2018. Design, fabrication, and testing of a pulper for Kendu (*Diospyros melanoxylon* Roxb.). *Journal of Food Process Engineering*, 41, 1-9.
- S.S. Singh, S. Mishra, R.C. Pradhan, V Kumar. 2018. Development of a microwave assisted UV sterilization system for milk. *Acta Alimentaria*. 47 (3), DOI: 10.1556/066.2018.0004.
- C. Shashikumar, R.C. Pradhan, S. Mishra. 2018. Characterisation of *Madhuca longifolia* seed in relation to processing and design of equipment. *Quality Assurance and Safety of Crops & Foods*. DOI: 10.3920/QAS2017.1075.
- S. S. Rana, R.C. Pradhan, S. Mishra. 2018. Variation in properties of tender jackfruit during different stages of maturity. *Journal of Food Science and Technology*, 55, 2122–2129.
- P. Ghosh, R.C. Pradhan, S. Mishra. 2018. Clarification of jamun juice by centrifugation and microfiltration: analysis of quality parameters, operating conditions, and resistance. *Journal of Food Process Engineering*, 41, 10.1111/jfpe.12603.
- C. Shashikumar, R.C. Pradhan, S. Mishra. 2018. Influence of Moisture Content and Compression Axis on Physico-mechanical Properties of Shorea robusta Seeds. *Journal of The Institution of Engineers (India): Series A*, 10.1007/s40030-018-0274-y.
- S.S. Rana, R.C. Pradhan, S. Mishra. 2018. Optimization of chemical treatment on fresh cut tender jackfruit slices for prevention of browning by using response surface methodology. *International Food Research Journal*, 25, 196-203.
- S. S. Panigrahi, I. Syed, S. Sivapratha, and P. Sarkar. 2018. Nanoencapsulation strategies for lipid-soluble vitamins. *Chemical Papers*, (Article in press).
- C. V. Dhumal, K. Pal, and P. Sarkar. 2018. Characterization of tri-phasic edible films from chitosan, guar gum, and whey protein isolate loaded with plant-based antimicrobial compounds. *Polymer - Plastics Technology and Engineering* (Article in press).
- Syed and P. Sarkar. 2018. Ultrasonication-assisted formation and characterization of geraniol and carvacrol-loaded emulsions for enhanced antimicrobial activity against food-borne pathogens. *Chemical Papers* (Article in press).
- D. L. Kumar and P. Sarkar. 2018. Encapsulation of bioactive compounds using nanoemulsions. *Environmental Chemistry Letters*, 16(1), 59–70.
- S. Sivapratha and P. Sarkar. 2018. Oxidative stability and effect of stress factors on flaxseed oil-in-water emulsions stabilized by sodium caseinate–sodium alginate–chitosan interfacial membrane. *Chemical Papers*, 72(1): 1-14.
- V. Sharma, P. K. Patnaik, S. K. S. K. Nayak, I. Syed, V. K. Singh, P. Sarkar, G. Thakur, and K. Pal. 2018. Preparation and characterization of novel tamarind gum-based hydrogels for antimicrobial drug delivery applications. *Chemical Papers*, 72(8), 2101–2113.
- S. R. Paul, D. Qureshi, Y. Yogalakshmi, S. K. Nayak, V. K. Singh, I. Syed, P. Sarkar, and K. Pal. 2018. Development of bigels based on stearic acid-rice bran oil oleogels and tamarind gum hydrogels for controlled delivery applications. *Journal of Surfactants and Detergents*, 21(1), 17-29.
- A.E. Kate and P.P. Sutar. 2018. Development and Optimization of Novel Infrared Dry Peeling Method for Ginger (*Zingiber officinale* Roscoe) Rhizome, *Innovative Food Science and Emerging Technologies*, 48, August, 111-121.
- G. Behera and P. P. Sutar. 2018. A Comprehensive Review of Mathematical Modelling of Paddy Parboiling and Drying: Effects of Modern Techniques on Process Kinetics and Rice Quality, *Trends in Food Science and Technology*, 75, May, 206-230.
- S. Deepika and P.P. Sutar. 2018. Combining Osmotic-Steam Blanching with Infrared-Microwave-Hot Air Drying: Production of Dried Lemon (*Citrus limon* L.) Slices and Enzyme Inactivation. *Drying Technology*, 36 (14), 1719-1737.
- S.S. Shirkole and P. P. Sutar. 2018. Modeling Sorption Phenomena and Moisture Migration Rates in Paprika (*Capsicum annum* L.) using Physicochemical Characteristics. *Journal of Food Science and Technology*, 55 (02), 678-688.

- G. Behera, P.P. Sutar and A. Shubham. 2017. Development of Novel High Power-Short Time (HTST) Microwave Assisted Commercial Decontamination Process for Dried Turmeric Powder (*Curcuma Longa* L.), *Journal of Food Science and Technology*, 54(12):4078-4091.
- G. Behera and P.P. Sutar. 2018. Development of a New Pre-Drying Method of Accelerated Water Absorption and Partial Gelatinisation of Starch in Paddy using Pulsed Microwave-Water Applications in a Microwave Rotary Drum Dryer, *Drying Technology*, DOI:10.1080/07373937.2018.1456450.
- S.S. Shirkole and P. P. Sutar. 2018. High Power Short Time Microwave Finish Drying of Paprika (*Capsicum annum* L.): Development of Models for Moisture Diffusion and Color Degradation, *Drying Technology*, DOI:10.1080/07373937.2018.1454941.
- B.Z. Hmar, S. Mishra, R.C. Pradhan, 2017. Physico-chemical and sensory analysis of Kendu (*Diospyros melaxoxylon* Roxb.) jam using fuzzy logic. *Journal of Food Measurement and Characterization*, 10.1007/s11694-017-9575-5.
- A. Srimagal, S. Mishra, R.C. Pradhan, 2017. Effects of ethyl oleate and microwave blanching on drying kinetics of bitter gourd. *Journal of Food Science and Technology*, 54, 1192-1198.
- K. Vivek, S. Mishra, R.C. Pradhan, 2017. Physicochemical characterization and mass modelling of Sohiong (*Prunus nepalensis* L.) fruit. *Journal of Food Measurement and Characterization*, 10.1007/s11694-017-9708-x.
- B.Z. Hmar, S. Mishra, R.C. Pradhan. 2017. Physico-Chemical, Mechanical and Antioxidant Properties of Kendu (*Diospyros Melanoxylon* Roxb.). *Current Research in Nutrition and Food Science*, 5 (3), 214-222.

Paper Accepted for Publication: NIL

Books / Book Chapter

- Kumar, S. Chaturvedi, R.C. Pradhan, L. Nain, S. Sharma. 2018. Utilization of *Jatropha curcas* L. for biofuel production and sustainable environmental development. In: *Biofuels Advances and Perspectives*, ISBN:978-93-85046-22-3, Studium Press, New Delhi, India, pp-118.
- Syed, S. Garg, P. Sarkar. 2018. Entrapment of essential oils in hydrogels for biomedical applications In: *Polymeric Gels, Characterization, Properties and Biomedical Applications*, Woodhead Publishing Series in Biomaterials.

Publications in Conferences

- I. Syed, P. Sarkar. 2017. Impact of Antimicrobial-Loaded Emulsion System Stabilized with Gum Arabic on Food-Borne Pathogens. 2nd Innovations in Food Packaging, Shelf Life and Food Safety Conference, Stadthalle Erding, Munich, Germany, 3-6 October 2017 Germany.
- C.V. Dhuma, P. Sarkar. 2017. Formulation of edible films from polysaccharides and proteins. 2nd Innovations in Food Packaging, Shelf Life and Food Safety Conference, Stadthalle Erding, Munich, Germany, 3-6 October 2017 Germany.

Patent: NIL

Awards Received / Distinction Achieved

By Faculty: NIL

By Students: NIL

Technical Association / Societies

Prof. S. Mishra

- Member of American Society of Ag & Bio. Engineers (**ASABE**), USA.
- Member of Canadian Society of Bio Engineers (**CSBE**), Canada.
- Member of Indian Society of Agricultural Engineers (**ISAE**), India

Prof. R. C. Mishra

- Member of American Society of Ag & Bio. Engineers (**ASABE**), USA.
- Member of Association of Food Scientists and Technologists (**AFST**), India

Prof. S. K. Singh

- Member of American Society of Ag & Bio. Engineers (**ASABE**), USA.
- Member of Institute of Food Technologists (**IFT**), USA.
- Member of Indian Society of Agricultural Engineers (**ISAE**), India

Prof. M. Dwivedi

- Member of Association of Food Scientists and Technologists (**AFST**), India

Seminar, Symposia, Winter School, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

Short Term Course Conducted

- Global Initiative on Academic Network (GIAN) one week course on Innovative Food Processing and Packaging Technologies at NIT Rourkela (December 04 - 09, 2017), Course coordinator: P P Sutar and Co-coordinator: P Sarkar.

Seminar Attended

- I. Syed, P. Sarkar. 2017. Impact of Antimicrobial-Loaded Emulsion System Stabilized with Gum Arabic on Food-Borne Pathogens. 2nd Innovations in Food Packaging, Shelf Life and Food Safety Conference, Stadthalle Erding, Munich, Germany, 3-6 October 2017 Germany.
- C.V. Dhumal, P. Sarkar. 2017. Formulation of edible films from polysaccharides and proteins. 2nd Innovations in Food Packaging, Shelf Life and Food Safety Conference, Stadthalle Erding, Munich, Germany, 3-6 October 2017 Germany.

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI / Co-PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Design and Development of MW assisted UV Sterilization System for Liquid Food	ICAR, New Delhi	S. Mishra R. C. Pradhan	31.97	Feb 2016	Mar 2018
Utilizations of Minor Millets for Ready-to-eat Nutritious Snacks Product by Wet Extrusion Technology	SERB, New Delhi	R. C. Pradhan S. Mishra	45.96	Mar 2017	Feb 2020
Study on Novel non-thermal operation for clarification and concentration of fruit-juice (anacardium Occidental L.) and its By-product Utilization	SERB, New Delhi	R. C. Pradhan S. Mishra	42.69	Aug 2017	Aug 2020
Design, development and testing of myrobalan decorator for rural application	TRIFED, New Delhi	R. C. Pradhan S. Mishra	15.96	Nov 2017	Nov 2019

Name of the Project	Sponsoring Agency	Name of the PI / Co-PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Designing Emulsion-based Antimicrobial Delivery Vehicles for Prolonged Protection of Fresh-cut Fruit Systems against Food-borne Pathogens using Papaya as Model	SERB, New Delhi	P. Sarkar	18.05	Dec 2015	Dec 2018
Development of Cost Effective Microwave-Infrared-UV Assisted Continuous Sterilization Process for Spices	Ministry of Food Processing Industries, Govt of India	P. P. Sutar P Sarkar	53.63	Sept 2015	Sept 2018

Consultancy Services: Nil

Sponsors Address	Title of the Project	Faculty Name
-	-	-

Institutional Programme Support/Centre of Excellence: Nil

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date
-	-	-	-	-	-

List of Laboratories Developed

Sl. No.	Name of the Laboratories
1	Food Quality and Safety Lab
2	Food Process Design Lab
3	Horticultural Processing Lab
4	Food Grain Processing Lab
5	Dairy and Livestock Processing Lab
6	Food Packaging and Storage Lab
7	Food Product Development Lab
8	Food Refrigeration and Cold Chain Lab

Ph.D. Degrees Awarded by the Department

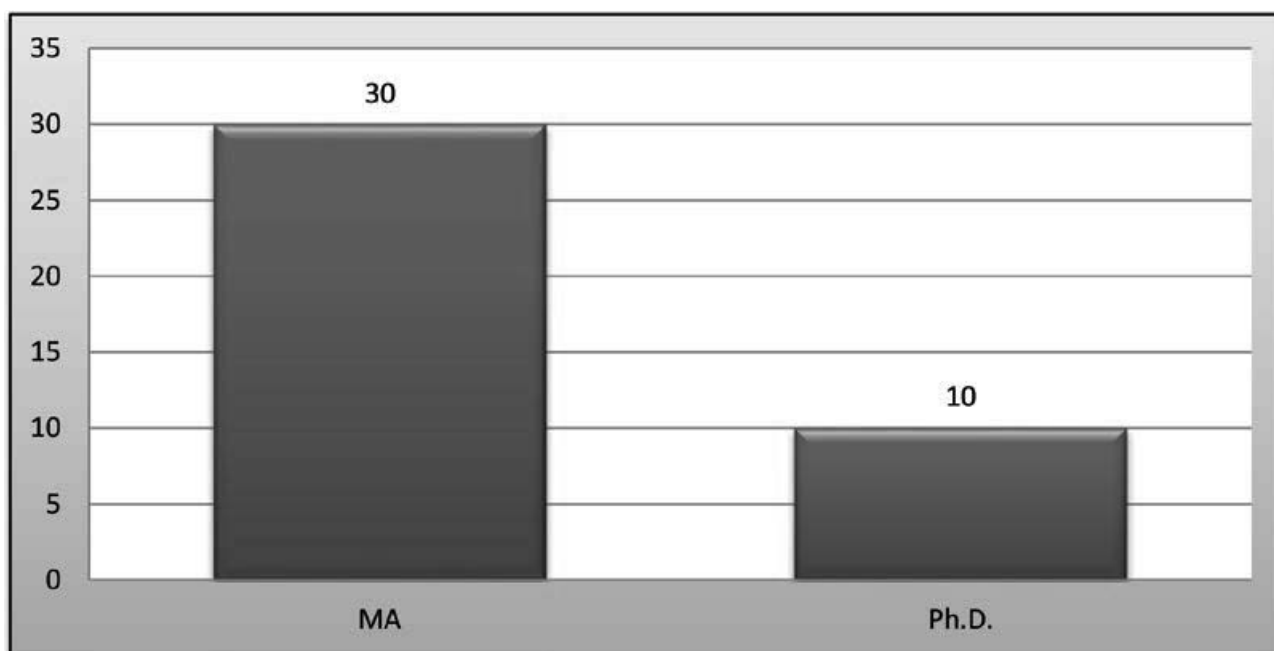
Name of the Student	Title of Thesis	Supervisor
Ms. Baby Z. Hmar	Design and Development of a Pulper for Kendu Fruit	Prof. Sabyasachi Mishra
Ms. Payel Ghosh	Development of a Process for Clarification and Concentration of Jamun (<i>Syzygium cuminii</i>) Juice using Membrane Filtration	Prof. R. C. Pradhan

M.Tech. (Research) Degrees Awarded by the Department: Nil

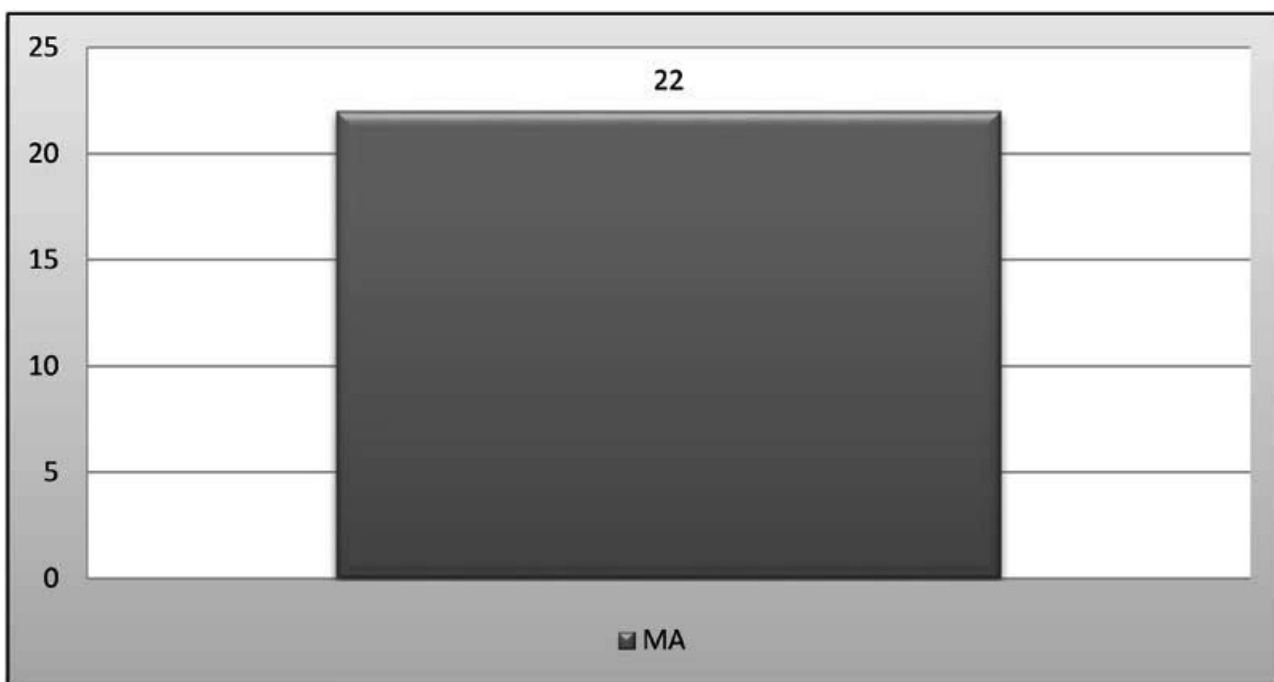
Name of the Student	Title of Thesis	Supervisor
-	-	-

Department of HUMANITIES & SOCIAL SCIENCES

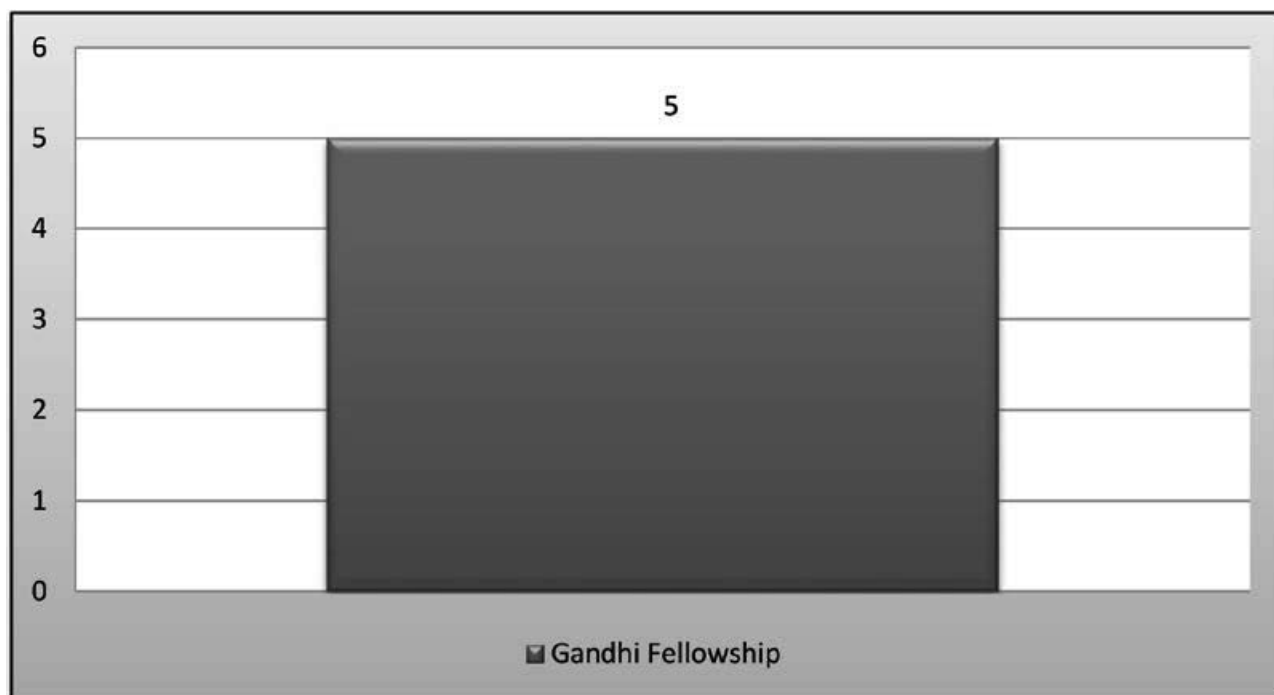
Student Intake in 2017-18



Total Student Strength



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof. Akshaya Kumar Rath (ratha@nitrkl.ac.in) Assistant Professor, Ph.D. (University of Hyderabad) English Literature
2	Prof. Apparao Thamminaina (thamminainaa@nitrkl.ac.in) Assistant Professor, Ph.D. (University of Hyderabad) Social Anthropology
3	Prof. Bikash Ranjan Mishra (mishrab@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kanpur) International Economics and Industrial Economics
4	Prof. Jalandhar Pradhan (pradhanj@nitrkl.ac.in) Associate Professor, Ph.D. (IIPS.Mumbai) Health Economics
5	Prof. Mantu Kumar Mahalik (mahalikm@nitrkl.ac) Assistant Professor, M.Phil. (JNU New Delhi), Ph.D. (IIT Madras) Macroeconomics, Housing & Energy Economics
6	Prof. Narayan Sethi (sethin@nitrkl.ac.in) Associate Professor, Ph.D. (University of Hyderabad) Financial Economics
7	Prof. Nihar Ranjan Mishra (misharn@nitrkl.ac.in) Associate Professor, Ph.D. (University of Hyderabad) Social Anthropology
8	Prof. Ramakrishna Biswal (biswalrk@nitrkl.ac.in) Assistant Professor, M.Phil. (Center of Advanced Study in Psychology, Utkal university, Bhubaneswar), Ph.D. (University of Delhi). Clinical and Counselling Psychology, Cognitive Psychology
9	Prof.(Ms.) Seemita Mohanty (seemita@nitrkl.ac.in) Professor, M.Phil, Ph.D. (Utkal University) English Language Teaching, Sociolinguistics, Cultural Studies

Sl. No.	Name & Specialization
10	Prof. Sthitapragyan Ray (raysp@nitrrkl.ac.in) Assistant Professor, Ph.D. (Utkal University) Sociology of Development
11	Prof. Surabhi Verma (vermas@nitrrkl.ac.in) Assistant Professor, Ph.D. (Punjab University, Chandigarh) Sanskrit
12	Suman Dhaka (dhakas@nitrrkl.ac.in) Assistant Professor, Ph.D. (IIT Guwahati) Psychology
13	Uppender Gundala (upenderg@nitrrkl.ac.in) Assistant Professor, Ph.D. (University of Hyderabad) English Literature

Publication

Publications in Journals

- Seemita Mohanty, "The mountain that burns", South Asian Review, vol. 29, no. 3, pp. 134-142, 2017, 10.1080/02759527.2008.11932623.
- Seemita Mohanty, "An assessment of the english language needs of tribal youth of urban Odisha and identifying the barriers experienced in their language learning", Explorations: Teaching and Learning English in India, no. 1, pp. 20-34, 2017.
- Meenakshi Sankaran, and Seemita Mohanty, "Importance versus achieved: a cross-sectional study on engineering students' perception on generic attributes", Journal of Engineering Education Transformations, vol. 31, no. 1, pp. 46-53, 2017, 10.16920/jeet/2017/v31i1/117733.
- Meenakshi Sankaran, and Seemita Mohanty, "Practice vis-a-vis benefits: An assessment of the teaching-learning methods employed in engineering education", Journal of Engineering Education Transformations, vol. 31, no. 3, pp. 230-236, 2018, 10.16920/jeet/2018/v31i3/120797.
- Meenakshi Sankaran, and Seemita Mohanty, "Student perception on achieved graduate attributes and learning experiences: a study on undergraduate engineering students of India", International Journal of Continuing Engineering Education and Life Long Learning, vol. 28, no. 1, pp. 77-98, 2018, 10.1504/IJCEELL.2018.10010136.
- Surabhi Verma, "Understanding pre-cognitive dreams in the light of Indian literature and knowledge systems", International Journal of Multidisciplinary Educational Research., vol. 6, no. 11, pp. 46-55, November 2017.
- Surabhi Verma, "The Concept of 'Saptapancaka' as higher states of consciousness in tantrika discourse", Malini, vol. ix, no. 22, pp. 40-43, June 2017.
- Rasheda Parveen, and Akshaya Kumar Rath, "Positioning Kali in thuggee tradition", Rupkatha Journal on Interdisciplinary Studies in Humanities, vol. 10, no. 2, pp. 158-170, July 2018, 10.21659/rupkatha.v10n2.16.
- Bikash Ranjan Mishra, and Pabitra Kumar Jena, "Bilateral FDI flows in Four Major Asian Economies: A Gravity Model Analysis", Journal of Economic Studies, 2019.
- Pabitra Kumar Jena, Bikash Ranjan Mishra, and Vimarsh Padha, "Foreign direct investment and the macro-economy of India", IUP Journal of Applied Economics, 2018.
- Radharani Nayak, and Seemita Mohanty, "Let's have fun while learning english: activities to develop speaking skills of rural school children", The Journal of AsiaTEFL, vol. 15, no. 2, pp. 502-509, 2018, 10.18823/asiatefl.2018.15.2.18.502.
- Nihar Ranjan Mishra, and Dinabandhu Sahoo, "Neoliberal development, displacement and resistance movement: the case of kalinga nagar industrial complex, Odisha, India", Man in India, vol. 97, no. 11, pp. 245-266, 2017.
- Nihar Ranjan Mishra, and Nabanita Das, "Coal mining and local environment: A study in Talcher coalfield of India", Air, Soil and Water Research, vol. 10, pp. 1-12, September 2017, 10.1177/1178622117728913.
- Nihar Ranjan Mishra, and Dhiraj Kumar, "Observing developmental intervention in mineral-rich Adivasi subsistence economy: An ethnographic account from West Singhbhum (Jharkhand)", Contemporary Voice of Dalit, vol. 9, no. 1, pp. 73-86, August 2017, 10.1177/2455328X17690645.

- Nihar Ranjan Mishra, and Shilpi Smita Panda, "Factors affecting temporary labour migration for seasonal work: a review", *Management Research Review*, March 2018, 10.1108/MRR-04-2017-0104.
- Nihar Ranjan Mishra, "Rise of tourism in Odisha: a critical analysis", *Man in India*, vol. 97, no. 9, pp. 267-284, 2017.
- Nihar Ranjan Mishra, and Dhananjay Kumar, "Caste hierarchy and new agro-technological practices: some anthropological thoughts on western uttar pradesh", *Man in India*, vol. 97, no. 9, pp. 285-300, January 2017.
- Nihar Ranjan Mishra, and Kumar Dhananjay, "New agro-technological practices and caste hierarchy: some anthropological thoughts on western uttar pradesh", *Asian Man (The) - An International Journal*, vol. 11, no. 1, pp. 26-34, October 2017, 10.5958/0975-6884.2017.00004.4.
- Sahoo, M., Som, M. and Pradhan, J. 2017. Perceived barrier in accessing the reproductive healthcare services in Odisha. *Indian Journal of Community Health* 29(3):229-238.
- Pradhan, J., Dwivedi, R., Pati, S. et al. 2017. Does spending matters? Re-looking into various covariates associated with Out of Pocket Expenditure (OOPE) and catastrophic spending on accidental injury from NSSO 71st round data. *Health Economics Review* (2017) 7: 48.
- Pradhan, J., Dwivedi, R. & Banjare, P. 2017. Relying on Whom? Correlates of Out of Pocket Health Expenditure among the Rural Elderly in Odisha, India, *Ageing International*:42(3), 306–323.
- Dwivedi, R., Pradhan J. 2017. Publically Financed Health Insurance for Poor: Understanding Rashtriya Swasthya Bima Yojna (RSBY) in Odisha, *Indian Journal of Economics and Development* 13 (2), 281-294.
- Banjare, P., J. Pradhan, R. Dwivedi, S.S. Mahapatra, and B R Debata. 2017. Concern and Maintenance during Twilight Years: Perception and Observation of Elderly Towards the Younger Generation in Rural Odisha, *Journal of Health Management*.
- R. Biswal, C. Subudhi and S.K. Acharya, 2017, Healers and Healing Practices of Mental Illness in India: The Role of Proposed Eclectic Healing Model, *Journal of Health Research and Review*, Vol-4(3), 89-95.
- Sahoo, Kalpana and Sethi, Narayan, "Impact of Foreign Capital on Economic Development in India: An Econometric Investigation" *Global Business Review* (Sage), 18(3), pp.1-15. 2017.
- Mallick, Arundhati and Sethi, Narayan, "Interaction between Monetary and Fiscal Policy: An Empirical Evidence from India" *Journal of Indian Economy* (Journal Press India), 3(2), pp.17-25, 2017.
- Nayak, Subhashree, Sethi, Narayan, Bhujabal, Padmaja and Mallick, Arundhati, "Determinants and Pattern of Saving Behavior in Rural Households of Western Odisha: A Micro Level Analysis", *Journal of Economic Policy and Research*, 12(1), pp.50-61, 2017.
- Dash, Devi Prasad; Sethi, Narayan and Bal, Debi Prasad, "Is the Demand for Crude Oil Inelastic for India? Evidence from Structural VAR analysis" *Energy Policy* (Elsevier) 118 (2018) pp.552-558.

Publications in Conferences

- P. Behera, and Bikash Ranjan Mishra, "The nexus between Institutional quality and FDI Performance: evidence from middle-income Asian countries", in 54th Annual Conference Proceedings on The Indian Econometric Society (TIES) 2018.
- P. Behera and B. R. Mishra, "Institutions and Foreign Direct Investment: Evidence from Asian Developing Countries, in International Conference on Economics and Finance, BITS Pilani, Goa Campus during 16-17 February 2018.
- Lopamudra D. Satpathy and B. R. Mishra, "The long-run association among productivity growth, competition and size of Indian Manufacturing firms: A Panel ARDL Bounds Test Investigation" in 54th Annual Conference Proceedings on The Indian Econometric Society (TIES) 2018 during 7th to 9th March 2018.
- Chattopadhyaya Kaushik & Seemita Mohanty. "Digital Literacy, Media Consumption and Cultural Exclusion: A Study on the Lodha Tribal Community of India" In Proceedings of the 38th International Academic Conference, University of Economics, Prague, Czech Republic, June 11-14, 2018.

Books/Edited Book Publications

- Narayan Sethi, *Agrarian Crisis in Indian Farmers*, Best Publishing House Pvt. Ltd, New Delhi, India, 2018

Paper Accepted for Publication

- Sethi, N, Padmaja Bhujabal, Devi Prasad Dash and Sanhita Sucharita, An Empirical Insight of Examining Impact of Recent Demonetization on Monetary System: Evidence from India, Iranian Economic Review.
- Sethi, N., Arundhati Mallik, What Causes India's High Inflation? A Threshold Structural Vector Autoregression Analysis, Institutions and Economies (IE)).
- Rath, Akshaya K. Encyclopedia Article (long) "Bhakti." Encyclopedia of Women in World Religions: Faith & Culture Across History. Gen Ed. Susan de Gaia. ABC CLIO: USA. 2018. (Forthcoming)
- Rath, Akshaya K. Encyclopedia Article (medium) "Matriliny." Encyclopedia of Women in World Religions: Faith & Culture Across History. Gen Ed. Susan de Gaia. ABC CLIO: USA. 2018. (Forthcoming)
- Rath, Akshaya K. "Transgender Studies in India: Folklore, Mythical Tradition and Autobiographies," Women's and Gender Studies in India: Crossings. Ed. Anu Aneja. Routledge: London. 2018. (Forthcoming)

Books/Book Chapter

- Das, Amarendra and B. R. Mishra Labour and Economy, Odisha Human Development Report, Government of Odisha; Odisha. 2018.
- Sahoo, Dinabandhu and Mishra, N. (2018). Development-Induced Displacement, Gender and Women's Movement. In Jaya Shrivastava (Ed.), Gender Discrimination and Inequality in Contemporary India: Dimensions and Voices of Protests. New Delhi: Kalpaz Publications and Gyan Books Pvt. Ltd. as Distributors (ISBN: 9789386397270).
- Niharranjan Mishra and Narendra Jha, (2018) Mining Induced Displacement and Its Impact on Environment and Health: A Study from Odisha, in Development Displacement and Tribal Life, edited by Farhad Mollick, K.K. Publication, New Delhi.
- Ray, S.P, 2017, Tribal Movement in Edited book "Tribal Development and Inclusive Policy", published by Concept & IIPA.
- Ray, S.P, 2018, Comparative Study of Two Social Movements in Odisha in Edited Volume in Honour of Prof. Rajni Kothari, Cambridge University Press.

Patent

Awards Received/Distinction Achieved

By Faculty:

- Prof. Niharranjan Mishra awarded UGC Inter University Associate by Indian Institute of Advanced Studies, Shimla.

By Students:

Technical Association/Societies

Seminar, Symposia, Winterschool, Short Term Course/ Workshops Conducted by Department

- Prof. Niharranjan Mishra, Prof. S.P. Ray & Prof. Apparao T. organized one short term course on Project Management for Development Professionals and Researchers during 25th June-29th June, 2018.
- Prof. R.K. Biswal organized a Three-day Workshop on Design and Development of Common Curriculum for Rural Engagement, 08 Nov 2017, NCRI Sponsor.

Seminar, Symposia, Winterschool Participation by Faculty Members

- Rath, Akshaya K. "Towards a Transgender Religion in India." The Future of Humanities: Challenges and Perspectives. Banaras Hindu University, Varanasi, 30-31 March 2018.

- Choudhuri, Chaitali, and Akshaya K. Rath. "The Mahatma and the Hijra." National Seminar on Gandhi and Time-Binding: Interface between Principles and Practices. Balvant Parekh Centre for General Semantics and Other Human Sciences, Vadodara. 23-24 January 2018.
- Niharranjan Mishra & Dinabandhu Sahoo, Neoliberal State, Resource Accumulation and Resistance Movement in Kalinga Nagar, Odisha in National Conference on Social Movement in Odisha Organised by IIT Kanpur during 21-23 February, 2018.
- Niharranjan Mishra delivered a invited talk on Future Research in Tribal Culture and Research Institutions in two day workshop on Revisiting Tribal Policies, Research and Innovations', organized jointly by Centre for Innovations in Public Systems (CIPS) during 30th and 31st august, 2017.
- Niharranjan Mishra delivered a invited talk on Technological change in agriculture: Its impact on rural Institution in a National Workshop on Sociology of Science and Technology in India organized by NISER, Bhubaneswar during 22nd and 23rd July, 2017.
- Niharranjan Mishra deliver a talk on Impact of Coal Mining on Local Biodiversity at IIAS, Shimla, during 25th May, 2018.
- Ray, S.P. Invited speaker on Science, Technology & Society Seminar at NISER, Bhubaneswar during 22nd and 23rd July, 2017.
- Ray, S.P. , Rising Social Movements in Odishain National Conference on Social Movement in Odisha Organised by IIT Kanpur during 21-23 February, 2018.
- Sethi. N. delivered a talk on Methodology for Qualitative Research in Ten Day Research Methodology Workshop on Social Sciences oragnised by Central University Ranchi, during March 21-30, 2018 at CUJ Campus, Brambe (Ranchi).
- Sethi. N. delivered a talk on Testing Hypothesis, in Ten Day Research Methodology Workshop on Social Sciences oragnised by Central University Ranchi, during March 21-30, 2018 at CUJ Campus, Brambe (Ranchi).
- Sethi. N. delivered a talk on Housing Policies: Affordable Homes at 15th technical paper meeting of the sessions 2016-18 on the topic "Housing Policies: Affordable Homes" on 2nd October, 2017 on the occasion of World Habitat Day oragnised by Institute of Engineers , Rourkela.
- Sethi, N; Bhujabal, P; Dash, D P; & Sucharita S; "Demonetization and its Effect on Indian Monetary System: An Empirical Investigation" organized by 54th Annual Conference of the Indian Econometric Society (TIES) held at Shri Mata Vishnodevi University, Katra, Jammu from 7th to 9th, March, 2018.
- Sethi, N; Bhujabal, P; Dash, D P; & Sucharita S; "An Empirical Insight of Examining Impact of Recent Demonetization on Monetary System: Evidence from India" organized by The International Conference on Economics and Finance, (ICEF-2018), BITS Pilani, KK Birla Goa Campus, Goa, India held in Goa, during February 16-17, 2018.
- Sethi, N; "Socio Economic Conditions of Child Labour in Odisha: A Case Study of Rourkela City" organized by 59th Annual Conference of The Indian Society of Labour Economics (ISLE), 2017 during 16-18 December 2017, Thiruvananthapuram, Kerala.
- Sethi, N; & Mallick A; "What Causes India's High Inflation? A Threshold Structural Vector Autoregression Analysis" organized by International Conference on Applied Economics and Policy (ICAEP) 2017 on the topic of during 21st-22nd August, 2017, held at University of Malaya, Kuala Lumpur, MALAYSIA.

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Empowerment of Tribal Women Through Handicrafts: A Study on Sundargarh District of Odisha	Ministry of Tribal Affairs	Prof. Bikash Ranjan Mishra	485100.00	April 1st 2017	Mar 31st 2019
Barriers to Participation in Education: A Study on Girls from Particularly Vulnerable Tribal Groups in Odisha	Indian Council of Social Science Research (ICSSR), New Delhi	Prof. Seemita Mohanty	15, 00, 000/-	May 1st 2018	April 31st 2020
Mother-tongue based Multilingual Education in Odisha: Issues, Challenges and Impact	Ministry of Tribal Affairs (MoTA), Govt. of India	Prof. Seemita Mohanty	9, 09, 300/-	April 1st 2017	Mar 31st 2019

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Code-switching and Language Questions among PVTGs of Odisha	Ministry of Tribal Affairs (MoTA), Govt. of India	Prof. Seemita Mohanty	4, 80, 900/-	April 1st 2017	Mar 31st 2019
A Study relating Consciousness and Spiritual Intelligence with reference to Kāśmīra Śaivism	Indian Council of Philosophical Research (ICPR), New Delhi.	Prof. Surabhi Verma National Institute of Technology Rourkela	3.0	31-03-2017	31-03-2019
Health of Tribal Elderly in Odisha: Challenges of Access and Affordability	Ministry of Tribal Affairs (MoTA), Govt. of India	Prof. J.Pradhan	4,99,800	April 1st 2017	Mar 31st 2019
Natural Disasters and Sustainable Livelihoods: A Study on Fishing Communities of Coastal Odisha.	Indian Council of Social Science Research (ICSSR), New Delhi	Prof. Nihar Ranjan Mishra	5.5 Lakhs	April 1st 2018	Mar 31st 2020
NTFP Management and Empowerment of Tribal Women,: A Study among PVTGs of Odisha	Ministry of Tribal Affairs (MoTA), Govt. of India	Prof. Nihar Ranjan Mishra	9.8 Lakhs	April 1st 2017	Mar 31st 2019
Youth & Post-conflict Reconstruction	Indian Council of Social Science Research (ICSSR), New Delhi	Prof. S.P.Ray	1 Lakh	May 15th 2017	May 31st 2018
An Assessment of Impact of Tribal Sub Plan Schemes on Tribal Communities of Odisha	Ministry of Tribal Affairs (MoTA), Govt. of India	Prof. N. Sethi	4,91,400	April 1st 2017	Mar 31st 2019
Is microfinance a social vehicle to reduce domestic violence? A study of Odisha	Indian Council of Social Science Research (ICSSR), New Delhi	Prof. N. Sethi	10Lakhs	April 1st 2018	Mar 31st 2020
Mapping and Identifying the Barriers to Inclusive Education among Tribal Children with Development Disability (DD) in Sundargarh District of Odisha “	Ministry of Tribal Affairs (MoTA), Govt. of India	Prof. R.K. Biswal	499800	April 1st 2017	Mar 31st 2019
Causes and Consequences of Dropouts in Primary and Secondary Education: A Study of Scheduled Tribe Children in Sundargarh District of Odisha	Ministry of Tribal Affairs (MoTA), Govt. of India	Prof. M.K. Mohalik	499800	April 1st 2017	Mar 31st 2019

Consultancy Services

Sponsors Address	Title of the Project	Faculty Name
Govt. of Odisha	Human Development Report,, Odisha	Prof. J. Pradhan

Institutional Programme Support / Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date
Centre of Excellence for Tribal Studies	Ministry of Tribal Affairs (MoTA), Govt. of India	Prof. Seemita Mohanty	1, 31, 66000/-	28-2-2017	31-3-2019

List of Laboratories Developed

Sl. No.	Name of the Laboratories
1	Digital Language Lab

Ph.D. Degrees Awarded by the Department

Name of the Student	Title of Thesis	Supervisor
Rasheda Parveen	Religion and Sexuality: A Study Of Select Indian English Poets	Akshaya Kumar Rath
Dhananjay Kumar	Changing Agricultural Practices and their Impact on Rural Social Institutions in Uttar Pradesh, India	Nihar Ranjan Mishra

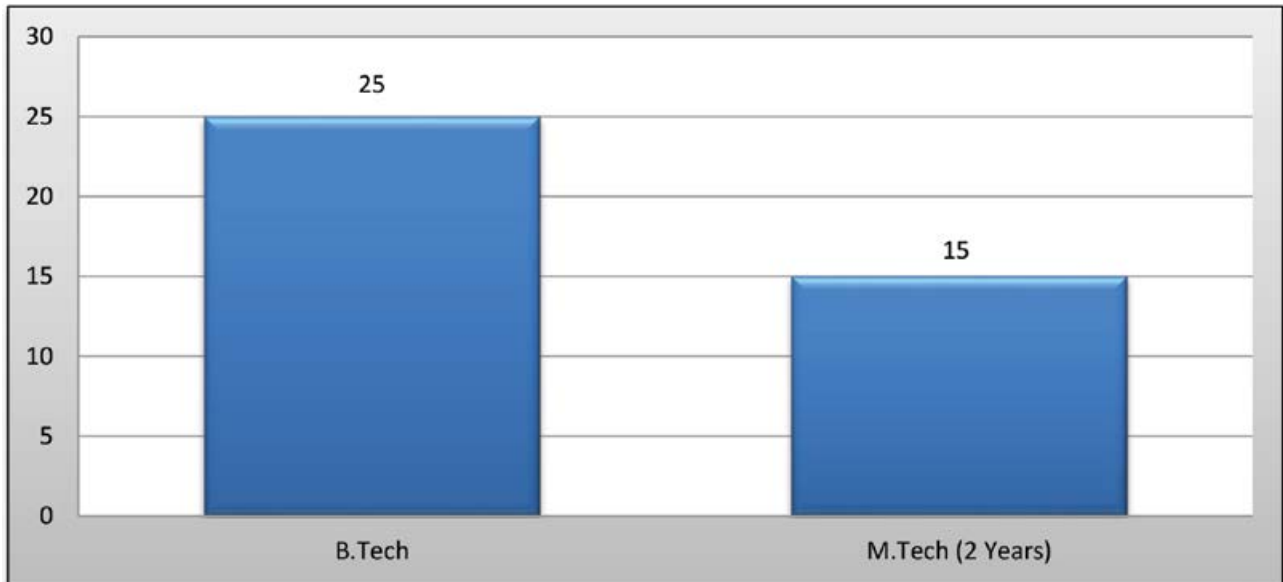
M.Tech. Research Degrees Awarded by the Department

Name of the Student	Title of Thesis	Supervisor

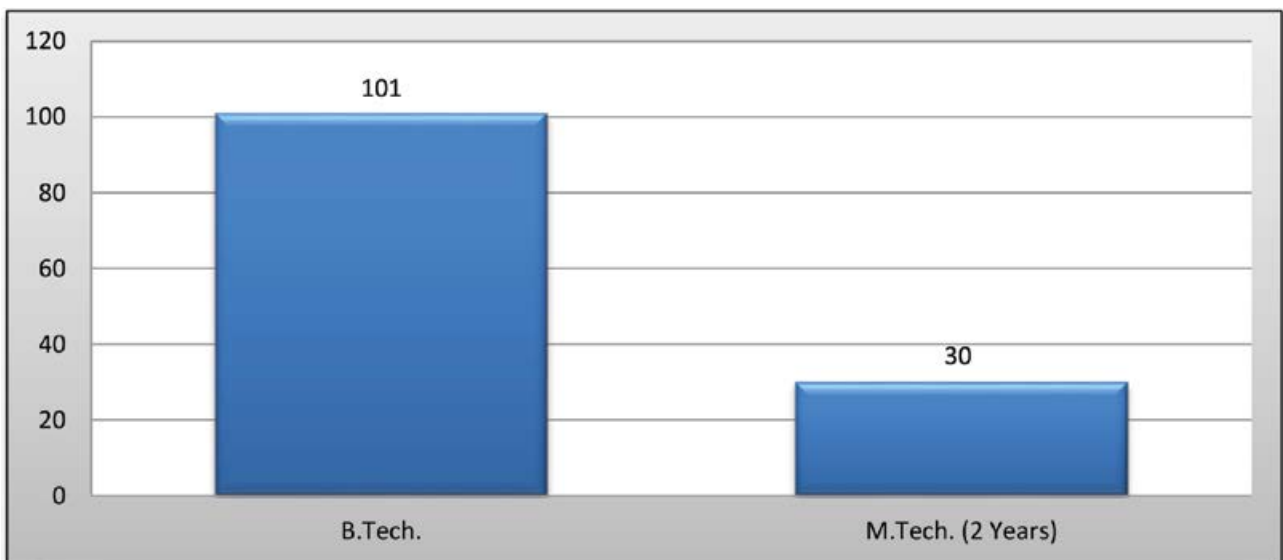


Department of INDUSTRIAL DESIGN

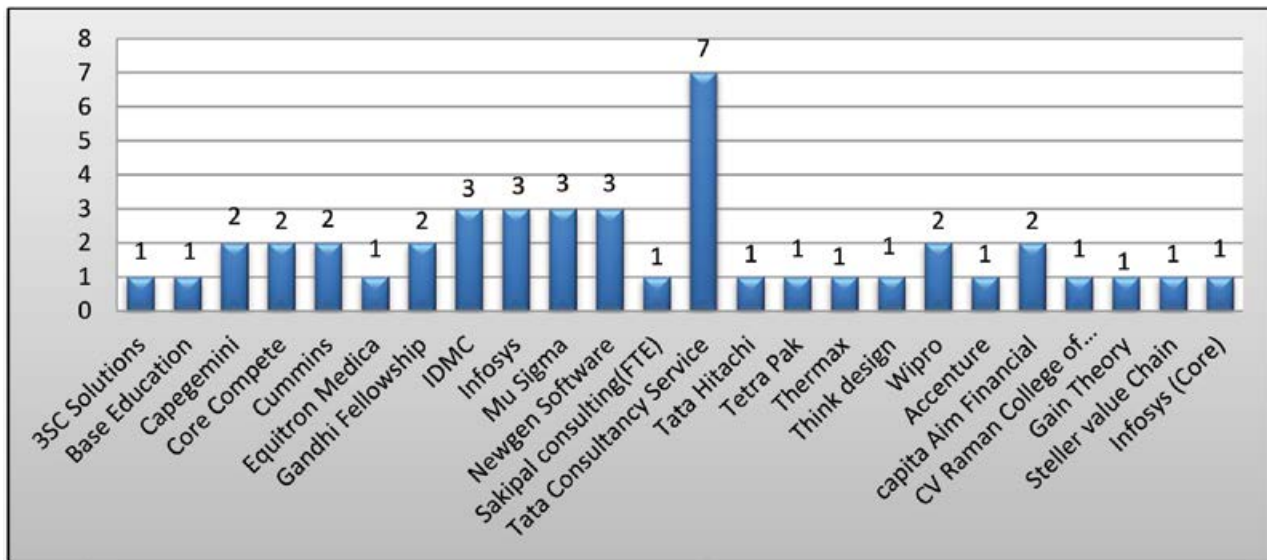
Student Intake in 2017-18



Total Student Strength



Total Student Strength



Faculty

Sl. No.	Name & specialization
1	Prof. Bibhuti Bhusan Biswal (bbbiswal@nitrkl.ac.in) (on Deputation 05/2017-05/2022) Robotics, FMS, CNC, Computer integrated manufacturing and Rapid product manufacturing
2	Prof. Mohammed Rajik Khan (khanmr@nitrkl.ac.in) Geometric modeling, CAD, CAE, Innovative product design, Human factors in product design, CAD based industrial ergonomics, Rapid prototyping and tooling, Electromagnetic welding, Bio-mechanical, etc.
3	Dr. Dibya Prakash Jena (jenad@nitrkl.ac.in) Product Design and Development, Condition Monitoring, Industrial Instrumentation, Mechatronics, Automotive noise control, Vibration, Industrial Noise Control, FEM Analysis, Dynamics and Control,
4	Dr. B.B.V.L. Deepak (bbv@nitrkl.ac.in) Machines & mechanisms, mechatronics, industrial robots, autonomous guided vehicles, algorithm development for trajectory planning of robotic arms and mobile robots.
5	Dr. Mohit Lal (lalm@nitrkl.ac.in) Product design and development, condition monitoring of rotating machineries active magnetic bearings
6	Prof. Dhananjay Singh Bisht (bishtd@nitrkl.ac.in) Product conceptualization, product semantics, product styling, product ergonomics, user interface design, usability engineering

Publication

Publications in Journals

- Panda, Biranchi, Marco Leite, Bibhuti Bhusan Biswal, Xiaodong Niu, and Akhil Garg. "Experimental and numerical modelling of mechanical properties of 3D printed honeycomb structures." *Measurement* 116 (2018): 495-506.
- Bahubalendruni, MVA Raju, and Bibhuti Bhusan Biswal. "An intelligent approach towards optimal assembly sequence generation." *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science* 232, no. 4 (2018): 531-541.
- Upadhyay, Chandramani, Rahul, Saurav Datta, Siba Sankar Mahapatra, and Bibhuti Bhusan Biswal. "An experimental investigation on electro discharge machining of Inconel 601." *International Journal of Industrial and Systems Engineering* 29, no. 2 (2018): 223-251.

- Rahul, Saurav Datta, Manoj Masanta, Bibhuti Bhusan Biswal, and Siba Sankar Mahapatra. "Analysis on surface characteristics of electro-discharge machined Inconel 718." *International Journal of Materials and Product Technology* 56, no. 1-2 (2018): 135-168.
- Rahul Abhishek, K., Saurav Datta, Bibhuti Bhusan Biswal, and Siba Sankar Mahapatra. "Machining performance optimization for electro discharge machining of Inconel 601, 625, 718 and 825: an integrated optimization route combining satisfaction function, fuzzy inference system and Taguchi approach." *J Brazil Soc Mech Sci Eng* (Published Online). <https://doi.org/10.1007/s40430-016-0659-7> (2016).
- Panda, Biranchi Narayan, Raju MVA Bahubalendruni, Bibhuti Bhusan Biswal, and Marco Leite. "A CAD-based approach for measuring volumetric error in layered manufacturing." *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science* 231, no. 13 (2017): 2398-2406.
- Datta, Saurav, Bibhuti Bhusan Biswal, and Siba Sankar Mahapatra. "A novel satisfaction function and distance-based approach for machining performance optimization during electro-discharge machining on super alloy Inconel 718." *Arabian Journal for Science and Engineering* 42, no. 5 (2017): 1999-2020.
- Bahubalendruni, MVA Raju, and Bibhuti Bhusan Biswal. "A novel concatenation method for generating optimal robotic assembly sequences." *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science* 231, no. 10 (2017): 1966-1977.
- Datta, Saurav, Bibhuti Bhusan Biswal, and Siba Sankar Mahapatra. "Electrical discharge machining of Inconel 825 using cryogenically treated copper electrode: Emphasis on surface integrity and metallurgical characteristics." *Journal of Manufacturing Processes* 26 (2017): 188-202.
- Balabantaray, Bunil Kumar, Om Prakash Sahu, Nibedita Mishra, and Bibhuti Bhusan Biswal. "A Quantitative Performance Analysis of Edge Detectors with Hybrid Edge Detector." *JCP* 12, no. 2 (2017): 165-173.
- Panda, S., B. B. Biswal, S. D. Jena, and D. Mishra. "An approach to weight optimization of a spur gear." *Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology* 231, no. 2 (2017): 189-202.
- Rahul, Kumar Abhishek, Saurav Datta, Bibhuti Bhusan Biswal, and Siba Sankar Mahapatra. "Machining performance optimisation during EDM of Inconel 718: a case experimental investigation." *International Journal of Productivity and Quality Management* 21, no. 4 (2017): 460-489.
- Khan Mohammed Rajik, Md. Mosarraf Hossain, Archana Sharma & Satendra Kumar, "Predicting the effect of field shaper in electromagnetic welding using FEM", *Arabian Journal for Science and Engineering*, July 2018.
- Allaparthi Muddu, Khan Mohammed Rajik & Brahma Teja, "Three-dimensional finite element dynamic analysis for micro drilling of multi-layer printed circuit board material", *Materials Today: Proceedings*, 2018, Vol. 5, Issue 2, Part 2, pp. 7019–7028.
- Jain Pushpdant & Khan Mohammed Rajik, "Biomechanical study of fused lumbar spine considering bone degeneracy using FEA", *Arabian Journal for Science and Engineering*, 2018, 43(3):1325-1334.
- Deepak, B. B. V. L., Bahubalendruni, R. M., Rao, C. A., & Nalini, J. (2017). Computer aided weld seam tracking approach. *Journal of Engineering, Design and Technology*, 15(1), 31-43.
- Deepak, B. B. V. L., and MVA Raju Bahubalendruni. "Numerical analysis for force distribution along the swing jaw plate of a single toggle jaw crusher." *World Journal of Engineering* 14, no. 3 (2017): 255-260.
- Deepak, B. B. V. L., and MVA Raju Bahubalendruni. "Development of a path follower in real-time environment." *World Journal of Engineering* 14, no. 4 (2017): 297-306.
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- Mohammed Rajik Khan, Aditya Rahul Gupta, "Design and Development of an Automated Hand Shovel", 15th International Conference on Humanizing Work and Work Environment (HWE 2017) Theme: Ergonomics for Improved Productivity, December, 8-10, 2017, Aligarh Muslim University, Aligarh, India.
- Allaparthi Muddu, Khan Mohammed Rajik & Brahma Teja, "Three-Dimensional Finite element dynamic analysis for micro drilling of multi-layer printed circuit board material", International Conference on Emerging Trends in Materials & Manufacturing Engineering (iMME17), NIT Tiruchirappalli, TN, India, March 10- 12, 2017.
- Bisht Dhananjay S & Khan Mohammed Rajik , "Anatomically shaped tool handles designed for power grip", 6th International Conference on Research into Design (ICoRD'17), Indian Institute of Technology Guwahati, Assam, January 09-11, 2017.
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Paper Accepted for Publication

- Khan Mohammed Rajik & Singh Nishant Kumar, "Prevalence of musculoskeletal disorders among Indian railway sahayaks", *International Journal of Occupational and Environmental Health*, 2018 (Accepted, July 27, 2018).
- Mohammed Rajik Khan, Aditya Rahul Gupta, "Design and development of an automated hand shovel", *Ergonomics for Improved Productivity*, Springer Nature Singapore Pte Ltd. 2018 (Accepted for publication).

Books/Book Chapter

- Jha, Panchanand, and Bibhuti Bhusan Biswal. "Optimization Approach for Inverse Kinematic Solution." In *Kinematics*. InTech, 2017.
- Khan M.R., Raj A., Hossain M.M., Kumar S., Sharma A. (2019) Distribution of Electromagnetic Field and Pressure of Single-Turn Circular Coil for Magnetic Pulse Welding Using FEM. In: Dixit U., Narayanan R. (eds) *Strengthening and Joining by Plastic Deformation. Lecture Notes on Multidisciplinary Industrial Engineering*. Springer, Singapore, pp 201-215 ISBN: 978-981-13-0377-7.
- Allaparthi Muddu, Khan Mohammed Rajik & A. Shyamnarayan, "FE Modal and Harmonic Analysis of Micro Drill with Ultrasonic Horn", In: Silva L. (eds) *Materials Design and Applications. Advanced Structured Materials*, vol 65, pp. 281-293, Springer, Cham 2017.
- Mohammed Rajik Khan, Biswaksen Patnaik and Sonalisa Patel, "Design and ergonomic analysis of a novel sit-to-stand and mobility assistive device for ambulation and elderly", Springer Nature Singapore Pte Ltd. 2017, A. Chakrabarti and D. Chakrabarti (eds.), *Research into Design for Communities, Volume 1, Smart Innovation, Systems, and Technologies* 65, pp. 801-811.
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- Mahanta, Golak Bihari, B. B. V. L. Deepak, B. B. Biswal, Amruta Rout, and G. Bala Murali. "Design Optimization of Robotic Gripper Links Using Accelerated Particle Swarm Optimization Technique." In *Proceedings of the Second International Conference on Computational Intelligence and Informatics*, pp. 337-345. Springer, Singapore, 2018.
- Murali, G. Bala, B. B. V. L. Deepak, B. B. Biswal, and Bijaya Kumar Khamari. "Integrated Design for Assembly Approach Using Ant Colony Optimization Algorithm for Optimal Assembly Sequence Planning." In *Computational Intelligence in Data Mining*, pp. 249-259. Springer, Singapore, 2019.
- M. Satapathy and M. Lal, Simultaneous Estimation of Speed Dependent Bearing and Coupling Dynamic Parameters in a Turbo-Generator System, ICoVP, 13th International Conference on Vibration Problems, 29th November – 2nd December, Guwahati India (2017). Springer Publishing House.
- S. K. Kuppa and M. Lal, Online Condition Monitoring of a Flexible Rotor System with the help of Active Magnetic Bearings, ICoVP, 13th International Conference on Vibration Problems, 29th November – 2nd December, Guwahati India (2017). Springer Publishing House.

- S.K. Kuppa and M. Lal, Characteristic Parameters Estimation of Uncertainties Present in an Active Magnetic Bearing Integrated Flexible Rotor System Using Dynamic reduction technique, IFToMM International Conference on Rotor Dynamics, 23-27 September 2018, Brazil. Springer Publishing House.
- M. Satapathy and M. Lal, Speed dependent dynamic parameters estimation of a rotor–bearing–coupling system, IFToMM International Conference on Rotor Dynamics, 23-27 September 2018, Brazil. Springer Publishing House.

Patent: Nil

Awards Received/Distinction Achieved

By faculty:

- Won best paper award in undergraduate category with 1st prize of \$200 gift voucher for the research paper “Design and development of an automated hand shovel” presented in 15th International Conference on Humanizing Work and Work Environment (HWWE 2017) Theme: Ergonomics for Improved Productivity, Aligarh Muslim University, Aligarh, India, December, 8-10, 2017.
- Received merit award for most distinguish paper for the research paper “Anatomically shaped tool handles designed for power grip” presented in 6th International Conference on Research into Design (ICoRD’17) at Indian Institute of Technology Guwahati, Assam, January 09-11, 2017.
- Received a gift voucher of EUR 150 as a felicitation for winning the distinguish paper award at 6th International Conference on Research into Design (ICoRD’17) 09th -11th January 2017 at Indian Institute of Technology Guwahati..
- Dr. B B V L Deepak received “Brindaban Sahoo Memorial Award” for the paper titled “An Intelligent Strategy for Automated Assembly Sequence Planning While Considering DFA Concept” form IEI Odisha.
- Dr. B B V L Deepak received “IEI Young Engineer Award 2017” in the field of Mechanical Engineering.
- Dr. B B V L Deepak received “Distinguish Paper Award “for the paper titled “Optimal Assembly Sequence Planning towards Design for Assembly Using Simulated Annealing Technique” in the International Conference on Research into Design 2017..
- Received best technical paper award for the research paper “Three-Dimensional Finite element dynamic analysis for micro drilling of multi-layer printed circuit board material” presented in International Conference on Emerging Trends in Materials & Manufacturing Engineering (iMME17), NIT Tiruchirappalli, TN, India, March 10- 12, 2017.

By Students:

- One of the Research Scholar has stood 1st for best research work and presentation in Research Scholars Week, 2017-18 at NIT Rourkela (PG Student: Pushpdant Jain).
- One of the M.Tech. project has received Gold medal for best Postgraduate (M.Tech. and Dual Degree) project (2016-17) on “Design & Fabrication of a Novel Continuous Passive Motion (CPM) Device for Gait Rehabilitation” at NIT Rourkela (PG Student: Aditya Gupta).
- One of the M.Tech. project has received Shanta Jain Award-2016 for the best Product Oriented project (2016-17) on “Design & Fabrication of a Novel Continuous Passive Motion (CPM) Device for Gait Rehabilitation” at NIT Rourkela (PG Student: Aditya Gupta).
- Won best paper award in undergraduate category with 1st prize of \$200 gift voucher for the research paper “Design and development of an automated hand shovel” presented in 15th International Conference on Humanizing Work and Work Environment (HWWE 2017) Theme: Ergonomics for Improved Productivity, Aligarh Muslim University, Aligarh, India, December, 8-10, 2017 (UG Student: Aditya Rahul Gupta).
- Ms. Sri Dharini is the Runner-up of 7th National Project Innovation contest for her work ‘Gravitation based Solar Panel Design’.
- Mr. G Bala Murali Received a Cash Prize of Rs.1,00,000 in the State level ‘Youth Innovation Award Competition.
- Received best technical paper award for the research paper “Three-Dimensional Finite element dynamic analysis for micro drilling of multi-layer printed circuit board material” presented in International Conference on Emerging Trends in Materials & Manufacturing Engineering (iMME17), NIT Tiruchirappalli, TN, India, March 10- 12, 2017.

Technical association/societies

Seminar, symposia, Winter School, short term course/ workshops conducted by department, participation by faculty members

Sl. No.	Category	Title	Dates
1		RINL Sponsored Short term course on Inventory and Supply Chain Management	05-09 Mar 2018
2		A Short Term Course on Optimization Techniques in Industrial Robotics (OTIR-2017)	21-25 Dec 2017
3	Short Term Course	RINL Sponsored Application of Artificial Intelligence Techniques, Robotics and Mechatronics in Various Systems of Industrial Environments	20-24 Nov 2017
4		RINL Sponsored Latest trends in Energy Optimization, Automation, Condition Monitoring and Maintenance in industrial Environment	12-16 Mar 2018
5		INSA Sponsored Short Term Course on Analytical And Experimental Techniques In Thermal Engineering	04-08 Jun 2018
6		RINL Sponsored Short Term Course on Controlling Strategies using Mechatronics Equipment in Steel Industry (CSMESI-2018)	12-16 Jun 2018

Research Projects

Name of the project	Sponsoring agency	Name of the PI	Total value (Rs. In lakhs)	Start Date	Close Date
Design and fabrication of a novel scoop stretcher for full body Immobilization during causality transfer	ICMR	Prof. M. R. Khan	19.96	Apr 2017	Mar 2019
Electromagnetic welding (EMW) coil design & characterization from mechanical and metallurgical aspects for tubular jobs of ODS alloy with other materials	ATC, BRNS	Prof. M. R. Khan	21.49	2015	2018
Development of laser sensor based robotic welding for producing quality welded joints	BRNS	Prof. B. B. Biswal	39.44	2016	2019
Development of an Intelligent Drone System for Pesticide Spraying Application in Precession Agriculture	DST-ECR	Prof. B. B. V. L Deepak	19.39	2017	2021
Design and fabrication of a metamaterial based acoustic cloak to skin a hollow aluminum cylinder from SONAR ranging 10 Hz to 20 kHz in ideal water medium	NRB	Dr. D.P. Jena	24.9	2016	2019
Design development and fabrication of acoustic signature based gunshot detection system for sniper using microphone array	DST	Dr. D.P. Jena	22	2016	2019

Consultancy Services

Sponsors address	Title of the project	Faculty name

Institutional Programme Support/Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date

Major Equipment Acquired

Sl. No.	Laboratory	Major Equipment	Quantity
1	Computer Aided Design Laboratory	NIL	NIL
2	Art, Design & Aesthetics Laboratory	NIL	NIL
3	Creative Automation Laboratory	6 axis Robotic arm with welding setup and laser sensor (Through Project)	1
4	Software Laboratory	NIL	NIL
5	Ergonomics & Simulation Laboratory	NIL	NIL
6	Product Design & Development Laboratory	NIL	NIL
7	Electromagnetic Welding Laboratory	NIL	NIL
8	Industrial Acoustics Laboratory	NIL	NIL

List of Laboratories

Sl. No.	Name of the Laboratories
1	Computer Aided Design Laboratory
2	Art, Design & Aesthetics Laboratory
3	Creative Automation Laboratory
4	Software Laboratory
5	Ergonomics & Simulation Laboratory
6	Product Design & Development Laboratory
7	Electromagnetic Welding Laboratory (R&D Project Lab)
8	Industrial Acoustics Laboratory (R&D Project Lab)

Ph.D. Degrees Awarded by the Department

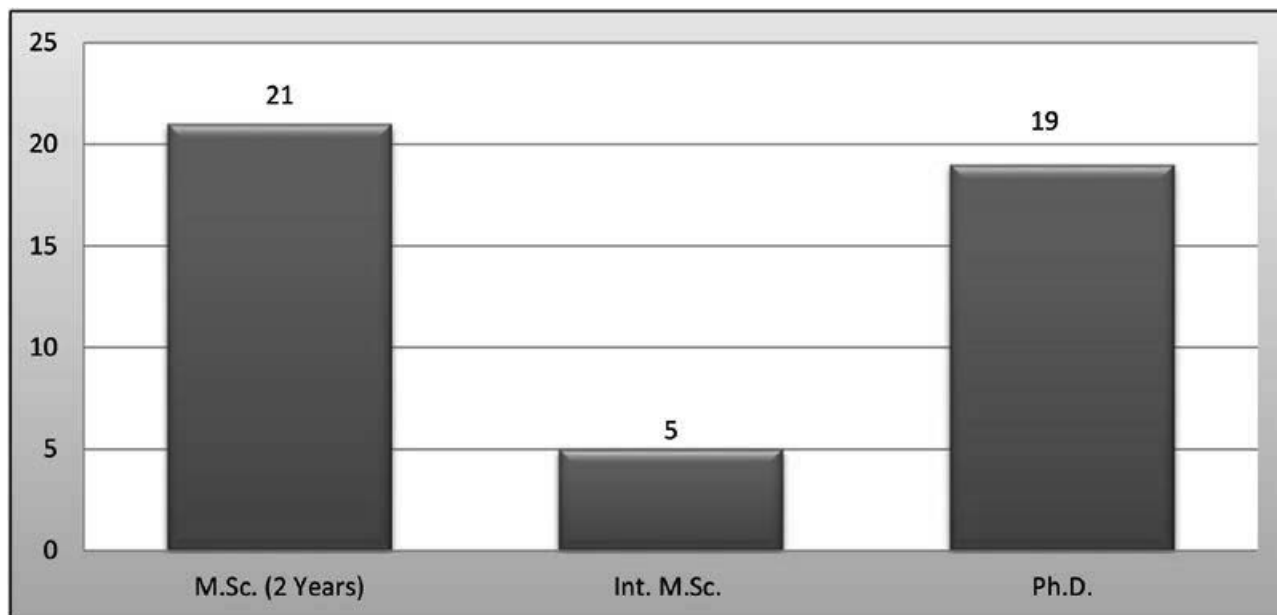
Sl. No.	Name of the student	Title of Thesis	Supervisor
1	Nibedita Mishra	A study on development of Human Robot Interaction(HRI)	Prof. B. B Biswal & Prof. BBVL Deepak
2	Pradip Kumar Sahu	An optimize trajectory planning for industrial robots using mathematical and heuristic methods	Prof. B B Biswal & Prof. BBVL Deepak

M.Tech. Research Degrees Awarded by the Department

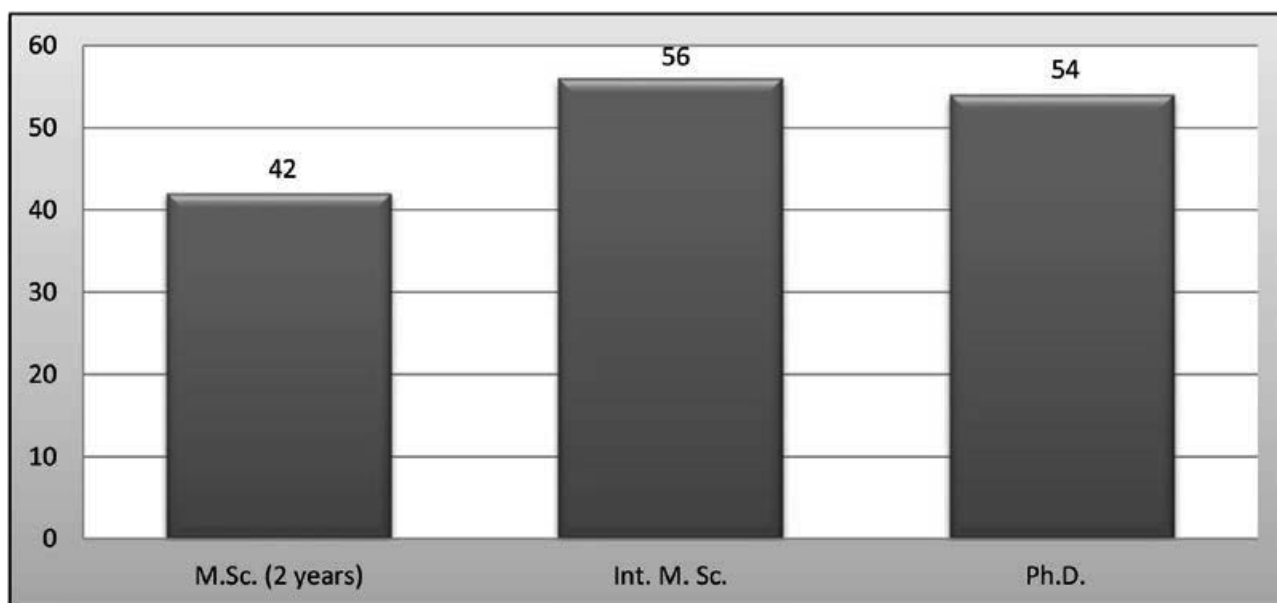
Sl. No.	Name of the student	Title of Thesis	Supervisor
1	Monalisha Satapathy	Simultaneous Estimation of Speed-Dependent Dynamic Parameters and Residual Unbalances in Rotor-Bearing- Coupling Systems	Prof. Mohit Lal

Department of LIFE SCIENCE

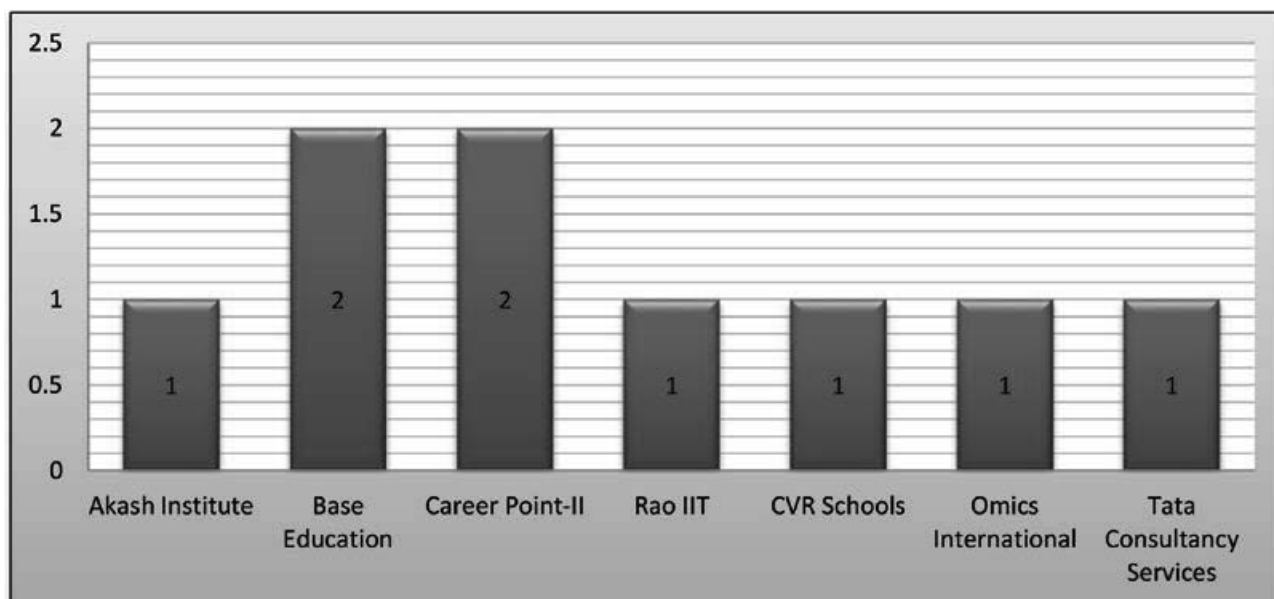
Student Intake in 2017-18



Total Student Strength



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof. Samir Kumar Patra (samirp@nitrkl.ac.in) Associate Professor, Ph.D. (Kalyani University); Postdoc (UCSF, USA); McGill Univ.(Canada) (Biochemistry & Molecular Biology)
2	Prof. Sujit Kumar Bhutia (sujitb@nitrkl.ac.in) Assistant Professor, Ph.D (IIT Kharagpur) (Cancer & Cell Death)
3	Prof. Surajit Das (surajit@nitrkl.ac.in) Assistant Professor , Ph.D. (Annamalai University) (Environmental Biotechnology, Marine microbiology, Fish Biotechnology, Biodiversity and Ecology)
4	Prof. Bibekanand Mallick (mallickb@nitrkl.ac.in) Assistant Professor, Ph.D. (IACS, Kolkata) (RNAi, Stem cell and Cancer, Next-gen Seq, Epigenomics, Molecular biology and Bioinformatics)
5	Prof.(Ms.) Bismita Nayak (nayakb@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Delhi) (Immunology, Nanobiotechnology, Drug/Vaccine delivery, Biomedical Applications)
6	Prof. Suman Jha (jhas@nitrkl.ac.in) Assistant Professor, Ph.D. (MPI, Germany) (Protein conformational dynamics (folding/misfolding); Protein-protein/nanoparticle/metal ion interactions)
7	Prof. R Jayabalan (jayabalanr@nitrkl.ac.in) Assistant Professor, Ph.D (Bharathiar University) (Food Sciences and Technology, Alternative Fuels, microbial products, Microemulsion systems)
8	Prof. Binod Bihari Sahu (sahub@nitrkl.ac.in) Assistant Professor, Ph.D (ILS, Bhubaneswar) (Plant Immunity, Non-host resistance during plant-pathogen interaction and mechanism of PCD)
9	Prof. Mohammed Saleem (saleemm@nitrkl.ac.in) Assistant Professor, Ph.D. (University of Münster, Germany) (Membrane-protein interactions, Endocytosis, Neurodegeneration, Host-pathogen interactions, Membrane Mechanics)

Sl. No.	Name & Specialization
10	Prof. Rohan Dhiman (dhimanr@nitrkl.ac.in) Assistant Professor, Ph.D. (Institute of Microbial Technology, Chandigarh) (Host-pathogen interaction in M. tuberculosis infection, Autophagy, Microbial Immunology, Innate and adaptive immunity in tuberculosis)
11	Prof. Monalisa Mishra (mishramo@nitrkl.ac.in) Assistant Professor, Ph.D (International University Bremen, Germany) (Cell and Developmental Biology)
12	Prof.(Ms.) Vidya Devi Negi (deviv@nitrkl.ac.in) Assistant Professor, Ph.D (IISc, Bangalore) (Infection biology and immunological modulation by infection during pregnancy and neonatal development)
13	Prof. Bijesh Kumar Biswal (biswalb@nitrkl.ac.in) Assistant Professor, Ph.D (IIT Madras) (Cancer and Stem Cell Biology)
14	Prof. Santosh Kumar (RNA-Protein interactions in diseases, RNA structures and their recognition by RNA binding proteins)
15	Prof. Srinivasan Muthuswamy (Human Molecular Genetics - Molecular basis of monogenic and multifactorial genetic disorders)

Publication

Publications in Journals

- Binod Bihari Sahu, Jordan L. Baumbach, Prashant Singh, Subodh K. Srivastava, Xiaoping Yi, and Madan K. Bhattacharyya, "Investigation of the Fusarium virguliforme Transcriptomes Induced during Infection of Soybean Roots Suggests that Enzymes with Hydrolytic Activities Could Play a Major Role in Root Necrosis", PLoS ONE, vol. 12, no. 1, 2017, 10.1371/journal.pone.0169963
- Jyoti Roy, Arijita Sarkar, Sibun Parida, Zhumur Ghosh, and Bibekanand Mallick, "Small RNA sequencing revealed dysregulated piRNAs in Alzheimer's disease and their probable role in pathogenesis", Molecular BioSystems, vol. 13, no. 3, pp. 565-576, 2017, 10.1039/C6MB00699J
- Jyoti Roy, and Bibekanand Mallick, "Altered gene expression in late-onset Alzheimer's disease due to SNPs within 3'UTR microRNA response elements", Genomics, vol. 109, no. 3-4, pp. 177-185, 2017, 10.1016/j.ygeno.2017.02.006
- Devyani Samantarrai, and Bibekanand Mallick, "miR-429 inhibits metastasis by targeting KIAA0101 in Soft Tissue Sarcoma", Experimental Cell Research, vol. 357, no. 1, pp. 33-39, 2017, 10.1016/j.yexcr.2017.04.017
- Manoranjan Arakha, Jyoti Roy, Parth Sarathi Nayak, Bibekanand Mallick, and Suman Jha, "Zinc oxide nanoparticle energy band gap reduction triggers the oxidative stress resulting into autophagy-mediated apoptotic cell death", Free Radical Biology and Medicine, vol. 110, pp. 42-53, 2017, 10.1016/j.freeradbiomed.2017.05.015
- Durgesh Nandini Das, Prajna Paramita Naik, Subhadip Mukhopadhyay, Prashanta Kumar Panda, Niharika Sinha, B R Meher, and Sujit Kumar Bhutia, "Elimination of dysfunctional mitochondria through mitophagy suppresses benzo[a]pyrene-induced apoptosis.", Free Radical Biology and Medicine, vol. 112, pp. 452-463, 2017, 10.1016/j.freeradbiomed.2017.08.020
- Niharika Sinha, Prashanta Kumar Panda, Prajna Paramita Naik, Durgesh Nandini Das, Subhadip Mukhopadhyay, Tapas K Maiti, Mk Shanmugam, A Chinnathambi, Me Zayed, Sa Alharbi, G Sethi, R Agarwal, and Sujit Kumar Bhutia, "Abrus agglutinin promotes irreparable DNA damage by triggering ROS generation followed by ATM-p73 mediated apoptosis in oral squamous cell carcinoma.", Molecular Carcinogenesis, vol. 56, no. 11, pp. 2400-2413, 2017, 10.1002/mc.22679
- Shradha Mawatwal, Assirbad Behura, Abhirupa Ghosh, Saqib Kidwai, Abtar Mishra, Amar Deep, Sakshi Agarwal, Sudipto Saha, Ramandeep Singh, and Rohan Dhiman, "Calcimycin mediates mycobacterial killing by inducing intracellular calcium-regulated autophagy in a P2RX7 dependent manner", Biochim Biophys Acta, vol. 1861, no. 12, pp. 3190-3200, 2017, 10.1016/j.bbagen.2017.09.010

- Saqib Kidwai, Chan Yong Park, Shradha Mawatwal, Prabhakar Tiwari, Myung Geun Jung, Tannu Priya Gosain, Pradeep Kumar, David Alland, Sandeep Kumar, Avinash Bajaj, Yun Kyung Hwang, Chang Sik Song, Rohan Dhiman, III Young Lee, and Ramandeep Singh, "Dual mechanism of action of 5-Nitro-1,10-Phenanthroline against *Mycobacterium tuberculosis*", *Antimicrob Agents Chemother*, vol. 61, no. 11, 2017, 10.1128/AAC.00969-17
- Leonard, Bishwanath Seth, Binod Bihari Sahu, V. R. Singh, and Nivedita Patra, "Statistical optimization for enhanced bacoside A production in plant cell cultures of *Bacopa monnieri*", *Plant Cell Tissue and Organ Culture (PCTOC)*, pp. 1-12, 2017, 10.1007/s11240-017-1373-6
- Garima Singh, Jyoti Roy, Pratiti Rout, and Bibekanand Mallick, "Genome-wide profiling of the PIWI-interacting RNA-mRNA regulatory networks in epithelial ovarian cancers", *PLoS One*, vol. 13, no. 1, pp. e0190485, 2018, 10.1371/journal.pone.0190485
- Mousumi Sahu, and Bibekanand Mallick, "Deciphering synergistic regulatory networks of microRNAs in hESCs and fibroblasts", *International Journal of Biological Macromolecules*, vol. 113, pp. 1279-1286, 2018, 10.1016/j.ijbiomac.2018.03.061
- Shreyasi Asthana, Mousumi Sahu, Parth Sarathi Nayak, Bibekanand Mallick, and Suman Jha, "The smaller heparin fragments bind non-specifically through the IAPP sequence: An in silico study", *International Journal of Biological Macromolecules*, vol. 113, pp. 1092-1104, 2018, 10.1016/j.ijbiomac.2018.03.001
- Binod Bihari Sahu, Bing Wang, Rishi Sumit, Micheline N Ngaki, Subodh K. Srivastava, Yang Yang, Madan K. Bhattacharyya, and Sivakumar Swaminathan, "Arabidopsis novel Glycine-rich plasma membrane PSS1 protein enhances disease resistance in Transgenic Soybean plants", *Plant Physiology*, vol. 176, no. 1, pp. 865-878, 2018, 10.1104/pp.16.01982
- Suman Jha, Shreyasi Asthana, Sujit Kumar Bhutia, and Harekrushna Sahoo, "Chaotropes trigger conformational rearrangements differently in Concanavalin A", *Journal of Chemical Sciences*, vol. 129, no. 8, pp. 1267-1276, 2017, 10.1007/s12039-017-1333-z
- Shreyasi Asthana, Bibekanand Mallick, Andrei T Alexandrescu, and Suman Jha, "IAPP in type II diabetes: Basic research on structure, molecular interactions, and disease mechanisms suggests potential intervention strategies", *Biochimica et Biophysica Acta (BBA) – Biomembranes* 2018, 10.1016/j.bbamem.2018.02.020
- Anuj Satish Tiwari, Ashutosh Prince, Manoranjan Arakha, Suman Jha, and Mohammed Saleem, "Passive membrane penetration by ZnO nanoparticles is driven by the interplay of electrostatic and phase boundary conditions", *RSC Nanoscale*, vol. 10, no. 7, pp. 3369-3384, 2018, 10.1039/c7nr08351c
- Bhaskar Das, Moumita Sahoo, Soumen Ghosh, Md Imran Khan, Indira Dash, R Jayabalan, Suraj Tripathy, Amrita Mishra, and Balasubramanian P, "Biosynthesis of magnesium oxide (MgO) nanoflakes by using leaf extract of *Bauhinia purpurea* and evaluation of its antibacterial property against *Staphylococcus aureus*", *Materials Science and Engineering: C*, vol. 91, pp. 436-444, 2018, 10.1016/j.msec.2018.05.059
- Rohit Kumar Singh, Sourav Mishra, Satyapriya Jena, Bijayananda Panigrahi, Bhaskar Das, R Jayabalan, Pankaj Kumar Parhi, and Dindyal Mandal, "Rapid colorimetric sensing of gadolinium by EGCG-derived AgNPs: the development of a nanohybrid bioimaging probe", *Chemical Communications*, vol. 54, pp. 3981-3984, 2018, 10.1039/C8CC01777H.
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Books/Edited Book Publications

- Manoranjan Arakha, and Suman Jha, *Interfacial phenomena on biological membranes*, 2018, 10.1007/978-3-319-73326-5, Springer.
- Surajit Das, and Hirak Ranjan Dash, *Handbook of Metal-Microbe Interactions and Bioremediation*, no. 1, CRC Press, 2017.

Book Chapter Publications

- Indira Dash, Bhaskar Das, Balasubramanian P, and R Jayabalan, Sea water as a reaction medium for bioethanol production, *Microbial Biotechnology: Application in Food and Pharmacology*, 9, Springer, February 2018, 10.1007/978-981-10-7140-9_9.
- Lekshmi Narendrakumar, Bhaskar Das, Balasubramanian P, R Jayabalan, and Sabu Thomas, Quorum Quenching and Biofilm Inhibition: Alternative Imminent Strategies to Control the Disease Cholera, *Biotechnological Applications of Quorum Sensing Inhibitors*, 4, Springer, May 2018, 10.1007/978-981-10-9026-4_4.
- Prajna Paramita Naik, Prashanta Kumar Panda, and Sujit Kumar Bhutia, Oral cancer stem cells microenvironment, *Stem Cell Microenvironments and Beyond*, 11, Springer Nature, December 2017, 10.1007/978-3-319-69194-7_11.

Patents

- M Bhattacharyya, Rishi Sumit, Binod Bihari Sahu, "Arabidopsis Nonhost Resistance Gene(s) and Use thereof to Engineer Disease Resistant Plants", Filed, March 2013, 13/783682
- Jyoti Roy and Bibekanand Mallick, "Identification of dysregulated PIWI-interacting (piRNAs) signatures in Alzheimer's diseases", Filed, December 2016, 201631042882
- Suman Jha, Manoranjan Arakha, Parth Sarthi Nayak, "Method for continuous production of silver nanoparticle using *Bacillus thuringiensis*", Filed, March 2016, 201631007436

Awards Received/Distinction Achieved

By Faculty:

- The best oral scientific presentation award to Prof. S.K. Bhutia in international conference on scientific frontiers in natural products based drugs (SFNPBD-2017), National University of Singapore.
- Prof. S. K. Bhutia was awarded Odisha Bigyan Academy Young Scientist Award.
- Prof. S. K. Bhutia was awarded Professor A. R. Rao Memorial Young Scientist Award in International symposium on Cancer Prevention and Treatment 2018, Jawaharlal Nehru University, New Delhi.

By Students:

Technical Association/Societies

Seminar, Symposia, Winter School, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI and Co-PI	Total Value	Year of Start	Duration	Status
Effect of Bacterial Infection on TH1/Th2/Th17 Balance during Pregnancy	DST	Prof. Vidya Devi Negi	2560000.00	2013	36	Closed
Salmonella infection and developmental defect in <i>Caenorhabditis elegans</i>	SERB	Prof. Vidya Devi Negi	4326000.00	2017	36	Running
To study the effect of major immunodominant antigens of mycobacteria on calcimycin induced autophagy in infected macrophages	SERB	Prof. Rohan Dhiman	4496000.00	2016	36	Running

Name of the Project	Sponsoring Agency	Name of the PI and Co-PI	Total Value	Year of Start	Duration	Status
To study the antimycobacterial role of calcium ionophores by inducing autophagy of mycobacteria infected macrophages	DST	Prof. Rohan Dhiman	3500000.00	2014	60	Running
Soybean lectins and their antimycobacterial role by regulating autophagy	SERB	Prof. Rohan Dhiman	2566000.00	2017	36	Running
Identification of piRNA associated genomic and epigenomic regulatory networks in ovarian cancer	DST	Prof. Bibekanand Mallick	1804000.00	2014	36	Running
Decoding the Dominant Microrna-Mediated Pluripotency Networks in Stem Cells	CSIR	Prof. Bibekanand Mallick	2029415.00	2013	36	Closed
Integration Polymorphisms and NGS in dissecting complex networks of mi RNA-mediated regulation in neurodegenerative diseases	DST	Prof. Bibekanand Mallick	2270000.00	2012	36	Closed
Structural impact of SNPs on miRNA-mediated regulation and its implication in Cancer (RGYI)	DBT	Prof. Bibekanand Mallick	2951000.00	2013	36	Closed
Taxonomy and diversity of culture dependent and culture-independent heterotrophic bacteria of bhitarkanika mangrove ecosystem, odisha, india	MOEFCC	Prof. Surajit Das and Prof. R Jayabalan	2757600.00	2016	36	Running
Biosynthesis of Biological active nad enzymatically resistant Oligosaccharide-Ferulic acid conjugate (a prodrug to target colo-rectal cancer) in microemulsion system (RGYI)	DBT	Prof. R Jayabalan and Prof. Surajit Das	1658000.00	2013	36	Closed
Utilization of mushroom extracts as prebiotic sources to develop synbiotic microcapsules	SERB	Prof. R Jayabalan and Prof.(Ms.) Bismita Nayak	2490000.00	2012	36	Running
Deciphering role of autophagy in stemness and therapy resistance in oral cancer stem cells	DBT	Prof. Sujit Kumar Bhutia and Prof. Bijesh Kumar Biswal	4477200.00	2018	36	Running
Stonin-2 regulated Beclin-1 dependent autophagy and autophagic lysosome reformation	Science & Engineering Research Board(SERB)	Prof. Sujit Kumar Bhutia and Prof. Binod Bihari Sahu	4572200.00	2017	36	Running
Protective autophagy by secretory clusterin associated with cell survival and chemoresistance in oral cancer	BRNS	Prof. Sujit Kumar Bhutia and Prof. Subhankar Paul	3127200.00	2017	36	Running

Name of the Project	Sponsoring Agency	Name of the PI and Co-PI	Total Value	Year of Start	Duration	Status
Autophagy induced by cellular Stress Switches to apoptosis	DBT	Prof. Sujit Kumar Bhutia and Prof. Binod Bihari Sahu	2122000.00	2015	36	Closed
Molecular Profiling of apoptotic pathway in cancer stem cells of oral squamous cell carcinoma and its modulating by plant lectins	DST,ODISHA	Prof. Sujit Kumar Bhutia	901000.00	2015	36	Running
Taxonomy and diversity of culture dependent and culture-independent heterotrophic bacteria of bhitarkanika mangrove ecosystem, odisha, india	MOEFCC	Prof. Surajit Das and Prof. R Jayabalan	2757600.00	2016	36	Running
Green synthesis of iron nanoparticles from manglicolous fungi of Indian Sundarban and their applications in sequestration of heavy metals form contaminated water	DBT	Prof. Surajit Das	1462600.00	2016	36	Running
Phototrophic biofilm based waste water recycling for sustainable water usage in rubber latex coagulation	DBT	Prof. Surajit Das	2876000.00	2014	48	Running
Oxomolybdenum Complexes of Aroyl hydrazones:Characterization, Biological and Catalytic Evaluation	CSIR	Prof. Rupam Dinda and Prof. Surajit Das	1790000.00	2013	36	Closed
Molecular Characterization and Genetic Analysis of Biofilm forming Mercurry Resistant Marine Bacteria for Bioremediation fo Mercurry	DBT	Prof. Surajit Das	792000.00	2013	12	Closed
Biosynthesis of Biological active nad enzymatically resistant Oligosaccharide-Ferulic acid conjugate (a prodrug to target colo-rectal cancer) in microemulsion system (RGYI)	DBT	Prof. R Jayabalan and Prof. Surajit Das	1658000.00	2013	36	Closed
Diversity and Synthesis of Immunoglobulin in the Indian Major Carps (Under NFBSFARA)	ICAR	Prof. Surajit Das	6292505.00	2013	54	Running
Studies on association between bio film formation and quorum sensing auto inducer impotential marine bacteria for enhanced utilisation I bioremediation	DBT	Prof. Surajit Das and Prof. Samir Kumar Patra	2688000.00	2011	36	Closed
Characterization of marine bacterial bio film for utilization in degradation of petroleum hydrocarbon	DST	Prof. Surajit Das	940000.00	2017	36	Running

Name of the Project	Sponsoring Agency	Name of the PI and Co-PI	Total Value	Year of Start	Duration	Status
Understanding bio film modulation and catabolic gene expression by quorum sensing autoinducers in marine bacteria for degradation of poly cyclic aromatic hydrocarbon	DBT	Prof. Surajit Das and Prof. Samir Kumar Patra	3719600.00	2017	36	Running
Identification, cloning, expression, purification and characterization of DNA demethylase enzyme activity: Investigation of the mechanism of demethylation of cytosine -5-carbon methylated -DNA keeping the DNA strand intact	DBT	Prof. Samir Kumar Patra and Prof. Surajit Das	9496400.00	2017	36	Running
Nanoparticle: A boon or bane for human IAPP/ pro IAPP	INSPIRE, DST, GOI	Prof. Suman Jha	3500000.00	2013	60	Running
Deciphering role of cancer stem cells to therapy resistance in oral cancer	SERB	Prof. Sujit Kumar Bhutia and Prof. Suman Jha	4110000.00	2013	36	Running
Conformational Amyloidogenic & Cytotoxic propensity of Human ProIapp	DBT	Prof. Suman Jha	3157200.00	2013	36	Closed
Nanoparticle based approach to enhance the AMP efficacy against AMP resistant bacteria	DBT	Prof. Suman Jha	850000.00	2016	36	Running
How do Protins bend membranes? Biophysical & Biochemical parameters that regulate membrane shaping by super molecular assembly of clathrin and HIV1	DST	Prof. Mohammed Saleem	3500000.00	2014	60	Running
Spatio-temporal mapping of membrane deformation induced by Amyloid-beta 40 during neurodegeneration	DBT	Prof. Mohammed Saleem	3233200.00	2018	36	Running
DNA damage-induced p73-mediated apoptosis with abrus agglutinin in oral cancer	CSIR	Prof. Sujit Kumar Bhutia	932000.00	2013	36	Closed
Deciphering role of cancer stem cells to therapy resistance in oral cancer	SERB	Prof. Sujit Kumar Bhutia and Prof. Suman Jha	4110000.00	2013	36	Running
Autophagic cell death induction with Abrus agglutinin	DBT	Prof. Sujit Kumar Bhutia and Prof. Subhankar Paul	3106000.00	2011	36	Closed
Elucidate the epigenetic role of sox9 in tkls resistant non small cell lung cancer	SERB	Prof. Bijesh Kumar Biswal	4106520.00	2017	36	Running
Deciphering role of autophagy in stemness and therapy resistance in oral cancer stem cells	DBT	Prof. Sujit Kumar Bhutia and Prof. Bijesh Kumar Biswal	4477200.00	2018	36	Running
Epigenetic regulation of Centrosome biogenes is and genomic instability in cancer	DST-SERB GOVT.OF INDIA	Prof. Samir Kumar Patra	1920000.00	2016	24	Running

Name of the Project	Sponsoring Agency	Name of the PI and Co-PI	Total Value	Year of Start	Duration	Status
Studies on association between bio film formation and quorum sensing auto inducer impotential marine bacteria for enhanced utilisation I bioremediation	DBT	Prof. Surajit Das and Prof. Samir Kumar Patra	2688000.00	2011	36	Closed
Understanding bio film modulation and catabolic gene expression by quorum sensing autoinducers in marine bacteria for degradation of poly cyclic aromatic hydrocarbon	DBT	Prof. Surajit Das and Prof. Samir Kumar Patra	3719600.00	2017	36	Running
Identification,cloning, expression ,purification and characterization of DNA demethylase enzyme activity: Investigation of the mechanism of demethylation of cytosine -5-carbon methylated -DNA keeping the DNA strand intact	DBT	Prof. Samir Kumar Patra and Prof. Surajit Das	9496400.00	2017	36	Running
Autophagy induced by cellular Stress Switches to apoptosis	DBT	Prof. Sujit Kumar Bhutia and Prof. Binod Bihari Sahu	2122000.00	2015	36	Closed
Non - host resistance programmed cell death in Arabidopsis for Egeineering board spectrum and durable disease resistance in rice	SERB	Prof. Binod Bihari Sahu	2620000.00	2015	36	Running
Engineering arabidopsis-specific nonhost resistance mechanism in rice for durable and board spectrum sheath blight resistance against Rhizoctonia Solari	Govt.of Odisha	Prof. Binod Bihari Sahu	896000.00	2015	36	Running
Stonin-2 regulated Beclin-1 dependent autophagy and autophagic lysosome reformation	Science & Engineering Research Board(SERB)	Prof. Sujit Kumar Bhutia and Prof. Binod Bihari Sahu	4572200.00	2017	36	Running

Consultancy Services

Sponsors Address	Title of the Project	Faculty Name

Institutional Programme Support / Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date

List of Laboratories Developed

Sl. No.	Name of the Laboratories
1.	Laboratory of Epigenetics
2.	Laboratory of Cancer and Cell Death
3.	Laboratory of Environmental Microbiology and Ecology
4.	Laboratory of Protein Biology
5.	Laboratory of Food Microbiology
6.	Laboratory of Plant Immunity
7.	Laboratory of Membrane Mechanics
8.	Laboratory of Mycobacterial Immunology
9.	Laboratory of Developmental Biology
10.	Laboratory of Infection Immunology
11.	Laboratory of RNAi and Functional Genomics

Ph.D. Degrees Awarded by the Department

Name of the Student	Title of Thesis	Supervisor
Sabnam Parbin	Investigation of Epigenetic Regulation of Tumor Suppressor Genes by Inhibition of Histone Deacetylases and Lipid Raft Signaling in Human Cancers	Prof. S.K. Patra
Bhakti Patel	Identification of Immunoglobulin IgZ and IgM and the Role of Innate Immune Signaling on their Synthesis in Catla Catla	Prof. S. Das
Ritu Raj	Synthesis of Fluorescent Nanoparticles and Bacteria-Nanoparticle Conjugates for Targeted Delivery of Cancer Therapeutics	Prof. S. Das
Supriya Kumari	Bioremediation Potential of Biofilm forming Lead Resistant and Naphthalene utilizing Marine Bacteria	Prof. S Das
Moumita Sahoo	Development of Synbiotic Functional Food using Potential Probiotic Isolates with Soymilk and Mushroom Extracts as Prebiotics	Prof. R. Jayabalan

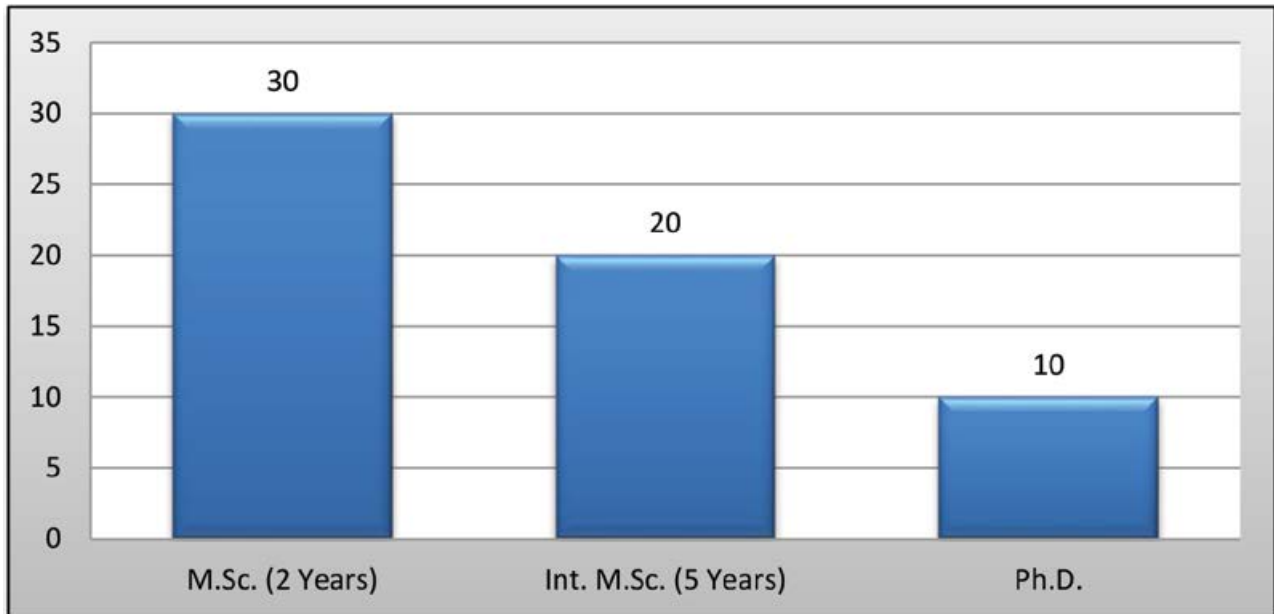
M.Tech. Research Degrees Awarded by the Department

Name of the Student	Title of Thesis	Supervisor

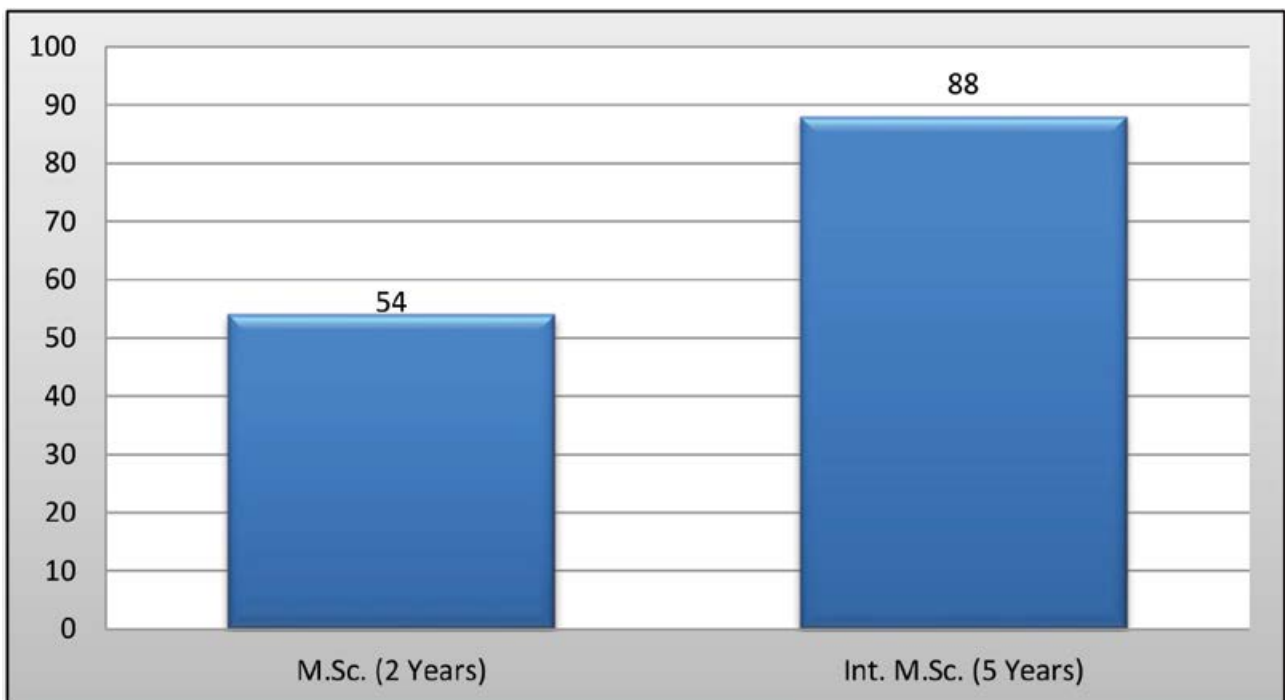


Department of MATHEMATICS

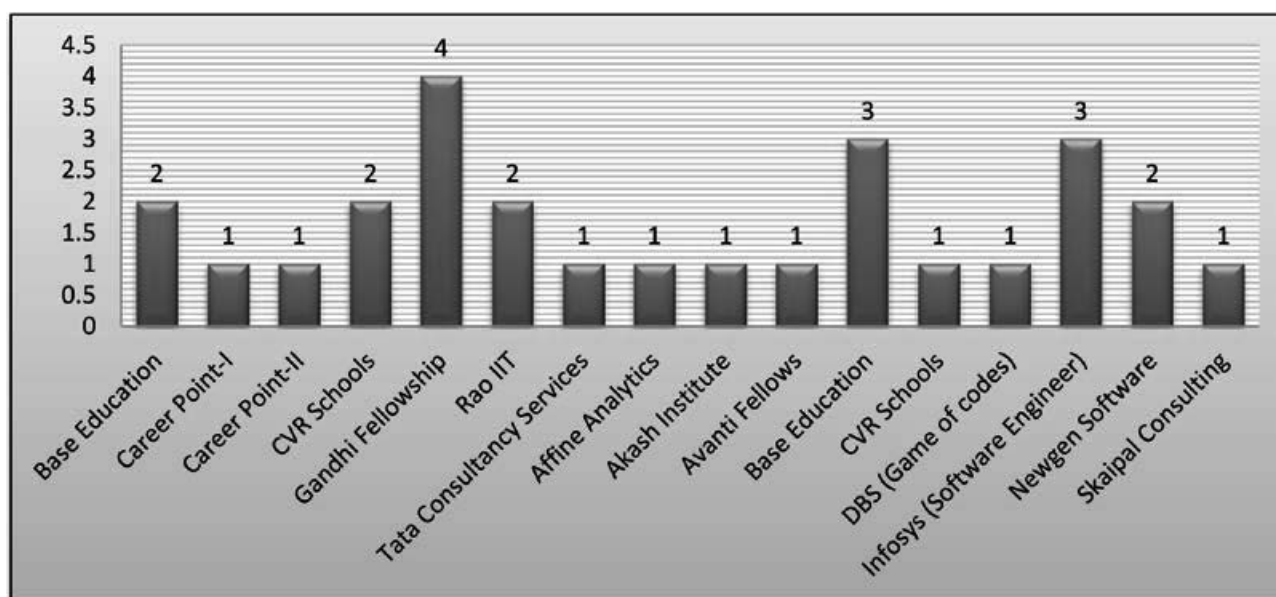
Student Intake in 2017-18



Total Student Strength



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof. Gopal Krishna Panda, (gkpanda@nitrkl.ac.in) Professor, Ph.D. (Sambalpur University) Number Theory, Nonlinear Optimization
2	Prof. Sneathish Chakraverty, (chakravertys@nitrkl.ac.in) Professor, M.Sc. [(Applied Maths), Roorkee University] Mathematical Modelling, Soft Computing and Machine Intelligence, Vibration and Inverse Vibration Problems, Numerical Analysis
3	Prof. Kishor Chandra Pati, (kcpati@nitrkl.ac.in) Professor & HOD, M.Sc, M.Phil, Ph.D. (Delhi university) Lie Algebra, Kac Moody Algebra, Control Theory
4	Prof. Anil Kumar, (akm@nitrkl.ac.in) Associate Professor, Ph.D. (IIT Guwahati) Mathematical Programming
5	Prof. Bata Krushna Ojha, (bkojha@nitrkl.ac.in) Associate Professor, Ph.D. (Utkal University) Fluid Dynamics
6	Prof. Santanu Saha Ray, (saharays@nitrkl.ac.in) Associate Professor, Ph.D. (Jadavpur University) Differential Equations, Wavelet Transforms, Stochastic Differential Equations, Integral Equations, Numerical Analysis.
7	Prof. Bikash Sahoo, (bikash.sahoo@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Roorkee) Computational Fluid Dynamics
8	S R Pattanaik: Convex Analysis, Maximal Monotone Operator, Douglas-Rachford Operator
9	Prof. Divya Singh, (singhd@nitrkl.ac.in) Assistant Professor, Ph.D. (Allahabad University) Wavelet Analysis
10	Prof. Jugal Mohapatra, (jugal@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Guwahati) Numerical Analysis
11	Prof. Manas Ranjan Tripathy, (manas@nitrkl.ac.in) Assistant Professor, Posrdoc-ISI (Indian Statistical institute), Delhi, Ph.D (IIT Kharagpur) Statistical Inference, Estimation Theory, Computational Statistics, Estimation Using Censored Samples. Decision Theory

Sl. No.	Name & Specialization
12	Prof. S Pradhan: Functional Analysis
13	Prof. Debajyoti Choudhuri, (choudhurid@nitrkl.ac.in) Assistant Professor, Ph.D.(University of Hyderabad) Elliptic PDEs
14	Prof. S. Kayal Statistical Information Theory, Decision Theory, Order Statistics, Record Values
15	Prof. Ranjit Mehatari Assistant Professor, Ph.D.(IISER Kolkata) Spectral Graph Theory

Publication

Publications in Journals

- Suchandan Kayal (2018). Quantile-based cumulative inaccuracy measures, *Physica A: Statistical Mechanics and its Applications*, Vol. 510, P. 329-344.
- Lakshmi Kanta Patra, Suchandan Kayal and Phalguni Nanda (2018). Some Stochastic Comparison Results for Series and Parallel Systems with Heterogeneous Pareto Type Components, *Applications of Mathematics*, Vol. 63(1), P. 55-77.
- Suchandan Kayal and Manas Ranjan Tripathy (2018). A Quantile-based Tsallis- α Divergence, *Physica A-Statistical Mechanics and its Applications*, Vol. 492, P. 496-505.
- R.N Padhan and K C Pati, Some studies on central derivation of nilpotent Lie Superalgebras, arXiv:1804.02514 .
- B.S Choudhary, C. Bandyopadhyay, Pranati Maity, K.C. Pati: Generalized Pata type result with multivalued rational type maps. *Indian Journal of Mathematics* 60(1).
- Debanjana Bhattacharyya, Subhransu Padhee & Kishor Chandra Pati, Modeling of DC–DC Converter Using Exact Feedback Linearization Method: A Discussion. *IETE Journal of Research*. (May 2018). DOI: 10.1080/03772063.2018.1454345.
- Archana Tiwari , S. R. Pattanaik, K. C. Pati, Revisiting parallel car parking problem. *J. Appl. Math. Comput.* DOI 10.1007/s12190-017-1143-y(2017).

Publications in Conferences

- R. N. Padhan and K. C. Pati, Splints of root systems of Basic Lie Superalgebras. The 32nd International Colloquium on Group Theoretical Methods in Physics (Group32) at Czech Technical University in Prague, Czech Republic.
- S. Muni, S Padhee, K. C. Pati: A study on the synchronization aspects of star connected identical chua's circuit. SCEECS 2018

Paper Accepted for Publication

Books/Book Chapter

Patent

Awards Received/Distinction Achieved

By Faculty:

By Students:

Technical Association/Societies

- Life Member of Odisha Mathematical Society
- Life Member of CSI

Seminar, Symposia, Winter School, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Affine Kac-Moody Symmetric spaces (tame Frechet manifolds) and its analysis through Laplace like operator.	NBHM	Prof. K.C. Pati	12, 87, 600	Apr 2017	Continuing
Control theory on symmetric spaces and lie super groups	DST SERB	Prof. K.C. Pati	13	Oct 2017	Continuing

Consultancy Services

Sponsors Address	Title of the Project	Faculty Name

Institutional Programme Support/Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date

List of Laboratories Developed

Sl. No.	Name of the Laboratories

Ph.D. Degrees Awarded by the Department

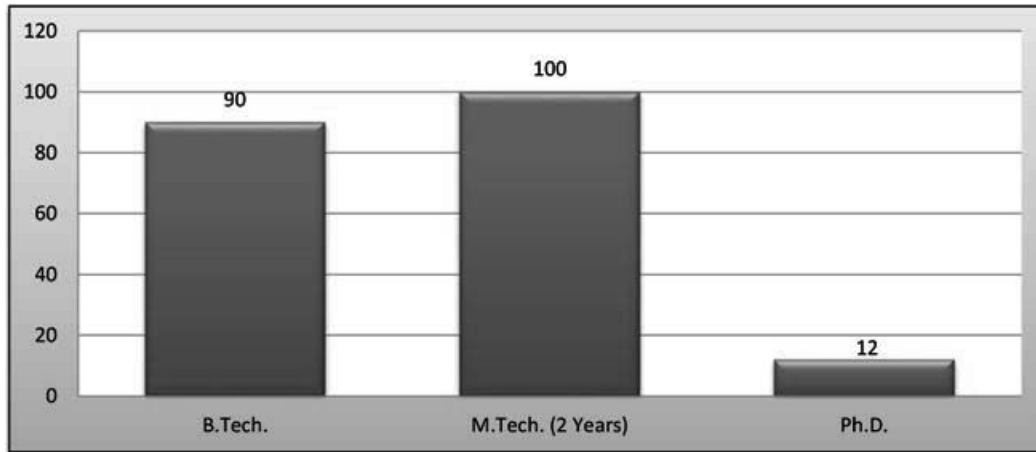
Name of the Student	Title of Thesis	Supervisor

M.Tech. Research Degrees Awarded by the Department

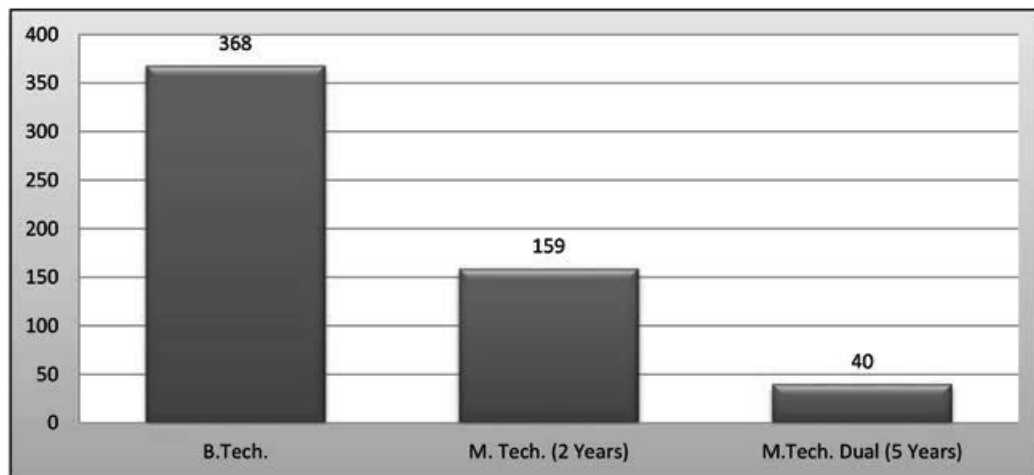
Name of the Student	Title of Thesis	Supervisor

Department of MECHANICAL ENGINEERING

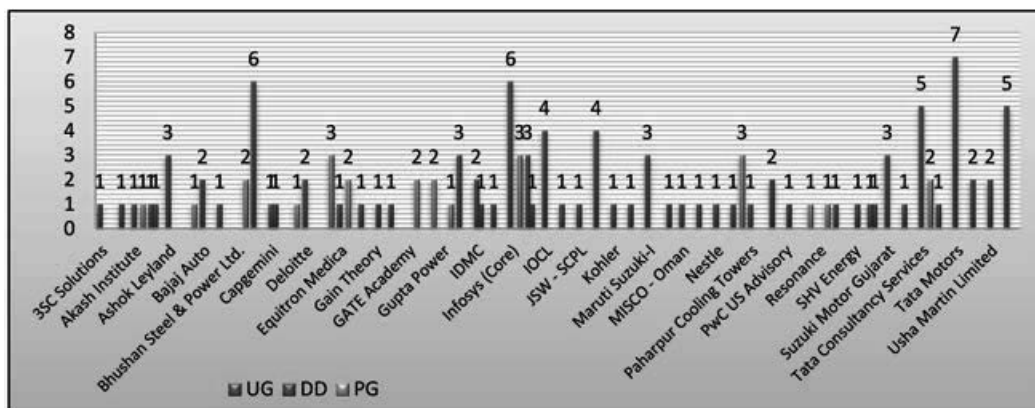
Student Intake in 2017-18



Total Student Strength



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof. Samir Kumar Acharya (skacharya@nitrkl.ac.in) Professor, Ph.D. (Sambalpur University) Composite Materials
2	Prof. Rabindra Kumar Behera (rkbehera@nitrkl.ac.in) Associate Professor, Ph.D. (NIT Rourkela) Machine Design and Vibration
3	Prof. Suraj Kumar Behera (beherask@nitrkl.ac.in) Assistant Professor, M.Tech. (IIT Kanpur) Solid mechanics, machine design
4	Prof. Chandan Kumar Biswas (ckbiswas@nitrkl.ac.in) Professor, Ph.D. (IIT Kharagpur) Non Conventional Machining, Micro Manufacturing
5	Prof.(Ms.) Sandhyarani Biswas (srb@nitrkl.ac.in) Assistant Professor, Ph.D. (NIT Rourkela) Composite Materials, Production Engineering
6	Prof. Saurav Datta (sdatta@nitrkl.ac.in) Associate Professor, Ph.D (Jadavpur University) Welding Technology, Quality Optimization, Modelling and Simulation of Production Processes
8	Prof. Suman Ghosh (ghoshs@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Multiphase flow, Heat transfer, Heat Exchanger
10	Prof. Kalipada Maity (kpmaity@nitrkl.ac.in) Professor, Ph.D. (Sambalpur University) Micro-Machining, Metal Forming, Cryo-treatment, hot-machining, modeling of metal working and machining, Plastic Deformation
11	Prof. Manoj Masanta (masantam@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Laser application in manufacturing, Coating Technology
12	Prof. Siba Sankar Mohapatra (ssm@nitrkl.ac.in) Professor, Ph.D. (IIT Kharagpur) Operations Management
13	Prof. Sukesh Chandra Mohanty (scmohanty@nitrkl.ac.in) Professor, Ph.D. (NIT Rourkela) Machine Design, Structural dynamics , Vibration, Gear dynamics
14	Dr. Manoj Kumar Moharana (moharanam@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kanpur) Fluid flow, Heat transfer
15	Prof. S. Murugan (murugans@nitrkl.ac.in) Professor, Ph.D. (Anna Univ.) IC Engine and Energy Engineering
16	Prof. Bijoy Kumar Nanda (bknanda@nitrkl.ac.in) Professor, Ph.D. (Sambalpur University) Machine Tool Design, Production Engineering, Damping of Structures
17	Prof. Dayal Ramakrushna Parhi (drkparhi@nitrkl.ac.in) Professor & HOD, Ph.D. (Cardiff Univ. UK) Robotics, Machatronics, Machine Design and Vibration
18	Prof. Subrata Kumar Panda (pandask@nitrkl.ac.in) Associate Professor, Ph.D. (IIT Kharagpur) Vibration and Control, Nonlinear FEM, Functionally Graded Material, CNT, Bio-Mechanics
19	Prof. Saroj Kumar Patel (skpatel@nitrkl.ac.in) Professor, Ph.D. (IIT Kharagpur) Quality assurance, Optimization, Bioenergy
20	Prof. Haraprasad Roy (royh@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Rator Dynamics

Sl. No.	Name & Specialization
21	Prof. Tarapada Roy (tarapada@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Guwahati) Vibration and Control
22	Prof. Ranjit Kumar Sahoo (rksahoo@nitrkl.ac.in) Professor, Ph.D. (IIT Kharagpur) Heat Transfer, Cryogenic Engineering
23	Prof. Susanta Kumar Sahoo (sks@nitrkl.ac.in) Professor, Ph.D. (Utkal University) Metal Forming, Ultrasonic Welding, Laser Material Processing
24	Prof. Alok Satapathy (alok@nitrkl.ac.in) Professor, Ph.D. (Sambalpur University) Thermal Science, Surface Engineering and Materials
25	Prof. Ashok Kumar Satapathy (aksatapathy@nitrkl.ac.in) Professor, Ph.D. (Sambalpur University) Thermal Engineering, Two Phase Flow
26	Prof. Jonnalagadda Srinivas (srinivasj@nitrkl.ac.in) Associate Professor, Ph.D. (Andhra University) Machine Vibration, Rotor Dynamics and MEMS
27	Prof. S. Anbarasu (anbarasu@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Madras) Thermal Engineering, Cryogenic Engineering
28	Prof. K. Chaudhury (chaudhuryk@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Fluid Mechanics
29	Prof. S. K. Rathore (rathoresk@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Turbulent Flow and Heat Transfer, Natural and Mixed Convection Flow
30	Prof. S. Kumar (kumarsumit@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Bombay) Bio-heat Transfer, Radiative Heat Transfer
31	Prof. J. R. Senapati (senapatijr@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Natural convection, Conjugate heat transfer, Non-Newtonian fluid flow
32	Prof. Balaji PS (psbalaji@nitrkl.ac.in) Assistant Professor, Ph.D. (Curtin University Australia) Vibration control, composite materials, Advanced machining process

Publication in Journals (SCI and Scopus indexed)

- Kumar Abhishek, V. Rakesh Kumar, Saurav Datta, Siba Sankar Mahapatra, 2017, Application of JAYA Algorithm for Optimization of Machining Performance Characteristics during Turning of CFRP (Epoxy) Composites: Comparison with TLBO, GA and ICA, Engineering with Computers, 33: 457-475, Springer-Verlag London.
- Chandramani Upadhyay, Saurav Datta, Manoj Masanta, Siba Sankar Mahapatra, 2017, An Experimental Investigation Emphasizing Surface Characteristics of Electro-Discharge Machined Inconel 601, Journal of the Brazilian Society of Mechanical Sciences and Engineering, 39(8): 3051-3066, Springer-Verlag London Limited.
- Dilip Kumar Sen, Saurav Datta, Siba Sankar Mahapatra, 2017, Decision Support Framework for Selection of 3PL Service Providers: Dominance Based Approach in Combination with Grey Set Theory, International Journal of Information Technology and Decision Making, 16(1): 25-57, World Scientific Publishing Co. Pte. Ltd., Singapore. DOI: 10.1142/S0219622016500474.
- Rahul, Kumar Abhishek, Saurav Datta, Bibhuti Bhusan Biswal, Siba Sankar Mahapatra, 2017, Machining Performance Optimization for Electro Discharge Machining of Inconel 601, 625, 718 and 825: An Integrated Optimization Route Combining Satisfaction Function, Fuzzy Inference System and Taguchi Approach, Journal of the Brazilian Society of Mechanical Sciences and Engineering, 39(9): 3499-3527, Springer-Verlag London Limited. DOI: 10.1007/s40430-016-0659-7.

- Rahul, Saurav Datta, Bibhuti Bhusan Biswal, Siba Sankar Mahapatra, 2017, A Novel Satisfaction Function and Distance Based Approach for Machining Performance Optimization during Electro-Discharge Machining on Super Alloy Inconel 718, *The Arabian Journal for Science and Engineering*, 42: 1999-2020, Springer-Verlag London Limited.
- Rahul, Saurav Datta, Bibhuti Bhusan Biswal, Siba Sankar Mahapatra, 2017, Electrical Discharge Machining of Inconel 825 using Cryogenically Treated Copper Electrode: Emphasis on Surface Integrity and Metallurgical Characteristics, *Journal of Manufacturing Processes*, 26: 188-202, Elsevier Science.
- Chitrasen Samantra, Saurav Datta, Siba Sankar Mahapatra, 2017, Fuzzy Based Risk assessment module for metropolitan construction project: An Empirical Study, *Engineering Applications of Artificial Intelligence*, 65: 449-464, Elsevier Science. DOI: 10.1016/j.engappai.2017.04.019
- Rahul, Saurav Datta, Manoj Masanta, Bibhuti Bhusan Biswal, Siba Sankar Mahapatra, 2018, Analysis on Surface Characteristics of Electro-Discharge Machined Inconel 718, *International Journal of Materials and Product Technology*, 56(1/2): 135-168, Inderscience Publishers, Switzerland.
- Rahul, Saurav Datta, Manoj Masanta, 2018, Surface Integrity and Metallurgical Characteristics of the EDMed Work Surfaces of A2 Tool Steel (SAE 304SS), Inconel 601 and Ti-6Al-4V: A Comparative Analysis, *Silicon*, 10(4): 1557-1572, Springer.
- Sweta Saroj, Chinmaya Kumar Sahoo, Manoj Masanta, Microstructure and mechanical performance of TiC-Inconel825 composite coating deposited on AISI 304 steel by TIG cladding process, *Journal of Materials Processing Technology*, 249 (2017) 490–501 Doi:10.1016/j.jmatprotec.2017.06.042 [Elsevier, Journal impact factor - 3.147/3.647].
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- Sweta Saroj, Chinmaya Kumar Sahoo, Tijo D, Kamallesh Kumar, Manoj Masanta, “Sliding abrasive wear behavior of TiC-Inconel825 composite coating produced by TIG cladding process” *International Journal of Refractory Metals and Hard Materials* 69C (2017) 119-130 Doi:10.1016/j.ijrmhm.2017.08.005 [Elsevier, Journal impact factor - 2.155/2.606].
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- Tijo D, Shilpi Kumari, Manoj Masanta, Ceramic-Metal Composite Coating on Steel Using Powder Compact Tool Electrode by Electro Discharge Coating Process, *Silicon*, 10 (2018) 1625-1637 DOI: 10.1007/s12633-017-9646-6 [Springer, Journal impact factor - 0.829/1.246].
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- Dipak Tanaji Waghmare, Chinmaya Kumar Padhee, Rites Prasad, Manoj Masanta, NiTi coating on Ti-6Al-4V alloy by TIG cladding process for improvement of wear resistance: Microstructure evolution and mechanical performances, *Journal of Materials Processing Technology*, 262C (2018) 551-561 DOI: 10.1016/j.jmatprotec.2018.07.033 [Elsevier, Journal impact factor - 3.147/3.647].
- AR Pati, A Panda, B Munshi, A Kumar, A Sahoo, S Ghosh, SS Mohapatra, 2018. Dropwise evaporative cooling of hot water: A novel methodology to enhance heat transfer rate at very high surface temperatures. *International Journal of Thermal Sciences* 127, 335-350. <https://doi.org/10.1016/j.ijthermalsci.2018.01.028>.

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- Chhabi Ram Matawale, Saurav Datta, Siba Sankar Mahapatra, 2017, Performance Appraisalment and Benchmarking of Leagility Inspired Industries: A Fuzzy Based Decision Making Approach, *International Journal of Services and Operations Management*, 26(4): 498-526, Inderscience Publishers, Switzerland.
- Kumar Abhishek, Saurav Datta, Siba Sankar Mahapatra, 2017, Multi-Objective Optimization during Drilling of CFRP Composites: A PCA-Fuzzy Taguchi Integrated Approach, *International Journal of Industrial and Systems Engineering*, 26(2): 182-200, Inderscience Publishers, Switzerland.
- Kumar Abhishek, Saurav Datta, Siba Sankar Mahapatra, 2017, Optimization of MRR, Surface Roughness, and Maximum Tool-Tip Temperature during Machining of CFRP Composites, *Materials Today: Proceedings*, 4: 2761–2770.
- Kumar Abhishek, Suman Chatterjee, Saurav Datta, Siba Sankar Mahapatra (2017) Integrating Principal Component Analysis, Fuzzy Linguistic Reasoning and Taguchi Philosophy for Quality-Productivity Optimization, *Materials Today: Proceedings*, 4: 1772–1777.
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- Dilip Kumar Sen, Saurav Datta, Saroj Kumar Patel, Siba Sankar Mahapatra, 2017, Green Supplier Selection in Fuzzy Context: A Decision Making Scenario on Application of Fuzzy-MULTIMOORA, *International Journal of Services and Operations Management*, 28(1): 98-140, Inderscience Publications, Switzerland.
- Dilip Kumar Sen, Saurav Datta, Siba Sankar Mahapatra, 2018, Sustainable Supplier Selection in Intuitionistic Fuzzy Environment: A Decision Making Perspective, *Benchmarking: an International Journal*, 25(2): 545-574, Emerald Group Publishing House, UK.
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- Chandramani Upadhyay, Rahul, Saurav Datta, Siba Sankar Mahapatra, Bibhuti Bhusan Biswal, An Experimental Investigation on Electro Discharge Machining (EDM) of Inconel 601, *International Journal of Industrial and Systems Engineering*, 29(2) (2018): 223-251, Inderscience Publishers, Switzerland.
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- Haraprasad Roy, Khare A, Saurabh Chandraker, and Dutt J K, “Fatigue based design and life estimation of viscoelastic rotors”, *Aircraft Engineering and Aerospace Technology*, December 2017, 10.1108/AEAT-01-2015-0015.R2.

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- Nitin Sharma, Trupti Ranjan Mahapatra, and Subrata Kumar Panda, "Numerical study of vibro-acoustic responses of un-baffled multi-layered composite structure under various end conditions and experimental validation", *Latin American Journal of Solid and Structure*, vol. 14, no. 8, pp. 1547-1568, 2017, 10.1590/1679-78253830.
- Kulmani Mehar, Subrata Kumar Panda, and Trupti Ranjan Mahapatra, "Thermoelastic nonlinear frequency analysis of CNT reinforced functionally graded sandwich structure", *European Journal of Mechanics - A/Solids*, vol. 65, pp. 384-396, 2017, 10.1016/j.euromechsol.2017.05.005.
- Kulmani Mehar, Subrata Kumar Panda, and Bhmesh K. Patle, "Stress, deflection, and frequency analysis of CNT reinforced graded sandwich plate under uniform and linear thermal environment: a finite element approach", *Polymer Composite*, pp. 1-18, 2017, 10.1002/pc.24409.
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- Chetan Kumar Hirwani, Subrata Kumar Panda, Trupti Ranjan Mahapatra, and Siba Sankar Mahapatra, "Numerical study and experimental validation of dynamic characteristics of delaminated composite flat and curved shallow shell structure", *Journal of Aerospace Engineering*, vol. 30, no. 5, 2017, 10.1061/(ASCE)AS.1943-5525.0000756.
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- Rahul, Thrinadh Jadam, Saurav Datta, Manoj Masanta, Bibhuti Bhusan Biswal, Siba Sankar Mahapatra, Characteristics of EDM_{ED} work surfaces of 304SS, Inconel 601 and Titanium alloy Ti-6Al-4V, 1st International Conference on Mechanical Engineering (INCOM 2018), January 4-6, 2018, organized by Department of Mechanical Engineering, Jadavpur University, Kolkata 700032.
- Santosh Kumar Sahu, Thrinadh Jadam, Saurav Datta, Debabrata Dhupal, Goutam Nandi, Application of SiC Powder Added in Kerosene Dielectric Media for Electro-Discharge Machining of Inconel 718 Super Alloys: Effects of Powder Concentration, International Conference on Materials Processing and Characterization (ICMPC 2018), organized by the Gokaraju Rangaraju Institute of Engineering and Technology, March 16-18, 2018, Hyderabad.
- Binay Kumar Paul, Santosh Kumar Sahu, Thrinadh Jadam, Saurav Datta, Debabrata Dhupal, Siba Sankar Mahapatra, Effects of Addition of Copper Powder in the Dielectric Media (EDM Oil) on Performance of Electro-Discharge Machining of Inconel 718 Super Alloys, International Conference on Materials Processing and Characterization (ICMPC 2018), organized by the Gokaraju Rangaraju Institute of Engineering and Technology, March 16-18, 2018, Hyderabad.
- S R Sihal, M Masanta, D Chaira, Development of Ti-TiC composites by powder metallurgy route using recycled machined Ti chips, 55th National Metallurgists' Day (NMD) and the 71st Annual Technical Meeting (ATM), BITS Pilani, Goa, India, 11 - 14 November, 2017.
- Rahul, Thrinadh Jadam, Saurav Datta, Manoj Masanta, Bibhuti Bhusan Biswal, Siba Sankar Mahapatra, Characteristics of EDM_{ED} work surfaces of 304SS, Inconel 601 and Titanium alloy Ti-6Al-4V, 1st International Conference on Mechanical Engineering (INCOM 2018), January 4-6, 2018, organized by Department of Mechanical Engineering, Jadavpur University, Kolkata 700032.
- Aishwarya Behera, Manoj Masanta, Effect of Pulse-on-time on Machining Performance during WEDM of nano-TiO₂ Dispersed Austenite Steel, ICMPC-2018, Hyderabad, 16-18 March, 2018.
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- Himadri Majumder, and Kalipada Maity, “Multi-response optimization of WEDM process parameters using taguchi based desirability function analysis”, in IOP Conference Series: Materials Science and Engineering, iop conference : materials science and engineering, national institute of technology rourkela, india, April 2018, pp. 1-6, 10.1088/1757-899X/338/1/012004.
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- Deepak Kumar Naik, and Kalipada Maity, “Optimization of dimensional accuracy in plasma arc cutting process employing parametric modelling approach”, in IOP Conference Series: Materials Science and Engineering, iop conference : materials science and engineering, national institute of technology rourkela, india, March 2018, 10.1088/1757-899X/338/1/012039.
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- Priyadarshi Biplab Kumar, Mukesh Sethy, Krishna Kant Pandey, Animesh Chhotray, and Dayal Ramakrushna Parhi, “A sensor based computer vision approach for humanoid navigation”, in International Conference on Nanotechnology: Ideas, Innovations and Initiatives (ICN:3I-2017), iit roorkee, December 2017.
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- Dravida Krishnatreya, Manoj Kumar, Suraj Kumar Behera, and Ranjit Kumar Sahoo, “Design and CFD analysis to visualize the flow pattern inside air turbine: A component of turboexpander”, in Proceeding of Fifth International Conference on Computational Methods for Thermal Problems, bangalore, india2018.
- Satish Kumar Yadav, and Sushil Kumar Rathore, “Flow and heat transfer characteristics of turbulent plane wall jet interacting with coflowing freestream”, in Proceedings of the 24th National and 2nd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTTC-2017), hyderabad, india, December 2017.
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- Praneeth J, and Jonnalagadda Srinivas, “Optimum design of an electromagnetic energy harvester from a vibration absorption system”, in Conference on Advances in Dynamics, Vibration and Control (ICADVC 2018), durgapur, west bengal, india, June 2018.

Papers accepted for publications

- Soni Kumari, Saurav Datta, Manoj Masanta, Goutam Nandi, Pradip Kumar Pal, Electro-Discharge Machining of Inconel 825 Super Alloy: Effects of Tool Material and Dielectric Flushing, Silicon, Springer. (Accepted) <https://doi.org/10.1007/s12633-017-9728-5>.
- Rahul, Dileep Kumar Mishra, Saurav Datta, Manoj Masanta, Effects of Tool Electrode on EDM Performance of Ti-6Al-4V, Silicon, Springer. (Accepted) <https://doi.org/10.1007/s12633-018-9760-0>.
- Santosh Kumar Sahu, Thrinadh Jadam, Saurav Datta, Goutam Nandi, Effect of using SiC Power Added Dielectric Media during Electro-Discharge Machining of Inconel 718 Super Alloys, Journal of the Brazilian Society of Mechanical Sciences and Engineering, Springer. (Accepted) DOI: 10.1007/s40430-018-1257-7.
- Dileep Kumar Mishra, Rahul, Saurav Datta, Manoj Masanta, Siba Sankar Mahapatra, Through Hole Making by Electro-Discharge Machining (EDM) on Inconel 625 Super Alloy Using Hollow Copper Tool Electrode, Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, SAGE Publications. (Accepted) DOI: 10.1177/0954408918784701.
- Santosh Kumar Sahu, Saurav Datta, Experimental Studies on Graphite Powder Mixed Electro-Discharge Machining of Inconel 718 Super Alloys: Comparison with Conventional Electro-Discharge Machining, Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, SAGE Publications. (Accepted) DOI: 10.1177/0954408918787104.
- Dilip Kumar Sen, Saurav Datta, Siba Sankar Mahapatra, On Evaluation of Supply Chain's Ecosilient (G-Resilient) Performance Index: A Fuzzy Embedded Decision Support Framework, Benchmarking: an International Journal, Emerald Group Publishing House, UK. (Accepted).
- Kumar Abhishek, V. Rakesh Kumar, Saurav Datta, Siba Sankar Mahapatra, An Integrated Multi-Response Optimization Route Combining Principal Component Analysis (PCA), Fuzzy Inference System (FIS), Nonlinear Regression and JAYA Algorithm: A Case Experimental Study on Machining of GFRP (Epoxy) Composites, International Journal of Industrial and Systems Engineering, Inderscience Publishers, Switzerland. (Accepted).
- Kamlesh Kumar, Prakash Mohan, Manoj Masanta, Influence of welding current on the mechanical property of 3 mm thick commercial 1050 aluminium butt joint weld by AC-TIG welding method, Materials Today: Proceedings (accepted).
- Aishwarya Behera, Manoj Masanta, Effect of Pulse-on-time on Machining Performance during WEDM of nano-TiO₂ Dispersed Austenite Steel, Materials Today: Proceedings (accepted).
- Tijo D, Dipak Tanaji Wagmare, Deekshith Kaladharan, Manoj Masanta, Effect of TiC content on Sliding Wear Behavior of TiC-Ti Metal Matrix Composite, Materials Today: Proceedings (accepted).

Books

Sl. No.	Title	Publisher-name & Year	Authors (same order as in publication)	Remarks (whether authored or edited)
1	Operations Research	Scientific Publishers, 2017	PK Mohanty & SK Patel	Authored
2	Ultrasonic spot welding of dissimilar aluminium to brass sheets	2018	Mantra Prasad Satpathy, and Susanta Kumar Sahoo	
3	CAD/CAM: principles and applications	2017	Jonnalagadda Srinivas	

Book Chapter

- Mantra Prasad Satpathy, and Susanta Kumar Sahoo, Ultrasonic spot welding of dissimilar metals: mechanical behavior and microstructural analysis, Strengthening and Joining by Plastic Deformation, 8, Springer 2018, 10.1007/978-981-13-0378-4_8.
- Kasinath Das Mahapatra, and Susanta Kumar Sahoo, Optimization of single pitch error and MRR in a WEDM gear cutting process, Precision Product-process Design and Optimization, 12, Springer 2018.
- Anshuman Kumar Sahu, and Siba Sankar Mahapatra, Electrical discharge coating by copper-tungsten composite electrode prepared by powder metallurgy route, Soft Computing Techniques and Applications in Mechanical Engineering, 10, IGI Global 2018, 10.4018/978-1-5225-3035-0.ch010.

- Sandhyarani Biswas, Primary manufacturing of thermosetting polymer matrix composites, Primary and Secondary Manufacturing of Polymer Matrix Composites, 1, CRC Press, September 2017.
- Sandhyarani Biswas, Jasti Anurag, and Siva Bhaskara Rao Devireddy, Finite element analysis of mechanical and thermal properties of polymer matrix composites, Primary and Secondary Manufacturing of Polymer Matrix Composites, 7, CRC Press, September 2017.

Patents/Copyright Publications

- S. Murugan, Preetam Kumar Khuntia, "Increased power-to-weight ratio of an engine by utilizing maximum volume of the cylinder for combustion", Filed, January 2018, 201831000725.
- P Vijay Kumar and J Srinivas, "A water pumping device", Granted, July 2007, 208297
- Dayal R Parhi K.A. Tejaswi, "Wings of formula student race car", Granted, June 2018, 301085.
- Bal, Sasmita Mishra, Purna Chandra And Satapathy, Ashok Kumar, "System and method for microchannel cooling with air-water spray", Filed, July 2017, 201731039679.
- PS Balaji, Biswajeet and Payal Senapthy, "Torsional spring isolator", Filed, February 2018, 302525/2018.
- PS Balaji, Biswajeet and Payal Senapthy, "Rubber-Steel Arch Isolator", Filed, February 2018, 302526/2018.
- PS Balaji, Biswajeet and Payal Senapthy, "Rubber-steel helical isolator", Filed, February 2018, 302527/2018.
- PS Balaji, Biswajeet and Payal Senapthy, "Extended rubber-steel helical isolator", Filed, February 2018, 302528/2018.

Technical Association/Societies

- Team Roadrunner, a team under SAE club, NIT Rourkela has participated in FORMULA BHARAT 2017. The competition is on design and development of Formula student car. Faculty adviser of this team is Prof. Suraj Kumar Behera.
- ASME NIT Rourkela Chapter. It is a Club under SAC, NIT Rourkela and American Society of Mechanical Engineers. Mission of this club is to serve diverse global communities by advancing, disseminating and applying engineering knowledge for improving the quality of life and communicating the excitement of engineering. Faculty adviser of this club is Prof. Suman Ghosh. The club is showing several activities like:
- Monthly publication of Tech-Talk, the official newsletter of ASME NIT Rourkela Chapter. Organizing different workshop and seminar like: Workshop on Solid works, Car Sketching and Designing Workshop, etc.
- Attending different competition like (i) Human Powered Vehicle Challenge 2018 (HPVC India-2018) (ii) Electric Solar Vehicle Championship 2018 (ESVC-2018), etc.,
- Organizing different competition like Student Led Design Conference 2017 (SLDC-2017), etc.,
- Organizing different seminar.
- Handling different project like Unmanned Aerial Vehicle (UAV): Uuadcopter

Seminar/Symposia/Summer School/Winter School/Short Term Courses/Workshops Conducted by Departments, Participation by Faculty Members

Conducted/Organized

Sponsoring Agency	Name of the Coordinator	Title of the course	Duration
DST and DBT	Prof. S. Murugan	National Conference on Waste to Energy, Carbon Capture and Storage [NCWECCS-2017]	03 Aug 2017
INSA	Prof. S. Murugan	Analytical and Experimental Techniques in Thermal Engineering [AETTE-2018]	04 Jun 2018
TEQIP-III	Prof. Suraj Kumar Behera	Solid Modeling and Motion Study using SolidWorks	18-22 June 2018 (05 Days)

Sponsoring Agency	Name of the Coordinator	Title of the course	Duration
RINL	Prof. Dayal Ramakrushna Parhi	Short Term Course on Application of Artificial Intelligence Techniques, Robotics and Mechatronics in Various Systems of Industrial Environments	20 Nov 2017
RINL	Prof. Dayal Ramakrushna Parhi	Short Term Course on Inventory and Supply Chain Management	05 Mar 2018
RINL	Prof. Dayal Ramakrushna Parhi	Short Term Course on Latest trends in Energy Optimization, Automation, Condition Monitoring and Maintenance in industrial Environment	12 Mar 2018
RINL	Prof. Dayal Ramakrushna Parhi	Short Term Course on Controlling Strategies using Mechatronics Equipment in Steel Industry	12 Jun 2018

Research Project

Name of the Project	Sponsoring Agency	Name of the PI and Co-PI	Total Value	Year of Start	Duration
Dynamic stability study of Beam/Plate like aerodynamic structures under multi frequency parametric excitation	DRDO	Prof. Sukesh Chandra Mohanty	1579000.00	2016	36
Fabrication of Ti-TiC metal matrix composite from waste Ti chips	CSIR	Prof. Debasis Chaira and Prof. Manoj Masanta	905000.00	2016	36
Development and Characterization of hard and wear resistance TiB ₂ -TiC ceramic composite coating on steel surface by electro discharge coating (EDC) Process	SERB	Prof. Manoj Masanta	2650000.00	2014	36
Ultrasonic vibration assisted turning of difficult to cut materials: design and development of a tool holding system & parametric analysis of the process	SERB	Prof. Susanta Kumar Sahoo and Dr. Manoj Kumar Moharana	3850000.00	2016	36
Experimental and Numerical Investigation of Dynamic behaviour of De-laminated carbon epoxy CRMCS under Hygro-thermal mechanical loading- role of delamination/ defects	DRDO	Prof. Subrata Kumar Panda and Prof. Siba Sankar Mahapatra	5960000.00	2014	36
Synthesis of magnetic iron oxide nanoparticles through micro emulsion for a sustainable arsenic removal water filter	BRNS	Prof. Raj Kishore Patel and Prof. Siba Sankar Mahapatra	2495750.00	2014	36
Design and Development of Dynamic Mechanical Analyser	Imprint India(SERB-DST & MHRD)	Prof. Tarapada Roy and Prof. Siba Sankar Mahapatra	36019000.00	2017	36
Development of kw class cryogenic helium turboexpander-phase-1:design and modelling	BRNS	Prof. Ranjit Kumar Sahoo and Dr. Suman Ghosh	941250.00	2016	12
Experimental and numerical study of entertainment phenomenon in stratified liquid layers by imposing rotary motion	DST	Dr. Suman Ghosh	501800.00	2014	36
A comprehensive investigation on flow structure of counter-current gas-liquid and liquid-liquid two phase flow	SERB	Dr. Suman Ghosh	2363000.00	2014	36

Name of the Project	Sponsoring Agency	Name of the PI and Co-PI	Total Value	Year of Start	Duration
Surveillance and monitoring of industrial equipment, industrial erections and buildings using hybrid ground mobile aerial robot with the help of AI techniques, image processing and sensor input	HINDALCO	Prof. Dayal Ramakrushna Parhi	900000.00	2018	36
Dynamic analysis of carbon nanotube epoxy matrix based laminated frp composite structure	SERB	Prof. Tarapada Roy	1100000.00	2016	24
Electromagnetic welding (EMW) coil design & characterisation from mechanical and metallurgical aspects for tubular jobs of ODS alloy with other materials	BRNS	Dr. Mohammed Rajik Khan and Prof. Subrata Kumar Panda	2149650.00	2015	36
Design and development of novel two and three dimensional oscillating heat pipes with connected headers for space applications	SERB	Dr. Manoj Kumar Moharana and Prof. Ranjit Kumar Sahoo	2883100.00	2018	36
Development of gas foil bearings for high speed turbo-expanders for cryogenic applications	BRNS	Prof. Suraj Kumar Behera and Prof. Ranjit Kumar Sahoo	3054250.00	2017	36
Development of a compact indigenous cryocooler based on single-stage GM type pulse tube refrigerator	PFRC, BRNS	Dr. Suman Ghosh	2896800.00	2018	24

List of Laboratories Developed

Sl. No.	Name of the Laboratory
1	Tribology Laboratory
2	Laser Laboratory
3	RP Laboratory
4	Cryogenics Laboratory
5	Metal forming Lab
6	Dynamic mechanical Lab
7	Multiphase Flow Lab
8	Mechatronics and Robotic Lab

Ph.D. Degrees Awarded

Student Name	Research Area/Thesis Title	Supervisor and Co-Supervisor	Status
Kasinath Das Mohapatra	Experimental and Numerical Investigations of Machining Ti-6Al-4V Spur Gears using WEDM Process	Susanta Kumar Sahoo	Thesis Submitted
Bikash Ranjan Moharana	Mechanical and Metallurgical Investigation of AISI 304 Stainless Steel and Commercially Pure Copper Dissimilar Metal Couple Weldments	Susanta Kumar Sahoo	Graduated
Siva Bhaskara Rao D	Mechanical, Thermal and Physical Properties of Hybrid Behaviour of Hybrid Banana-Jute Fibers Reinforced Epoxy and Polymer Composites: Modeling and Experiments	Sandhyarani Biswas	Graduated

Student Name	Research Area/Thesis Title	Supervisor and Co-Supervisor	Status
Prabina Kumar Patnaik	Processing, Characterization and Slurry Abrasion Wear Behaviour of Needle-Punched Nonwoven Fabric Reinforced Polymer Composites	Sandhyarani Biswas	Graduated
Priyadarshi Tapas Ranjan Swain	Mechanical, Thermal and Tribological Behaviour of Surface Modified Jute Fiber Reinforced Epoxy Composites	Sandhyarani Biswas	Graduated
Rahul	Experimental Studies on Machinability of Inconel Super Alloy during Electro-Discharge Machining: Emphasis on Surface Integrity and Metallurgical Characteristics of the EDMed Work Surface	Saurav Datta and Bibhuti Bhusan Biswal	Graduated
Harisankar Bendu	Experimental and Numerical Analysis of Ethanol Fueled HCCI Engine	S. Murugan	Graduated
Saurabh Kumar	Study of Dynamics of Functionally Graded Structural Elements Considering Geometric Nonlinearity	Haraprasad Roy and Anirban Mitra	Graduated
Ashirbad Swain	Viscoelastic Modelling and Dynamic Analysis of CNT-based Composite Shell Panels	Tarapada Roy and Bijoy Kumar Nanda	Graduated
Prabhu L	STUDIES ON AERODYNAMIC PERFORMANCE AND FLUTTER INSTABILITIES IN AEROFOILS	Jonnalagadda Srinivas	Thesis Submitted
Venkata Vara Lakshmi K	Kinematic Design, Dynamic Modeling and Control Studies of Revolute Planar Parallel Manipulator with Secondary Considerations	Jonnalagadda Srinivas	Graduated
Puneet Kumar	Material Modeling and Dynamic Analysis Studies of CNT-polymer Nanocomposite Structures	Jonnalagadda Srinivas	Thesis Submitted
Tijo D	In-situ TiC-TiB ₂ coating on Ti-6Al-4V alloy by powder suspension electro-discharge coating (EDC) and tungsten inert gas (TIG) cladding processes	Manoj Masanta	Thesis Submitted
Shreeshan Jena	Gait analysis of the lower limbs: A systematic approach for design and analysis of an orthotic.	A Thirugnanam and Subrata Kumar Panda	Thesis Submitted
Ajay Kumar Gupta	Performance of Plate Fin Heat Exchanger at Cryogenic Temperature	Ranjit Kumar Sahoo	Thesis Submitted
Pankaj Kumar	Analysis of Pulse Tube Refrigerator using CFD	Ranjit Kumar Sahoo and Sunil Kumar Sarangi	Thesis Submitted
Padmaja Tripathy	Experimental investigation of micro-milling of aerospace materials	Kalipada Maity	Thesis Submitted
Himadri Majumder	Experimental Investigations on Machinability Aspects of Nickel-Titanium Based Alloys during Wire Electrical Discharge Machining	Kalipada Maity	Thesis Submitted
Deepak Kumar Naik	Investigation and Optimization of Plasma arc cutting process	Kalipada Maity	Thesis Submitted
Munmun Bhaumik	Investigation of EDM Operation of High Strength Materials using Untreated and Cryogenically Treated Electrodes: Experimental and Numerical Analysis	Kalipada Maity	Graduated
Akhtar Khan	Machinability assessment of commercially pure Titanium(CP-Ti) Grade 2 during turning operation	Kalipada Maity	Thesis Submitted
Swastik Pradhan	Investigation of Machinability of Titanium Alloy(Grade5): Experimental and Numerical Analysis	Kalipada Maity	Graduated
Amit Kumar Mehar	Development, Characterization of Mechanical Properties, Wear Behaviour and Machining Analysis of Ceramic Composites for Bio-Medical Applications	Siba Sankar Mahapatra and Saroj Kumar Patel	Graduated

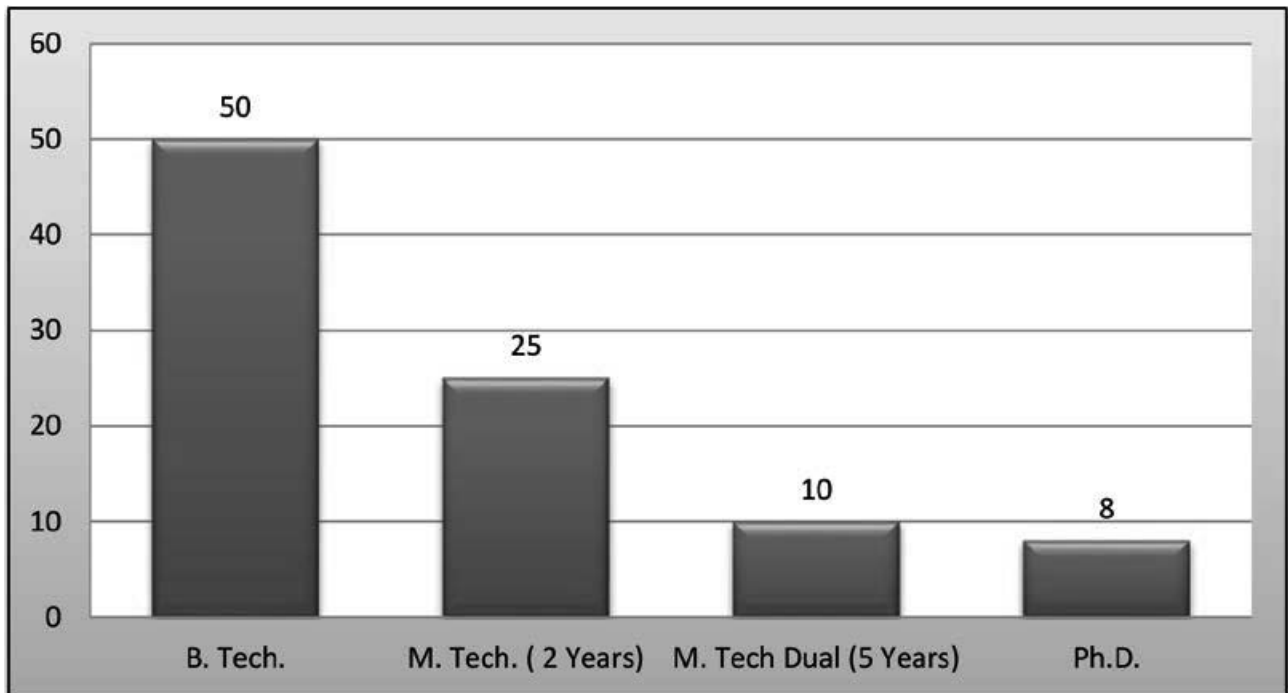
Student Name	Research Area/Thesis Title	Supervisor and Co-Supervisor	Status
Joji Thomas	Studies On Some Aspects Of Metaheuristic Algorithms In Solving Engineering optimization Problems	Siba Sankar Mahapatra	Thesis Submitted
Santosh Kumar Sharma	Studies on Some Aspects of Implementation of Reverse Logistics in Indian Context	Siba Sankar Mahapatra	Thesis Submitted
Ch Sateesh Kumar	Effect of Surface Modifications on the Hard Turning Performance of Al ₂ O ₃ /TiCN Mixed Ceramic Cutting Tools	Saroj Kumar Patel	Thesis Submitted
Shrutee Nigam	Copper Deposition on RP Parts: An Experimental Investigation	Saroj Kumar Patel and Siba Sankar Mahapatra	Graduated
Bibhuti Bhushan Sahoo	Buckling, Vibration and Dynamic Stability of Sandwich Beam with Functionally Graded Material Constraining Layer	Sukesh Chandra Mohanty	Thesis Submitted
Smita Parida	On the Linear and Non-Linear Free Vibration of Functionally Graded Plates in Thermal Environment	Sukesh Chandra Mohanty	Thesis Submitted
Shince V Joseph	Buckling, Free Vibration and Dynamic Stability of Sandwich Plates with Functionally Graded Material Constraining Layer	Sukesh Chandra Mohanty	Thesis Submitted
Chinmaya Sahu	Navigational Analysis of Artificial Intelligence based Control Strategy for Humanoid Robot	Dayal Ramakrushna Parhi	Graduated
Prabir Kumar Jena	Crack Assessment of Beam Structures from Changes in Natural Frequencies using Meta-heuristic Approaches	Dayal Ramakrushna Parhi	Graduated
Abhilash Purohit	Processing and Tribo-Performance Analysis of Polymer Composites Filled with Linz-Donawitz Sludge	Alok Satapathy	Thesis Submitted
Alok Ranjan Biswal	Geometric Nonlinear Finite Element and Genetic Algorithm based Vibration Energy Harvesting from Functionally Graded Nonprismatic Piezolaminated Beams	Rabindra Kumar Behera and Tarapada Roy	Graduated
M L Pavan Kishore	Hydrodynamic Design Structural Analysis and Optimization of Marine Propeller Blade	Rabindra Kumar Behera	Graduated
Uttam Kumar Sahu	Environmental friendly iron oxide based magnetic nanomaterials: Synthesis, characterization and application for arsenic removal	Raj Kishore Patel and Siba Sankar Mahapatra	Thesis Submitted

M.Tech. (R) Degrees Awarded

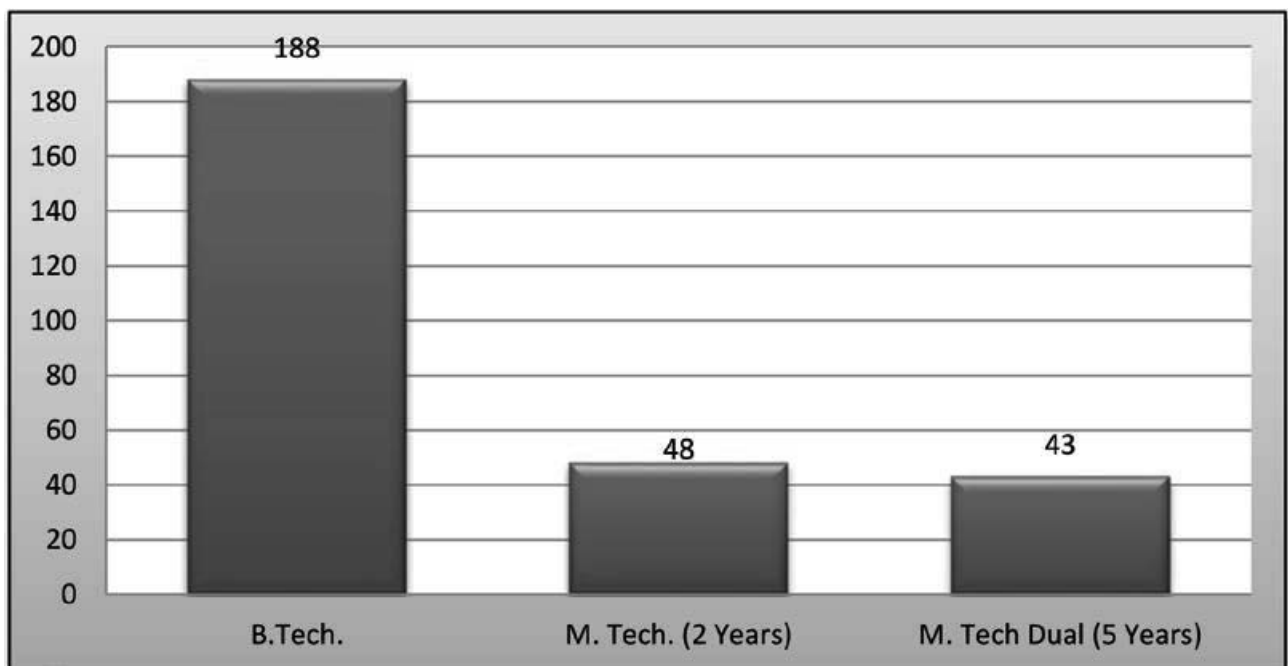
Name of the Student	Title of Thesis	Supervisor
Pranjal Bhuyan	Effect of Operating Conditions, Lobe-number, Clearance Size and Rotor Profile on the Transient Hydrodynamics, Heat Interaction, and Performance of a Root Blower	Suman Ghosh
Devendra M Ghodki	Kinematic, Dynamic and Gait Analysis for Navigation of NAO Humanoid Robot in a Cluttered Environment	Dayal Ramakrushna Parhi
Prithika Das	Development and characterization of Composites filled with coal mine overburden Material and other Industrial wastes	Manoj Kumar Mishra and Alok Satapathy

Department of METALLURGICAL & MATERIALS ENGINEERING

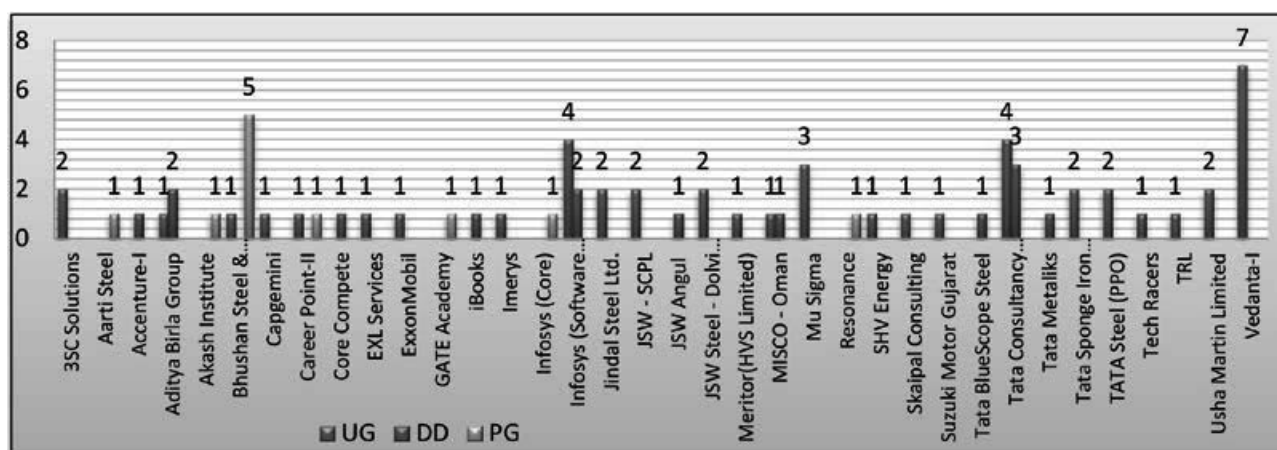
Student Intake in 2017-18



Total Student Strength



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof. Sudipta Sen (ssen@nitrkl.ac.in) Associate Professor, Ph.D. (IIT Kharagpur) Physical Metallurgy
2	Prof. Anindya Basu (basua@nitrkl.ac.in) Associate Professor, Ph.D. (IIT Kharagpur) Physical Metallurgy, Surface Engineering
3	Prof. Swapan Kumar Karak (karaksk@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Nanostructured materials, Composites, ODS Alloys, Joining of Materials
4	Prof. Bipin Bihari Verma (bbverma@nitrkl.ac.in) Professor, Ph.D. (IIT Delhi) Mechanical Metallurgy, Fracture Mechanics
5	Prof. Krishna Dutta (duttak@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Mechanical Metallurgy
6	Prof. Anshuman Patra, (patraa@nitrkl.ac.in) Assistant Professor, Ph. D. (NIT Rourkela), Nanostructured Materials, High Temperature Materials, ODS Alloys
7	Prof. Smarajit Sarkar (smarajit@nitrkl.ac.in) HOD and Associate Professor, Ph.D. (IIT Kharagpur) Metal matrix composites, Industrial Metallurgy
8	Prof. Mithilesh Kumar (mkumar@nitrkl.ac.in) Associate Professor, Ph.D. (BHU) Process Metallurgy
9	Prof. D. Nagarajan (nagarajand@nitrkl.ac.in) Assistant Professor, Ph.D (University of Queensland, Brisbane) Incremental Sheet Forming, Sheet Metal Forming Processes, Industrial Optical 3d Measurement Techniques, Severe Plastic Deformation, Light Alloys Development.
10	Prof. Syed Nasimul Alam (snalam@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Nanomaterials, Materials Characterization, X-Ray Diffraction
11	Prof. Natraj Yedla (yedlan@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Materials Modeling-deformation behavior of metallic glasses, Deformation behavior of metals
12	Prof. S. Pal (pals@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Computational Materials Engineering, Material Processing

Sl. No.	Name & Specialization
13	Prof. Bankim Chandra Ray (bcray@nitrkl.ac.in) Professor, Ph.D. (IIT Kharagpur) Physical Metallurgy, Polymer Composites
14	Prof. Debasis Chandra (debasis@nitrkl.ac.in) Associate Professor, Ph.D. (IIT Kanpur) Nanomaterials, Physical Metallurgy, Composites
15	Prof. Ashok Kumar Mondal (mondala@nitrkl.ac.in) Associate Professor, Ph. D. (IISc Bangalore) Light metals, Mechanical Behaviour
16	Prof. Rajesh Kumar Prusty (prustyr@nitrkl.ac.in) Assistant Professor, Ph. D. (NIT Rourkela) Composite materials, Mechanical behaviour, Environmental damage and degradation
17	Prof. Subash Chandra Mishra (scmishra@nitrkl.ac.in) Professor, Ph.D. (IIT Kharagpur) Plasma Technology, Polymer Composite
18	Prof.(Ms.) Archana Mallick (archanam@nitrkl.ac.in) Assistant Professor, Ph. D. (NIT Rourkela) Electroplating, Corrosion, Graphene, Thin Film
19	Prof. Santosh Kumar Sahoo (santoshsahoo@nitrkl.ac.in) Associate Professor, Ph.D. (IIT Bombay) Crystallographic Texture, Plastic Deformation, Microstructural Developments
20	Prof. Ajit Behera (beheraajit@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Surface Engineering, Advanced Materials, Thin Film
21	Prof. Ram Sajeewan Maurya (mauryar@nitrkl.ac.in) Assistant Professor, Ph.D. (IIT Kharagpur) Oxide Dispersion Strengthened Alloys, High Entropy Alloys, Bulk Metallic Glasses, Composite Materials

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- Alam S., Das S.K., Rao B.H., "Characterization of coarse fraction of red mud as a civil engineering construction material", Journal of Cleaner Production, vol. 168, no. , pp. 679-691, 2017, cited by 1.
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- Kotta A.B., Karak S.K., Kumar M., "Chemical, Physical, thermal, textural and Mineralogical studies of Natural iron ores from Odisha and Chhattisgarh regions, India", Journal of Central South University.
- Bal S, "Analysis and comparison of CNF and ACNT reinforced epoxy composite using microscopic technique", Microscopy and Microanalysis.
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- Talapaneni T., Yedla N., Sarkar S., "Study on desulfurization capacity of high alumina blast furnace slag at 1773K using slag-metal equilibrium technique", Metallurgical Research Technology.
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Books/Book Chapter

- Snehanshu Pal, Anshuman Patra, and Prabodh Ranjan Padhee, Process Modeling for Steel Industry, IK International Publishing House 2018, Ansari Road, Dariyaganj, New Delhi - 110002, Delhi, India, ISBN no.-, 9789385909399.
- Ray B.C., Prusty R.K., Rathore D.K., "Fibrous Polymeric Composites: Environmental degradation and Damage", Boca Raton: CRC Press, 2018 (ISBN: 9780429013959).

Patent

- Bikash Ranjan Parhi, Santosh Kumar Sahoo, Subash Chandra Mishra, Upendra Kumar Mohanty, Bhagyadhar Bhoi, Subrat Kar, Partha Bandopadhyay, "A novel technique for enrichment of alumina from bauxite mineral through hydrogen plasma processing", Indian Patent, Application No: 201731039417 dated 06/11/2017 (**FILED**)

Awards Received/Distinction Achieved

By Faculty:

By Students:

- Ms. Poulami Banerjee was selected in Prime Ministers Research Fellowship (PMRF)

Technical Association/Societies

All faculty members are life members of technical associations/societies like:

- ASM International (International Metallographic Society (IMS))
- Indian Institute of Metals
- The Institute of Engineers

- Material Research Society of India
- The Indian Science Congress Association
- The Plasma Science Society of India

Seminar, Symposia, Winter School, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

Conducted

- National conference on processing & characterization of materials (NCPCM 2017) on 8-9 December 2017, Convener: Prof. A. K. Mondal (conference proceeding has been published in IOP-Conference series: Materials Science & Engineering, vol. 338, 2018).
- 3 Day Workshop on Computational Techniques and Mathematical Modelling for Academia and Industry on 1-3 November, 2017, Organized by Computational Metallurgy Group Department of Metallurgical and Materials Engineering National Institute of Technology Rourkela.
- A customized 2-day short-term course for the executives of New Materials Business, TATA Steel on “FRP Composites: An Introduction from Definition to Development” during 17 – 18 May, 2018 at Kolkata. Coordinator: Prof. B. C. Ray.

Participated

- “Surface heat treatment of steels: conventional to modern trends and case studies” in Recent Trends in Iron and Steel making (RTISM) at O P Jindal University, Raigarh, April 10-11, 2018 invited talk by Prof. A. Basu.
- Invited Speaker in the workshop titled Recent Trends in VLSI Design – 2018, Department of Electronics and Communication Engineering. NIT, Arunachal Pradesh from 8th January 2018 to 12th January 2018.
- Effect of Ni addition on microstructure, mechanical and high temperature behaviour of mechanically alloyed W-Nb, International Conference on Nanotechnology: Ideas, Innovations & Initiatives-2017 (ICN: 3I-2017), 08 Dec 2017, IIT Roorkee by Prof. A. Patra (Invited speech).

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Mechanical Properties of Titanium and its Alloys from their Textural Aspects	CSIR	Prof. S. K. Sahoo and S. C. Mishra	11	Jun 2016	May 2019
Formability Analysis of Magnesium AZ31 Alloy Sheets during the Incremental Forming Process.	SERB	Prof. D. Nagarajan	12.1	Jun 2017	May 2020
Investigations on ratcheting and ratcheting- fatigue interaction behaviour of an aluminium alloy	SERB	Prof. K. Dutta	15.83	July 2014	Dec 2017
Fabrication of Ti-TiC metal matrix composite from waste Ti chips	CSIR	Prof. Debasis Chaira	10	July 2016	June 2019
Characterization and numerical simulation of brazed joint - ceramic ring of HVB (High Voltage Bushing)	BRFST	Prof. S.K.Karak	25	Aug 2016	Mar 2018
Development of Zirconium Based Alloys by Mechanical Alloying	DST	Prof. S.K.Karak	14	May 2015	Mar 2018

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Investigation of solidification process and prediction of microstructure during secondary cooling in continuous casting of plain carbon steel to estimate the porosity fraction and carbon segregated by multi scale simulation (cellular automata and phase field modeling techniques)	DST	Prof. S. Pal and A. Basu	12.2	June 2017	May 2020
Effect Of Hygrothermal Conditioning and Cycling on CNT Embedded GFRP Composite: A Study on Marine Environment Durability	Naval Research Board (DRDO), India	Prof. R. K. Prusty and B.C. Ray	11.88	Nov 2016	Nov 2019
The effect of shock wave, moisture and sea water on de-bonding of multilayer in FRP composite systems -Experimental and multi-scale modeling based investigation	Naval Research Board (NRB), DRDO, Government of India	Prof. S. Pal	19.93	April 2016	April 2019
Development of innovative process for the utilisation of mine and beneficiation of plant waste in chromite and manganese industry	R&D, Tata Steel, Jamshedpur	Prof. S.C.Mishra	7.30	May, 2018	May, 2019
Oxidation and corrosion property improvement by pulsed electro-codeposited composite coating	CSIR	Prof. A. Basu	13.7	Dec, 2017	Nov,2020
Moisture uptake kinetics and its subsequent effect on mechanical performance of nano-phased fibrous polymeric composites	CSIR	Prof. R. K. Prusty and B.C. Ray	5.50	May 2017	May 2020
Fabrication of nano-oxide dispersed tungsten alloys by mechanical alloying for armaments application	ARMREB (DRDO)	Prof. A. Patra	42.76	Dec 2017	Nov 2020

Consultancy Services

Sponsors Address	Title of the Project	Faculty Name
Tata Steel	A study of FRP (focus on Carbon, Glass and polymer fibre reinforcements) composites for structural applications in modern India: Feasibilities and opportunities	PI: B. C. Ray and R. K. Prusty

Institutional Programme Support/Centre of Excellence

Name of the Project	Sponsoring Agency	Name of the Coordinator	Total Value (Rs. in Lakhs)	Start Date	Close Date

List of Laboratories Developed

Sl. No.	Name of the Laboratory

Ph.D. Degrees Awarded by the Department

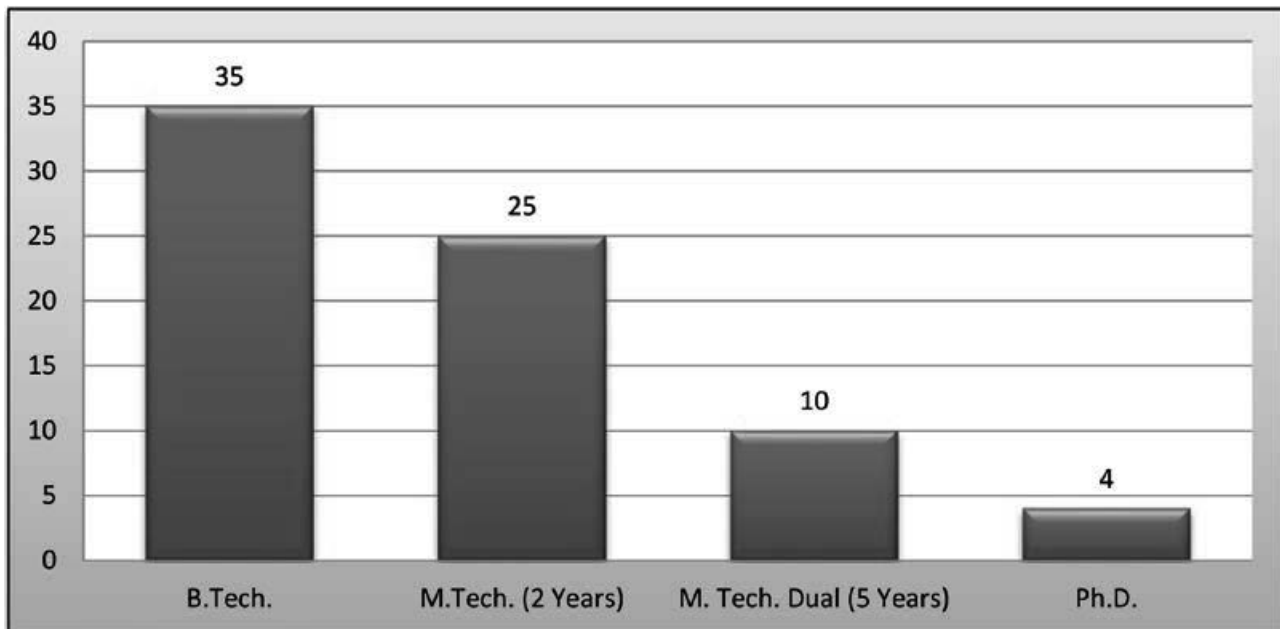
Student Name	Research Area/Thesis Title	Supervisor
Rajesh Kumar Prusty	Implication of CNT Fillers on Environmental Durability of GFRP Composites: An Evaluation of Microstructural Features and Mechanical Properties	Prof. Bankim Chandra Ray
Anshuman Patra	Fabrication of Nano-Y2O3 Dispersed Tungsten Alloys by Mechanical Alloying Followed by Conventional and Spark Plasma Sintering	Prof. Swapan Kumar Karak, Dr. Snehanishu Pal
Ashutosh Pattanaik	Effect of Processing Conditions on Properties of Fly ash-Epoxy Composite	Prof. Subash Chandra Mishra
Lailash Kumar	Development of Cu and Al-Based Metal Matrix Composites using Graphite Nanoplatelets and Multiwalled Carbon Nanotubes as Reinforcement	Prof. Syed Nasimul Alam, Prof. Santosh Kumar Sahoo
Anil Kumar Singh Bankoti	Creep, Tensile and Corrosion Behaviour of Ca and/or Sb Added AZ91 Mg Alloys	Prof. Ashok Kumar Mondal, Prof. Bankim Chandra Ray
Dinesh Kumar Rathore	Flexural Behaviour of Nano-Filler Enhanced and Inter-Ply Hybrid FRP Composites at Different In-Situ Elevated Temperatures	Prof. Bankim Chandra Ray
Sumanta Kumar Sahoo	Electrochemically Controlled Synthesis of Few-layer Graphene Nanosheets and its Evaluation for Applications	Prof.(Ms.) Archana Mallik, Prof. Bankim Chandra Ray
Ranjan Kumar Behera	Development of Spheroidal Graphite Cast Iron for Nuclear Fuel Transport Cask	Prof. Sudipta Sen, Prof. Subash Chandra Mishra
Pankajini Sahani	Fabrication of SiC-B4C-Si and SiC- B4C -Al Cermets by Powder Metallurgy Route	Prof. Debasis Chaira
Bikash Ranjan Parhi	Reduction of Bauxite through Hydrogen: Future Method of Extraction of Aluminium	Prof. Santosh Kumar Sahoo and Prof. Subash Chandra Mishra

M.Tech. Research Degrees Awarded by the Department

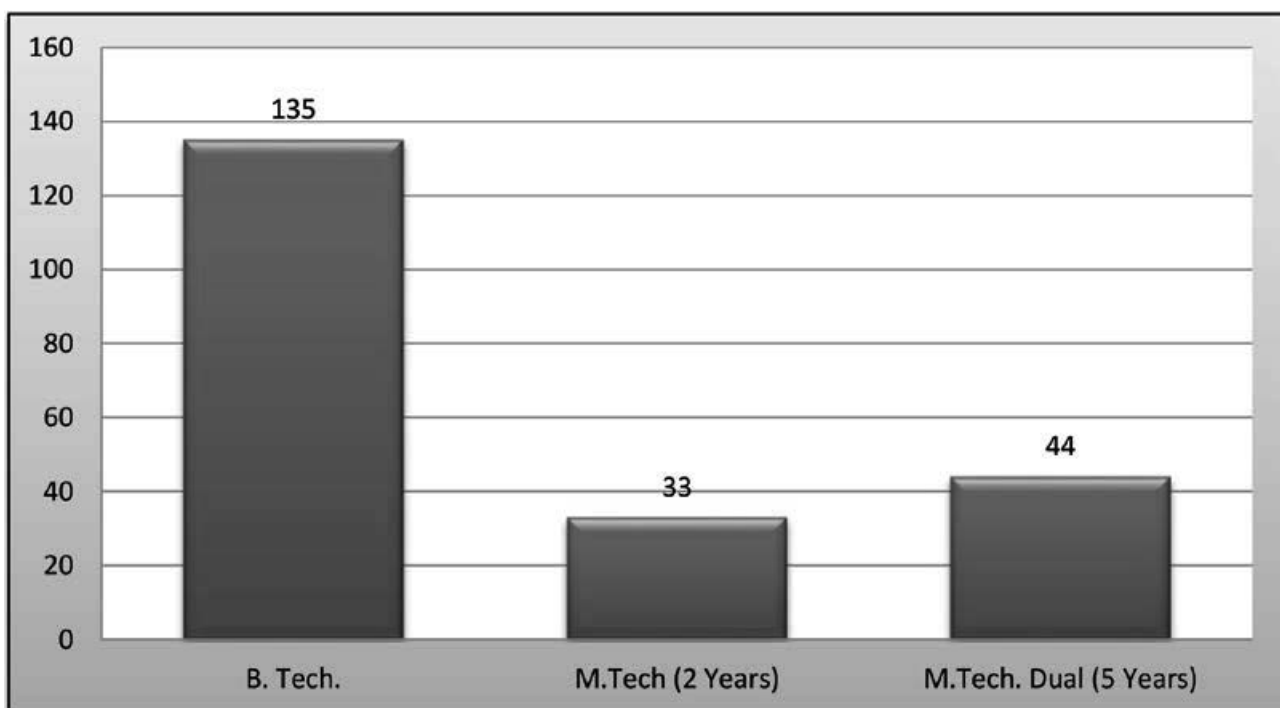
Name of the Student	Title of Thesis	Supervisor
Akankshya Supriya	Studies on Pre-Treated Coir Dust Reinforced Polymer Composites	Prof. Subash Chandra Mishra

Department of MINING ENGINEERING

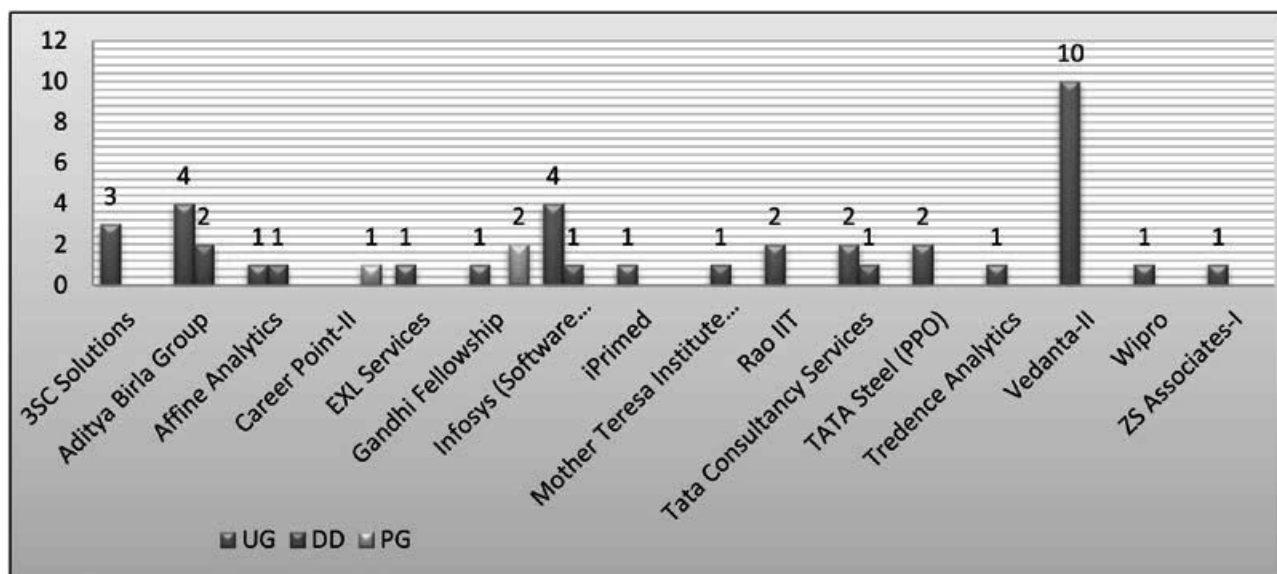
Student Intake in 2017-18



Total Student Strength



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof. Debi Prasad Tripathy (dptripathy@nitrkl.ac.in) Professor & Head, Ph.D.(ISM, Dhanbad) Mining Environment & Safety Engg., Environmental Pollution Monitoring & Control, Mine Planning, Mine Economics
2	Prof. Bhatu Kumar Pal (bkpal@nitrkl.ac.in) Professor, Ph.D. (IIT, Kharagpur) Mine Environmental Engineering, EIA, EMP, Opencast Mining & Mine Economics
3	Prof. Singam Jayanthu (sjayanthu@nitrkl.ac.in) Professor, Ph.D.(IIT,BHU) Mine Planning & Design, EMP, Mine Closure Planning, Coal Mining Methods, Support Design, Ground Control and Rock Mechanics
4	Prof. Hrushikesh Naik (hknaik@nitrkl.ac.in) Associate Professor, Ph.D. (NIT, Rourkela) Opencast Mining, Mine Surveying, Fly ash Management & Utilization
5	Prof. Manoj Kumar Mishra (mkmishra@nitrkl.ac.in) Associate Professor, Ph.D. (IIT, Kharagpur) Geo Mechanics, Slope Stability, Blasting, Fly Ash Utilisation
6	Prof. Himanshu Bhushan Sahu (hbsahu@nitrkl.ac.in) Associate Professor, Ph.D.(ISM, Dhanbad) Mine Environment and Safety Engineering, EIA, Environmental Management in Mining, Spontaneous Heating of Coal, Solid Fuels and Clean Coal Technology
7	Prof. Amit K Gorai (goraia@nitrkl.ac.in) Associate Professor, Ph.D. (ISM, Dhanbad) Environmental Engineering, Mine System Engineering, Soft Computing Modeling
8	Prof. Devidas Sahebraoji Nimaje (dsnimaje@nitrkl.ac.in) Assistant Professor, Ph.D. (NIT, Rourkela) Coal Mine Fires, Mine Environment and Safety

Publication

Publications in Int./National Journals

- D.S.Rao and Debi Prasad Tripathy (2018), Application of ANFIS for machinery noise prediction in a bauxite mine, Noise Control Engineering Journal, vol.66, no.2, pp.90-104, April 2018,10.3397/1/37669.
- Debi Prasad Tripathy and Charan Kumar Ala (2018) Risk assessment in underground coalmines using fuzzy logic in the presence of uncertainty, Journal of The Institution of Engineers (India): Series D, vol.99, no.1, pp.157-163, April 2018, 10.1007/s40033-018-0154-7.
- Debi Prasad Tripathy and Srinivas Rao Datrika (2017) Noise mapping of a bauxite mine using measured noise and GPS data, Disaster Advances, vol.10, no.11, pp.13-20, November 2017,
- Debi Prasad Tripathy and Tushar Ranjan Dash,(2017) Air pollution risk assessment using Air Quality Index (AQI), Open Access Journal of Pulmonary & Respiratory Sciences, vol.2, no.1, September 2017,
- Debi Prasad Tripathy and Srinivas Rao, Datrika,(2017) Optimisation of opencast mining machinery noise using differential evolutionary algorithm International Journal of Mining and Mineral Engineering, vol.8, no.4, pp.294-309 2017,10.1504/IJMME.2017.087951.
- Sucharita Patel and Bhatu Kumar Pal, (2018)"A novel approach in red mud neutralization using cow dung", Environmental Science and Pollution Research, Vol.25, no.13, pp.12841–12848, May 2018, doi no. 10.1007/s11356-018-1374-y.
- N P Nayak and Bhatu Kumar Pal, (2018)"Beneficiation of goethite-laterite ore - An alternative", Journal of Mines, Metals & Fuels, Vol.66, no.4, pp.253-255, April 2018.
- Bhatu Kumar Pal, (2018) "Use of isotopic analysis technique for exploration of coal, oil and natural gas deposits", Journal of Mines, Metals & Fuels, Vol.66, no.2, pp.161-162 February 2018.
- D Varghese and Bhatu Kumar Pal, (2017) "Climate variability and changes in local climate", Weather, December 2017, doi no. 10.1002/wea.3066.
- Maitreya Mohan Sahoo and Bhatu Kumar Pal (2017),"Geological modeling of a deposit and application using Surpac", Journal of Mines, Metals & Fuels, Vol.65, no.7, pp.417-422, July 2017.
- N P Nayak and Bhatu Kumar Pal "Pelletisation in Indian context -need of the hour", Journal of Mines, Metals & Fuels, Vol.65, no.9, pp.485-489 Sept. 2017.
- Prashanth Ragam and Devidas Sahebraoji Nimaje, "Evaluation and prediction of blast induced peak particle velocity using artificial neural network: a case study", Noise & Vibration Worldwide, vol.49, no.3, pp.111-119, March 2018. DOI: 10.1177/0957456518763161.
- Prashanth Ragam and Devidas Sahebraoji Nimaje, "Monitoring of blast-induced ground vibration using WSN and prediction with an ANN approach of ACC Dungri limestone mine, India", Journal of Vibroengineering, vol.20, no.2, pp.1051-1062, March 2018. DOI: 10.21595/jve.2017.18647.
- Prashanth Ragam and Devidas Sahebraoji Nimaje, "Estimation of ambiguous blast-induced ground vibration using intelligent models: A case study", Noise & Vibration Worldwide, vol.49, no.4, pp.147-157, April 2018. DOI: 10.1177/0957456518781858.
- Sukanth T, Singam Jayanthu, and Jayalakshmi A, Improvement of power quality in underground coal mines using controllers, AMSE JOURNALS-AMSE, vol.78, no.3, pp.274-288, July 2017.
- Guntha Karthik and Singam Jayanthu, Review on low-cost wireless communication systems for slope stability monitoring in opencast mines, International Journal of Mining and Mineral Engineering, vol.9, no.1, pp.21-31, April 2018,
- Singam Jayanthu and Singam Jayadarshana, Condition monitoring of wire ropes and winding equipment in various industries – laboratory and field studies, Indian Mining and Engineering Journal, volume-57, No.5, May-2018. ISSN 0019-5944, pp- 42-47.
- Singam Jayanthu and Guntha Karthik, Evaluation of stability of cut slopes in open cast metal mines using numerical modeling and field monitoring, Modelling, Measurement and Control C, vol.79, no.1, pp.12-15, March 2018.

- Singam Jayanthu, Guntha Karthik, and V Laxminarayana, online monitoring of slopes for improving safety in opencast mines vis-à-vis wireless systems, *Indian Mining and Engineering Journal*, vol.57, no.1, January 2018, pp- 7-11.
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- Singam Jayanthu and Guntha Karthik, Challenges of Sustainable Development in the Mining Industry – An Indian scenario *The Indian mining Engineering Journal (IMEJ)*, Pg.35-38, volume-57 No.6, June-2018. ISSN 0019-594.
- Prithika Das, Alok Satapathy, and M.K.Mishra, 2018, "Development and Sliding Wear Response of Epoxy Composites Filled with Coal Mine Overburden Material", *Materials Science and Engineering*, 338 (2018) 012032, <https://doi.org/10.1088/1757-899X/338/1/012032>.
- Harinandan Kumar, M K Mishra and S Mishra, 2017, "3D Modelling of Coal Deformation under Fluid Pressure using COMSOL Multiphysics", *Journal of Engineering Science and Technology Review, EMaTTech Publi.*, 10 (6) (2017) pp 62 – 69.
- Harinandan Kumar, M K Mishra and S Mishra, 2018, "Laboratory Investigation of Gas Permeability and its Impact on CBM Potential", *Journal of Petroleum Exploration and Production Technology, Springer Publi*, <https://doi.org/10.1007/s13202-017-0425-0>.
- Gorai, A. K., Tchounwou, P. B., Biswal, S. S., Tuluri, T. (In Press). Spatio-temporal Variation of PM_{2.5} Concentrations and its Health Impacts in a Mega City, Delhi in India. *Environmental Health Insights, SAGE*. DOI: 10.1177/1178630218792861.
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- Shaw N., Gorai A.K. (2018). A comparative study of aerosol optical depth (AOD) observations using MODIS Terra and Aqua products over Indian Territory and its relation with Particulate Matter (PM) concentration. *Environment, Development and Sustainability*, DOI. 10.1007/s10668-018-0198-8.

Publications in Conferences

- D P Tripathy and T R Dash (2017) Physico-chemical characteristics of airborne particulate matter in and around a mechanised opencast coal mine – a case study, Presented at 2nd International conference on pollution control and sustainable environment, October 05-06, 2017 London, UK. DOI: 10.4172/2375-4397-C1-008.
- D.P.Tripathy and C.K.Ala (2017) Overcoming safety, health and Env. Challenges in Mining industry using Risk Assessment Techniques, nat. Sem. on Indian Coal Mining Industry: Overcoming Challenges for a better Tomorrow, MCL, Sambalpur, 20.8.17, MGMI Odisha, pp.51-59.
- Sunil Kumar Bisoyi and Bhatu Kumar Pal (2018), "Assessment of water quality monitoring of a few lakes in India", 17th World Lake Conference 2017, to be held at Kasumigaura, Ibaraki, Japan, October 15-19, 2018. Singam Jayanthu and Singam Jayadarshana, Study of load on supports in blasting gallery panels in underground coal mines case studies, in International symposium-GEOMINTECH-ENTMS2018 on New Equipment, New Technology Management and Safety in Mines and Minerals based Industries, pp-10-16,-11-12 May, 2018
- Singam Jayanthu, New Technology with Trans-disciplinary Research for improved safety in mines vis-à-vis Ground Control Problems, International Symposium on Geomintech-ENTMS2018, Bhubaneswar, 11-12 May 2018, pp-99-107
- Singam Jayanthu, Guntha Karthik, and Lakshi Prosad Roy, Seminar on Challenges for a better tomorrow for slope stability monitoring vis- a-vis innovation and technologies, in Indian Coal Mining Industry Overcoming Challenges for A Better Tomorrow, Sambalpur-Odisha, 30.8.17, pp-9-18.
- Singam Jayanthu, State of the art technologies for estimation of in situ stress in rock mass, in 7th Asian Mining Congress,

- Singam Jayanthu, S Jayadarshana , Laboratory and Field Investigations on Condition monitoring of wire ropes and winding equipment in mines, International Symposium on Geomintech-ENTMS2018 ,Bhubaneswar, 11-12 may 2018, pp-50-55
- Angana Sarkar and Singam Jayanthu, Crobe-mediated bioleaching of value added products from mine tailing stacks – a critical appraisal, in National Seminar on Mining Technology for Safety, Bilaspur, 22-23 December 2017.
- Singam Jayanthu and Guntha Karthik, Instrumentation for monitoring of rock slopes vis-a-vis experimental trial with wireless systems, Keynote paper in INDOROCK-2017: 7th Indian rock Conference, 25-27 October, 2017, New Delhi
- Singam Jayanthu, Innovative application of noise control through active noise cancellatiojn technique in mines- as appraisal, , International Symposium on Geomintech-ENTMS2018 ,Bhubaneswar, 11-12 may 2018, pp-80-83
- Singam Jayanthu, Trans-disciplinary research on instrumentation vis-a-vis recent challenges due to ground control problems in mines, in National Seminar on RCMI-2018, 28 April 2018, CIMFR, Dhanbad
- Singam Jayanthu, Disasters due to ground control problems in mines vis-a-vis action plan for future, Proceedings of International Symposium on safety and health, Bhubaneswar, 22 -23 Feb 2018.
- S. Jayanthu, Guntha Karthik, G. Manekar and V Laxminarayana “Innovative Application of Wireless Systems for online Monitoring of Slope – Vision for Future” International Conference and Expo on “Mining Industry vision-2030” 6th to 8th December 2017, Nagpur, Maharashtra, India. Pp.157-162.
- Singam Jayanthu, GUNTHA KARTHIK, and DEVENDRA KUMAR YADAV, Current trends in slope stability monitoring in opencast mines vis-a-vis time domain reflectometry, National Seminar on Current Practices in Mining and Allied Industries-2017, 62-80
- S. Jayanthu, Application of acoustic emission techniques for estimation of in situ stress, National Seminar on Current Practices in Mining and Allied Industries-2017, 99-109.
- S. Jayanthu, Design of slopes in opencast mines vis-a-vis case studies on slope mass classification, National Seminar on Current Practices in Mining and Allied Industries-2017, 24-37.
- Hrushikesh Naik and Manoj Kumar Mishra (2018) Characterization of Indian fly ashes for mine stowing purposes, in Proceeding of the Eighth International Conference on Advances in Applied Science and Environmental Technology- ASET 2018, 155, Institute of Research Engineers and Doctors, USA, June,10.15224/978-1-63248-155-9-33, during 23rd and 24th June 2018, Paris.
- Pratishruti Mallick, Manoj Ku. Mishra, and Sushmita Mishra, 2018, “Evaluation of Coal Properties for CO2 Sequestration in Deep Seated Coal Seams”, International Conf. on Emerging Trends in Material and Mechanical Engineering’ (ICETMM – 2018), January 29-30, PU and MNIT, Jaipur, pp 74-82
- Prithika Das, Alok Satapathy, M.K.Mishra, 2018, “Processing, Mechanical Characterization and Sliding Wear Performance of Epoxy Composites filled with Fly Ash and Coal Mine Overburden Material”, International Conf. on Emerging Trends in Material and Mechanical Engineering’ (ICETMM – 2018), January 29-30, PU and MNIT, Jaipur, CD ver
- Harinandan Kumar, M.K. Mishra, and S. Mishra, 2017, “Laboratory Investigation of Gas Permeability and its Impact on CBM Potential”, Proceedings of the National Conference on Waste to Energy, Carbon Capture and Storage (NCWECCS – 2017), NIT Rourkela, 3-5 August 3-5, no. 4.7

Paper Accepted for Publication

- Guntha Karthik and Singam Jayanthu (2017) “Selection of Suitable Location and Method for Installation of TDR in Opencast Mine-An Experimental Approach” Accepted for publication in Journal of Mines, Metals, and Fuels.
- Prashanth Ragam and Devidas Sahebraoji Nimaje, “Estimation of PPV using soft computing technique approaches- a review”, Noise & Vibration Worldwide, 2018 (Article in Press).
- Goswami, A., M.K. Mishra, and D. Patra., 2018, ‘Incorporating spatial variability of lithological units into ore grade estimation of an Indian limestone deposit’, Journal of Mines, Metals and Fuels, (in press)

Books/Book Chapter

- Tripathy D.P. (2018), Legislative Framework for Solid Waste Management in India and USA, Ed. Dr. D. Sengupta, Springer. (Communicated).
- B. K. Tirkey and Devidas S Nimaje, "Prediction of mine water pH using ANN modelling", Chapter-12 in Edited book "Sustainable Mining Practices" - Editors- Prof Amit K Gorai and Prof Devidas S Nimaje in Sept 2017, Narosa Publishing House, New Delhi, pp. 161-172, ISBN: 978-81-8487-604-8.
- Edited book "Sustainable Mining Practices" - Editors- Prof Amit K Gorai and Prof Devidas S Nimaje in Sept 2017, Narosa Publishing House, New Delhi, ISBN: 978-81-8487-604-8.
- Tripathy D.P. & Dash, T.R. (2017), Mine Closure Planning: Legislative Framework and Environmental Management, Sustainable Mining Practices. Ed. Dr.A K Gorai & Dr.D.S.Nimaje, Narosa Publication, ISBN 978-81-8487-604-8.
- Revised and Enlarged Edition of Book 'A Complete Guide for Mining Engineers' by A. K. Gorai (ISBN: 978-81-7956-120-1) Lovely Prakashan, Dhanbad (2018).

Patent: Nil

Awards Received/Distinction Achieved

By Faculty:

Prof. D. P. Tripathy

- Expert, faculty interview for Professor and other cadres at IIT-BHU in February 2018.
- Ph.D thesis examiner for 5 thesis of prestigious Institutes like IIT, Bombay; IIT-Dhanbad, BIT, Mesra. During 2017-18. Ph.D examiner for Ph.D student from Monash University, Australia.
- Member, Editorial Board, Int. J. of Mining Engg. and Int. J. of Structural Analysis and Design", IRED, USA,
- Member, Selection Committee at MOEFCC, New Delhi for selection of Scientist.
- Reviewer of International Journals: Environmental Earth Sciences, Springer, OJAP. Computer and Geosciences (Elsevier) etc.
- Editor, JGMR, 2011, Member, Editorial Board, IJEE; Member, editorial board, HRP, USA; Editorial member, Earth Science, Science PG Group, member, IJME, IJSA &D, IRED.
- Referee, Faculty Appraisal for Recruitment, IIT, BHU; Invited as Expert member for faculty Recruitment, BPUT as well as IIT-Kharagpur for Professor.
- Examiner, M.Tech. DD thesis, IIT, Kharagpur, may 2018.
- Member, BOS, Gondwana University (MS), Aditya Engg. College, AP.

Prof. S. Jayanthu

- Member of Technical Committee related to Environmental appraisal of Mining Industries of Orissa State Pollution Control Board (OSPCB).
- Fellow of Institution of Engineers (India).
- Editor-in- Chief for Indian Mining and engineering Journal.
- Reviewer "Arabian Journal of Geosciences".
- Reviewer Society for Mining, Metallurgy, and Exploration, Inc.
- Editorial board member of Psychology and Behavioral Sciences, Science Publishing Group.
- Editorial Board Member of International Journal of Advanced Computer Research (IJACR) ISSN: (Print):2249-7277, ISSN: (Online):2277-7970. International Journal of Advanced Computer Research (IJACR).

- Member of Board of Studies (BOS) for Mining Engg. discipline of Kakatiya University, Warangal and Jawaharlal Nehru Technological University, Manthani, MREC-Hyderabad.
- Member of Curriculum Development/Audit Committee. NIT – Raipur.
- Examiner of Ph.D. thesis for various institutes—IIT-ISM-Dhanbad, and BTech/AMIE Thesis evaluation for JBIT-Hyderabad, Telangana State, IE(I).
- Resource person, and keynote speaker for various academic/ continuing education programs organized by different agencies.
- Guidance of AMIE projects related to Mining engineering.
- Guest of Honour, and keynote speaker for National seminar-on recent development in slope stability in mines, 20 and 21st Mar 2018-JBIT-Hyderabad-Telangana.

Dr. H. K. Naik

- Member, Board of Governors, NIT, Rourkela during 2017-2018

Dr. M. K. Mishra

- Theses Examiner, Ph.D. and M.Tech.(R): IIT-Mumbai & Kharagpur, ISM Dhanbad.
- Reviewer, Arabian Journal of Geoscience, and Coal Combustion and gasification Products.
- Member, Faculty Selection, Odisha Public Service Commission, June, 2018.
- Albert Nelson Marquis Lifetime Achievement Award Winner, 2018.

Dr. A. K. Gorai

- Endeavour Executive Fellowship for Working in UNSW, Sydney, Awarded by Australian Government, Department of Education and Training.
- Appointed as an External Examiner for Selection of Project Fellow at CIMFR, Dhanbad.
- Appointed as an Invited Speaker, 14th International Symposium on Recent Advances in Environmental Health Research at Mississippi, USA (14-18 Sept. 2017).

By Students:

- Shri Prashanth Ragam received Best Research Scholar in Mining Engg. in Research Scholars' week, 2018 at NIT, Rourkela.

Technical Association/Societies

Prof. S. Jayanthu: Fellow of Institution of Engineers (India).

Prof. D.P.Tripathy: FIE; Editor-in-Chief, Journal of Geology and Mining Research, ISSN: 2006 -9766.

Seminar, Symposia, Winter School, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

Sl. No.	Faculty	Topic	Venue
1	Prof. D. P. Tripathy	Physico-chemical characteristics of airborne particulate matter in and around a mechanised opencast coal mine – a case study, Presented at 2nd International Conference On Pollution Control and Sustainable Environment, October 05-06, 2017	Hotel Park Inn, London, UK
2	Prof. D. P. Tripathy	GIAN course on “Process Safety Engineering”	NIT, Rourkela 28-5-18 to 1-6-18

Sl. No.	Faculty	Topic	Venue
3	Dr.H.K.Naik	Characterization of Indian fly ashes for mine stowing purposes, in Proceeding of the Eighth International Conference on Advances in Applied Science and Environmental Technology-ASET 2018, 155, Institute of Research Engineers and Doctors, USA, June,10.15224/978-1-63248-155-9-33,	23rd and 24th June 2018, Paris.
4	Prof. S. Jayanthu	6th International Conference on Computing, Communication and Sensor Network	Kolkata December 30-31, 2017
5	Prof. S. Jayanthu	5th International Conference on Microelectronics, Circuits & Systems (Micro-2018)	Bhubaneswar 19-05-2018
6	Prof. S. Jayanthu	National Workshop on Sustainable Development of mineral Resources (SDMINER2018)	Khujaraho 07 and 8th April 2018
7	Prof. S. Jayanthu	All India seminar on sustainable materials and technology for better future	NIT-Rourkela 11-11-2017
8	Prof. S. Jayanthu	Urgent need of trans-disciplinary research for mining industries	12-5-18, Trident academy of Technology, Bhubaneswar
9	Prof. S. Jayanthu	International Conference and Expo on "Mining Industry vision-2030"	Nagpur Dtd: 06-08 December 2017
10	Prof. S. Jayanthu	International Symposium -Safety and health	Bhubaneswar Dtd: 23-02-2018
11	Prof. S. Jayanthu	International Symposium on Geomintech-ENTMS2018	Bhubaneswar Dtd: 11-12 May 2018

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Development of TDR based wireless system for slope stability monitoring in opencast mines	Ministry of Mines	Dr. S. Jayanthu	26.2	1-1-2015	31-12-2017
Estimation and simulation of gas permeability as well as stress – strain behaviour of Indian coal seam for CBM production and CO2 sequestration at in-situ conditions	DST	Dr. M. K. Mishra	39.13	02-2015	01-2018
Estimation of Aerosol Optical Depth (AOD) from Satellite Remote Sensing Data over Coal Mining Regions in India and Development of Statistical Model for Prediction of Particulate Matter Concentration from AOD	CSIR, New Delhi	Dr.A.K.Gorai	24.432	April 2018	

Consultancy Services

Sponsors Address	Title of the Project	Faculty Name
MOIL	Slope Stability studies and monitoring by suitable instrument at Dongri Buzurg mine, MOIL	Dr. S. Jayanthu
FACOR	Scientific Study on ground movement observation for two dumps at Ostapal Chromite mine, M/s FACOR Ltd	Dr. S. Jayanthu
SECL	Scientific Study on strata control investigations to determine the behaviour of strata during extraction of depillaring panel 122 LW of Churcha Mine East, SECL.	Dr. S. Jayanthu
SCCL	Scientific Study on roof behaviour through underground instrumentation and monitoring of goaf atmosphere for the proposed Blasting gallery Panels of No 3 seam at GDK11 incline-RG-1 Area, SCCL	Dr. S. Jayanthu

Sponsors Address	Title of the Project	Faculty Name
NTPC	Scientific Study On Design Of Pit And Dump Slopes For Dulanga Coal Mining Project Of M/S NTPC Ltd.-	Dr. S. Jayanthu
Aeshar Stone Mines	Scientific Study on Controlled Deep Hole Drilling and Blasting and Related Activities,	Dr. B.K. Pal
MOIL	Studies on Controlled Blasting and Monitoring by Suitable Instrument at Dongri Buzurg opencast Mine	Dr. B.K. Pal
OMC, Bhubaneswar	Verification of Iron Ore stock at Kurmitar, Gandhamardhan and Daitary iron ore mines	Dr. H.B. Sahu Dr. H.K. Naik
CMPDIL, Bhubaneswar/Ranchi	Analytical advice for physic-mechanical analysis of boreholes	Dr. M.K. Mishra Dr.H.K. Naik
OMC, Bhubaneswar	Blasting investigation on ground	Dr. M.K. Mishra
IDCOL, Bhubaneswar	Slope Stability and Blast Design	Dr. M.K. Mishra
TRL, Belpahar	Blast Effect Monitoring	Dr. M.K. Mishra

Institutional Programme Support/Centre of Excellence

Name of the Project	Sponsoring Agency	Coordinator	Total Value(Rs. in Lakhs)	Start Date	Close Date
FIST	DST	HOD(Mn)	65.00	Nov 2014	Oct 2019

List of Laboratories

Sl. No.	Name of the Laboratories
1	Sponcom Lab
2	Computer Lab
3	Material Handling System Lab
4	Mine Environmental Engineering Lab
5	Survey Lab
6	Rock mechanics Lab
7	Geo-mechanics Lab
8	Water Quality Lab
9	Ground control lab.

Ph.D. Degrees Awarded by the Department

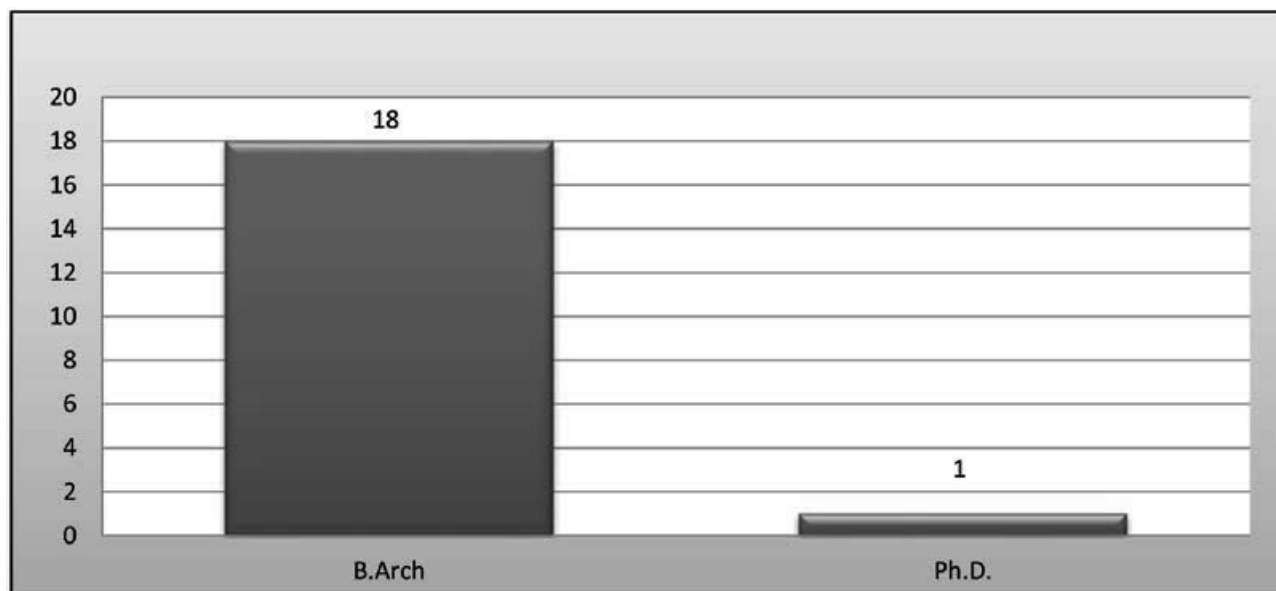
Name of the Student	Title of Thesis	Supervisor
Mr. D.S.Rao	Development of Soft Computing Models for Noise Prediction in Opencast Mines	Dr. D.P. Tripathy
Mr. K. G.R.Reddy	Development of Image Processing and Neuro-Fuzzy Based System for Automatic Sorting for Mining Industry	Dr. D.P. Tripathy
Mrs. S.Patel	Development of Adsorption Media by using Industrial Waste: Red Mud for the removal of As (V) Ions from Water	Dr. B.K. Pal
Mr. D.Varghese	Geoinformatics Application in Land Use Dynamics and its Biogeophysical Impacts on Macro Climate - A Case Study	Dr. B.K. Pal
Mr. A.K.Patel	Development of an Online Vision Based Integrated Quality Monitoring Model for Mineral Industry	Dr. A.K. Gorai

M.Tech. Research Degrees Awarded by the Department

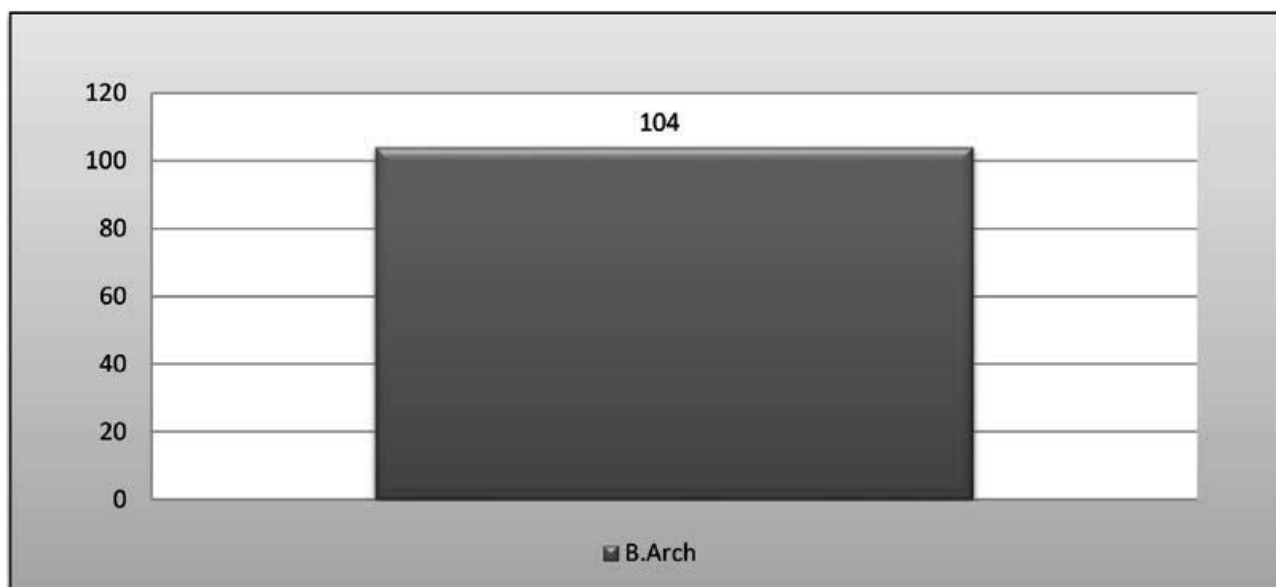
Name of the Student	Title of Thesis	Supervisor
Mr.P.Rammohan	Application of Fuzzy Logic for Prediction of Goaf Fall Area in Coal Mines	Dr. S. Jayanthu

Department of PLANNING & ARCHITECTURE

Student Intake in 2017-18



Total Student Strength



Publication

Publications in Journals

- Muhuri, S. & Basu, S. (2018), Developing Residential Social Cohesion Index for High-Rise Group Housing Complexes in India, Social Indicators Research, 137(3), pp.923–947.

Publications in Conferences

- Saha, N & Banerji, B. (2017, October). Bhubaneswar in global flux. Paper presented at Spaces and Flows: Eighth International Conference on Urban and ExtraUrban Studies, University of Hull, UK .
- Sen, R., Meggers, F. and Chattopadhyay, S. (2017) “Planning for centralized cooling systems in high density mass housing in tropics – towards smart energy policy in residential communities.” Proceedings of 53rd ISOCARP World Congress, 23rd-27th October, Portland, USA.
- Tungnung. K, Kodama. Y, Krishan. A, Takemasa, K. (2017). Passive Design with Affordances: Natural Ventilation and Adaptive Shading for Comfort, Churachandpur. Proceedings of 33rd International PLEA (Passive and Low Energy Architecture) Conference, Edinburgh. 3-5 July, 2017. Vol 3, p. 4381-4388. Part of ISBN: 978-0-9928957-5-4.

Paper Accepted for Publication

- Saha, N & Banerji, B. (2017). Bhubaneswar in global flux. Spaces and Flows: An International Journal of Urban and ExtraUrban Studies. [Accepted with revision] .
- Tungnung. K, Kodama. Y, Krishan. A, Takemasa, K, Gerald Pde. (2018). Passive Design with Affordances: Parametric Strategies on Heating Techniques in Cold-cloudy Shillong. 33rd International PLEA (Passive and Low Energy Architecture) Conference, Hongkong. December, 2018.

Technical Association/Societies

Faculty members

Dr. Basudatta Sarkar	Registered with Council of Architecture, India
Dr. Tuhin Subhra Maparu	Registered with Council of Architecture, India Associate Member of Institute of Town Planners' India
Binit kumar	Registered with Council of Architecture, India
Nabanita Saha	Registered with Council of Architecture, India Member of Institute of Town Planners, India
Tirthankar Sarkar	Registered with Council of Architecture, India
Suparna Saha	Registered with Council of Architecture, India Associate Member of Institute of Town Planners, India
Soumi Muhuri	Registered with Council of Architecture, India Associate Member of Institute of Town Planners, India
Roshmi Sen	Registered with Council of Architecture, India
Dr. Khuplianlam Tungnung	Registered with COA (Council of Architecture), India Registered with Architectural Institute of Japan (AIJ) Registered with DRA (Design Research Association) renamed as SDAFST

Students:

Society of Students of Planning and Architecture (SSPA)

Seminar, Symposia, Winterschool, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

Workshops	Co-coordinator	Conducted by
Model making workshop, Innovision, 2017	Binit Kumar	Binit Kumar
3 days' Workshop on Computational Design and Fabrication Methodologies, March, 2018	Basudatta Sarkar	DigitalIntuition
Seminars	Co-coordinator	Conducted by
Ethics in Architecture: A Survey of Emergency Infrastructure in the Coastal Areas of Indian Sub-continent, October 2017	Basudatta Sarkar	Prof. Arup Das IIT Kharagpur
Current trends in architecture, December 2017	Basudatta Sarkar K. Tungnung	Prof. Manjari Chakraborty BIT Mesra
Architectural practice in India	Binit Kumar	Architect Somnath Sanyal

Research Projects

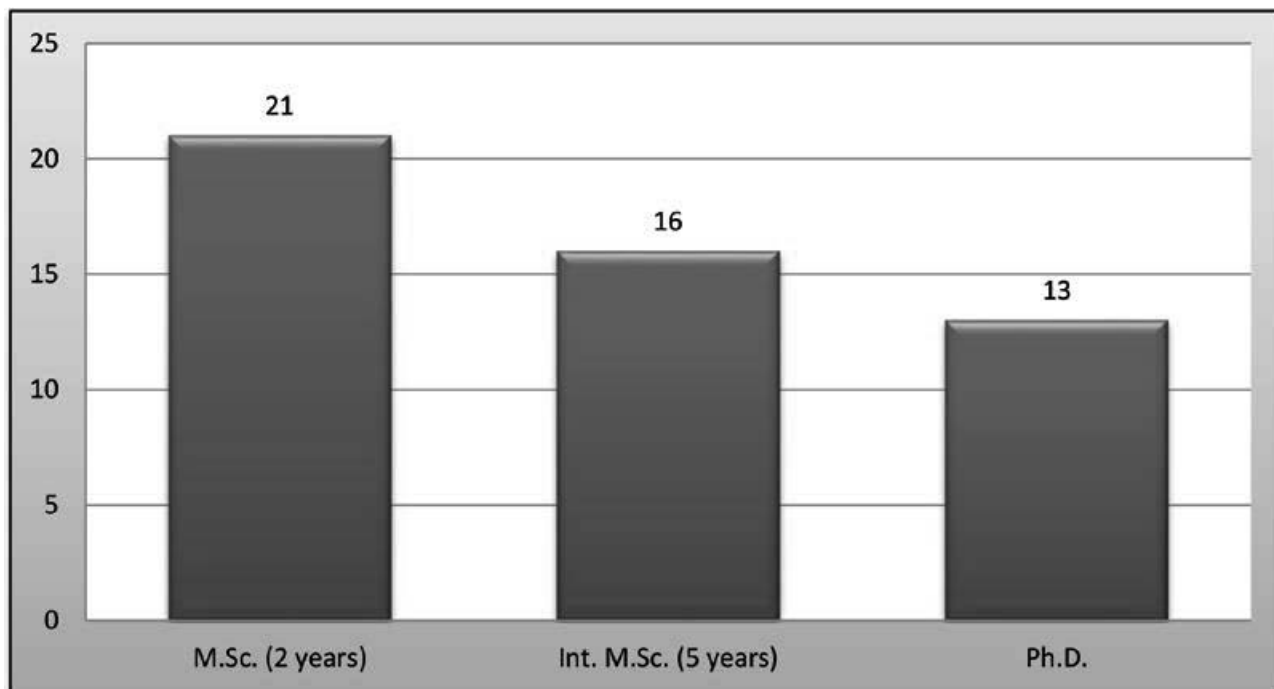
Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Developing policy framework for designing trans- generational urban communities and cities	ICSSR	Basudatta Sarkar (Co-PI)	19,00,000	May 2018	Continuing

List of Laboratories

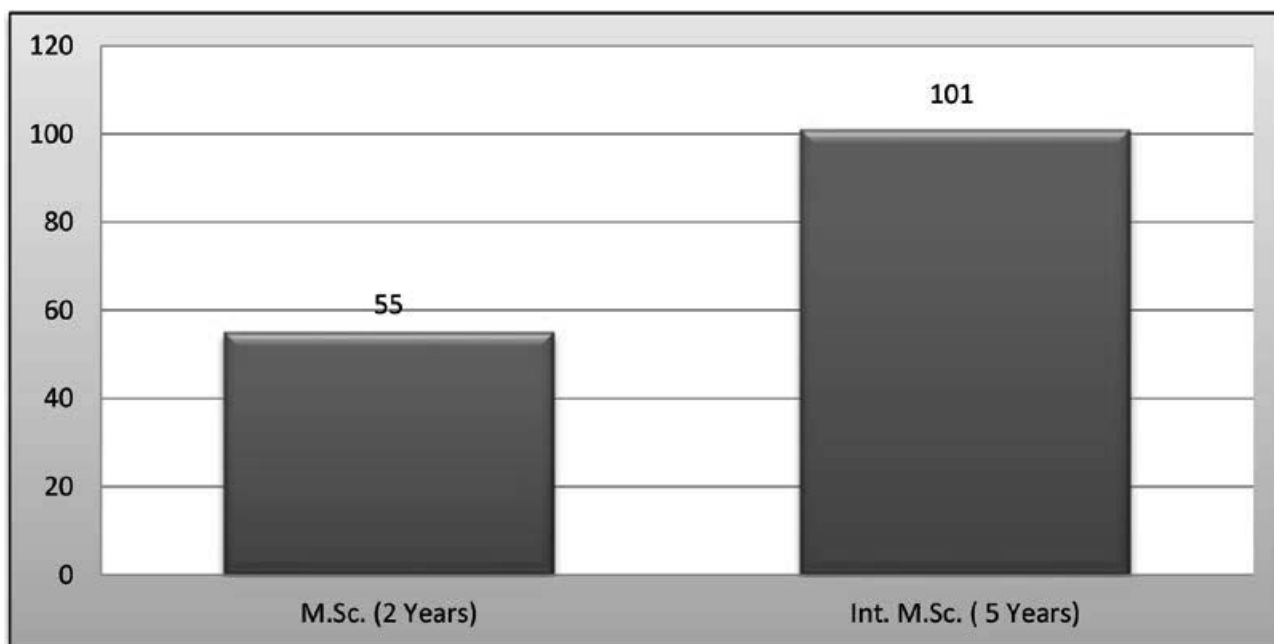
Sl. No.	Name of the Laboratories
1	Computer Laboratory
2	Building Energy Laboratory
3	Material Laboratory
4	Visual Arts Laboratory
5	Construction Yard

Department of PHYSICS & ASTRONOMY

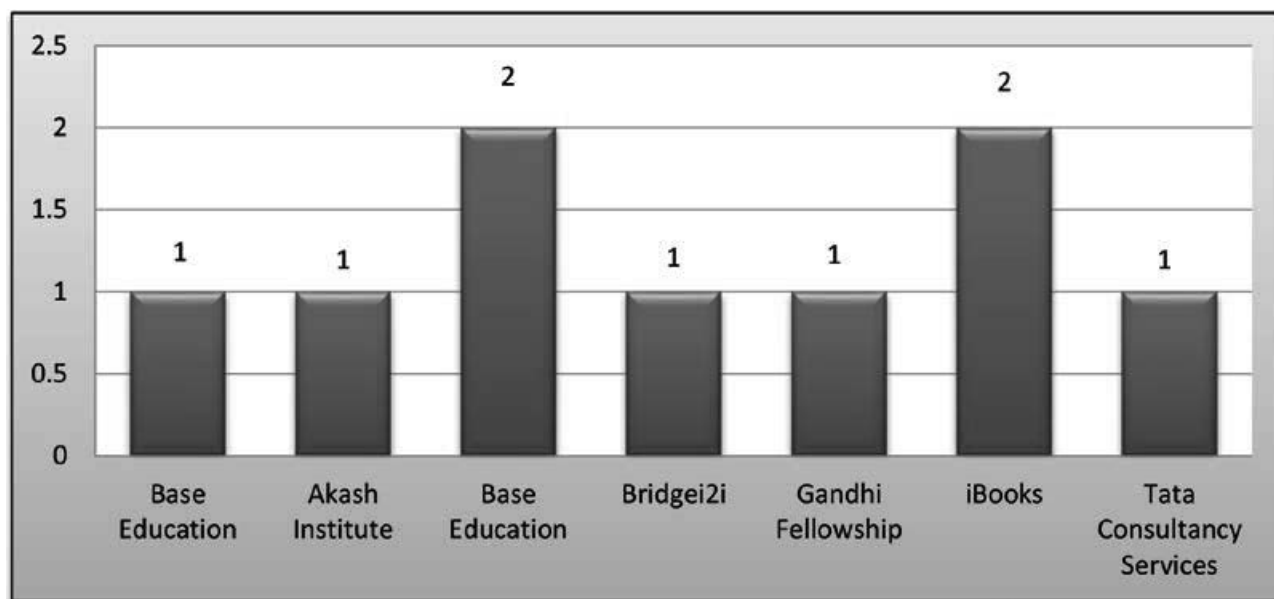
Student Intake in 2017-18



Total Student Strength



Total Student Strength



Faculty

Sl. No.	Name & Specialization
1	Prof. Simanchala Panigrahi (spanigrahi@nitrkl.ac.in) Ph.D. (Berhampur University), Professor Solid State Physics, Material Science, Ferroelectrics
2	Prof. D. K. Bisoyi (dkbisoyi@nitrkl.ac.in) Ph.D. (Sambalpur University), Associate Professor Polymer composites
3	Prof. D. Behera, Behera (dbehera@nitrkl.ac.in) Ph.D. (Utkal University), Associate Professor Superconductivity and Ferrites
4	Prof. B. Ganguli (biplabg@nitrkl.ac.in) Ph.D. (IIT Kanpur), Associate Professor Theoretical physics
5	Prof. P. Kumar (pawankumar@nitrkl.ac.in) Ph.D. (IIT Delhi), Associate Professor Bulk and Thin Functional Materials
6	Prof. S. Jena (sid@nitrkl.ac.in) Ph.D. (JNU), Associate Professor Soft mater
7	Prof P. N. Viswakarma (prakashn@ntirkel.ac.in) Ph.D. (I.I.Sc. Bangalore), Assistant Professor Low Temperature physics
8	Prof. D. K. Pradhan (dilippradhan@nitrkl.ac.in) Ph.D. (IIT Kharagpur), Assistant Professor Ferroelectrics & Multiferroics.
9	Prof. P. Mahanadia (pitam@nitrkl.ac.in) Ph.D (I.I.Sc. Bangalore), Assistant Professor Mesoscopic physics
10	Prof. A. K. Singh (singhanil@nitrkl.ac.in) Ph.D (JNU), Assistant Professor Multiferroics
11	Prof. J. P. Kar (karjp@nitrkl.ac.in) Ph.D. (IIT Delhi), Assistant Professor Thin films

Sl. No.	Name & Specialization
12	Prof. S. N. Dash (dashsurya@nitrkl.ac.in) Ph.D. (UGC-DAE CSR, Indore), Assistant Professor Magnetism
13	Prof. A. Pradhan (pradhana@nitrkl.ac.in) Ph.D (I.I.A, Bangalore), Assistant Professor Astrophysics
14	Prof. S. Datta (dattas@nitrkl.ac.in) Ph.D. (SINP, Kolkata), Assistant Professor Condensed Mater theory
15	Prof. S. Mishra (mishras@nitrkl.ac.in) Ph.D. (IIT Mumbai), Assistant Professor High Energy Physics theory
16	Prof. A. Rai (raia@nitrkl.ac.in) Ph.D. (Oklahoma State University, USA), Assistant Professor Quantum Optics, Quantum computation, Quantum information processing.
17	Prof. Mithun Biswas Computational Biophysics
18	Prof. Subhash Chandra Mahapatra GTR

Publication

Publications in Journals

- Measurement of temperature dependent magnetoelectricity in $\text{BiFe}_{(1-x)}\text{Co}_x\text{O}_3$; $x = 0, 0.01, 0.02$, S. Kuila, S. Tiwary, M.R. Sahoo, A. Barik, P.N. Vishwakarma, Journal of Alloys and Compounds, 709 (2017) 158.
- Cobalt substitution induced magnetodielectric enhancement in multiferroic $\text{Bi}_2\text{Fe}_4\text{O}_9$,
- S. R. Mohapatra, P. N. Vishwakarma, S. D. Kaushik, R. J. Choudhary, N. Mohapatra, and A. K. Singh, Journal of Applied Physics, 121 (2017) 124101.
- Effect of Holmium substitution on the magnetic and magnetodielectric properties of multiferroic $\text{Bi}_2\text{Fe}_4\text{O}_9$, S R Mohapatra, P N Vishwakarma, S D Kaushik, A K Singh, Journal of Applied Physics, 122 (13) (2017) 134103.
- Study of magnetization and magnetoelectricity in $\text{CoFe}_2\text{O}_4/\text{BiFeO}_3$ core-shell composites, S Kuila, Sweta Tiwary, M R Sahoo, A Barik, P D Babu, V Siruguri, B Birajdar and P. N. Vishwakarma, Journal of Applied Physics 123 (6) (2018) 064101.
- Investigation of Electrical and Thermal Properties of Reduced Graphene Oxide–Multiwalled Carbon Nanotubes/PMMA Hybrid Nanocomposite, K Sa, PC Mahakul, S Saha, D Behara, PN Vishwakarma, P Mahanandia, Physica Status Solidi A (2017) 1700476
- Enhanced antiferromagnetic transition and magnetodielectric study in Cobalt and Holmium co-substituted multiferroic $\text{Bi}_2\text{Fe}_4\text{O}_9$, SR Mohapatra, SD Kaushik, AK Singh, Materials Research Exp, 5 (1) (2018) 016107.
- Observation of self-polarization in the BSA protected Au_{20} clusters, DSwain, A Narzary, A Singh, A Chandra, T. Nagasawa, S. Yamamoto, M Mitsuishi, S. Rath, Nanotechnology 28 (2017) 445704.
- Possible relaxation and conduction mechanism in W6+doped $\text{SrBi}_4\text{Ti}_4\text{O}_{15}$ ceramic, P. Nayak, T. Badapanda, A.K. Singh, S. Panigrahi, Ceramics International, 43 (2017) 4527.
- Correlation of dielectric, electrical and magnetic properties near the magnetic phase transition temperature of cobalt zinc ferrite, Dhiren K. Pradhan, Shalini Kumari, Venkata S. Puli, Proloy T. Das, Dillip K. Pradhan, Ashok Kumar, J. F. Scott and Ram S. Katiyar, Phys. Chem. Chem. Phys, 19 (2017) 210-218.
- Studies on dielectric, optical, magnetic, magnetic domain structure, and resistance switching characteristics of highly c-axis oriented NZFO thin films, Dhiren K. Pradhan, Shalini Kumari, Linglong Li, Rama K. Vasudevan, Proloy T. Das, Venkata S. Puli, Dillip K. Pradhan, Ashok Kumar, Pankaj Misra, A. K. Pradhan, Sergei V. Kalinin, and Ram S. Katiyar, Journal of Applied Physics 122 (2017) 033902 (1-10).

- Studies of ferroelectric properties and leakage current behaviour of microwave sintered ferroelectric $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$ ceramic, Hari Sankar Mohanty, Tapabrata Dam, Hitesh Borkar, Ashok Kumar, K. K. Mishra, Shrabane Sen, Banarji Behera, Balam Sahoo, Dillip K. Pradhan; *Ferroelectrics*, 517 (2017) 25-33.
- Coupled Ion Conduction Mechanism and Dielectric Relaxation Phenomenon in $\text{PEO}_{20}\text{-LiCF}_3\text{SO}_3$ Based Ion Conducting Polymer Nanocomposite Electrolytes, Tapabrata Dam, Sidhartha S. Jena, and Dillip K. Pradhan, *J. Phys. Chem. C*, 122 (2018) 4133–4143.
- Impedance spectroscopic study on microwave sintered $(1-x)\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3-x\text{BaTiO}_3$ ceramics, Hari Sankar Mohanty, Ashok Kumar, Balam Sahoo, Pawan Kumar Kurliya, Dillip K. Pradhan, *J Mater Sci: Mater Electron* 29 (2018) 6966–6977.
- Investigation of surface and interface properties of RF sputtered calcium copper titanate thin films on silicon substrate, N. Tripathy, C. Das, S. P. Ghosh, B. Das, P. Kumar, and J. P. Kar, *J Mater Sci: Mater Electron* 28 (2017) 2686–2690.
- Structural, Dielectric and Impedance Studies of KNNS–BKT Ceramics, Madan Lal, M. Chandrasekhar, Radheshyam Rai, and Pawan Kumar, *American Journal of Materials Science*, 7(2) (2017) 25-34.
- Microwave assisted sol-gel synthesis of high dielectric constant CCTO and BFN ceramics for MLC applications, Sonia, Mallam Chandrasekhar, P. Kumar, *Processing and Application of Ceramics* 11 [2] (2017) 154–159.
- Synthesis and Characterizations of BT-BFN Ceramics for Capacitor Applications, R. R. Negi, M. Chandrasekhar, Pawan Kumar, J. P. Kar, and C. Prakash, *Ferroelectrics* 517 (2017) 34–40.
- Optical, piezoelectric, leakage current and polarization fatigue studies of NBT-KNN ceramics near MPB, S. Swain, M. Chandrasekhar, Pawan Kumar, *Ferroelectrics* 516 (2017) 185–192.
- Synthesis and Characterization of Ni-Cu-Zn Ferrites by Microwave Reactive Sintering Technique, DIPIKA NANDA, Pawan Kumar, and C. Prakash, *Integrated Ferroelectrics* 185 (2017) 183–192.
- Relaxation and Conduction Mechanism of BNT-KNN Ceramics by Impedance Study, M. Chandrasekhar, P. Kumar, C. Prakash, *Ferroelectrics* 517 (2017) 58–65.
- Effect of sintering temperature and Cu-rich secondary phase on dielectric properties of microwave processed $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ ceramics, B. Samanta, Pawan Kumar, and C. Prakash, *Ferroelectrics* 517 (2017) 46–57.
- Dielectric relaxation and conduction mechanism studies of BNT-BT-BKT ceramics, M. Chandrasekhar, Dipak Kumar Khatua, RANJIT PATTANAYAK, and Pawan Kumar, *Journal of Physics and Chemistry of Solids* 111 (2017) 160–166.
- Structural, Dielectric and Magnetic Studies of multiferroics $\text{Bi}_{1-x}\text{Sr}_x\text{FeO}_3$ ($x = 0.1, 0.2, 0.3, 0.4$, and 0.5), Pawan Kumar, Jaiprakash, R.S. Chauhan, and Anil Kumar, *Solid State Sciences* 72 (2017) 5-9.
- Comparative studies of BT, LCNO and 0.94BT-0.06LCNO ceramics for capacitor applications, Negi, R.R, and Pawan Kumar, *Ceramics International* (In Press).
- Microwave sintered lead free ferroelectric BZT-50BCT ceramics with higher Curie temperature and improved dielectric properties, Seelam Rangaswamy Reddy, V. V. Bhanu Prasad, Pawan Kumar, K. Prabakar, Vishnu Shanker, and Subir Roy, *Journal of Materials Science, Materials in Electronics* (Accepted)
- Dielectric, magnetic, ferroelectric, and Mossbauer properties of bismuth substituted nanosized cobalt ferrites through glycine nitrate synthesis method, K.L. Routray, D. Sanyal, and D. Behera, *Journal of Applied Physics*, 122(22) (2017) 224104.
- Effect of CNTs blending on the structural, dielectric and magnetic properties of nanosized cobalt ferrite, K.L. Routray, S. Saha, and D. Behera, *Materials Science and Engineering, B* 226 (2017) 199-205.
- Structural, dielectric and magnetic properties of nano-sized CoFe_2O_4 employing various synthesis techniques for high frequency and magneto recording devices: A comparative analysis, K.L. Routray, B. Sahoo, and D. Behera, *Materials Research Express*, 5(8) (2018) 8.
- Enhancement in conductivity and dielectric properties of rare-earth (Gd 3+) substituted nano-sized CoFe_2O_4 , K.L. Routray, and D. Behera, *Journal of Materials Science: Materials in Electronics*, 1 (2018) 13.
- Investigation of structural and electrical transport properties of nano-flower shaped NiCo2O4 supercapacitor electrode materials, Subrata Karmakar, Shikha Varma, Dhruvananda Behera, *Journal of Alloys and Compounds*, 757 (2018) 49-59.
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- Effect of grain size on electric transport and magnetic behavior of strontium hexaferrite ($\text{SrFe}_{12}\text{O}_{19}$), Sahu, P., Tripathy, S. N., Pattanayak, R., Muduli, R., Mohapatra, N., & Panigrahi, S, Applied physics A, 123 :3 (2017).

Publications in Conferences

- Structural, Dielectric and Magnetic Studies of Mn doped Y-Type Barium Hexaferrite ($\text{Ba}_2\text{Mg}_2\text{Fe}_{12}\text{O}_{22}$) Md. F. Abdullah, P. Pal, S. R. Mohapatra, C. S. Yadav, S. D. Kaushik, A. K. Singh, AIP Conf. Proc. 1942 (2018) 130037.
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- Structural, dielectric and magnetic studies of Fe_2TeO_6 and $\text{Fe}_2\text{Te}_{0.9}\text{Nb}_{0.04}\text{O}_6$ ceramics P. Pal, S. R. Mohapatra, S. D. Kaushik, and A. K. Singh, AIP Conf. Proc. 1832 (2017) 140026.

- Evidence of Magnetoelectric coupling in $\text{Bi}_{2(1-x)}\text{Ho}_{2x}\text{Fe}_4\text{O}_9$ ($x = 0, 0.01$) multiferroic ceramics S. R. Mohapatra, C. S. Yadav, S. D. Kaushik, and A. K. Singh, AIP Conf. Proc., 1832 (2017) 140019.
- Role of Rare Earth (Gd³⁺) on Structural and Dielectric Properties of Cobalt Ferrite, Krutika L. Routray and Dhruvananda Behera, International Conference on Materials for Advanced Technologies (ICMAT 2017), SINGAPORE, DURING, 18TH TO 23RD JUNE, 2017
- Impedance and dielectrics studies of $\text{Ni}_{0.5}\text{Zn}_{0.5}\text{Fe}_2\text{O}_4$ micro particles prepared via solid state route, Subrata Karmakar, Dhruvananda Behera, 2nd International Conference on Advances in New materials (ICAN2018), University of Madras, Chennai, 8-9 June, 2018.
- Structural investigation and dielectric properties of dy doped cobalt ferrite nanoparticles, K.L. Routray and D. Behera, 2nd International Conference on Advances in New materials (ICAN2018), University of Madras, Chennai, 8-9 June, 2018.
- Exploring the dielectric properties of Ni doped Cobalt ferrite nanoparticles, Bibekananda Sahoo, K.L. Routray and D. Behera, 2nd International Conference on Advances in New materials (ICAN2018), University of Madras, Chennai, 8-9 June, 2018.
- Impact of annealing temperature on the phase of CZTS with the variation in surface morphological changes and extraction of optical bandgap, Jagatpati Raiguru, B V Ramagouri Surya Subramanyam, Kadambinee Sa, Injamul Alam, Sonali Das, Jonaki Mukherjee, Prakash Chandra Mahakul, Bidyadhar Subudhi, and Pitamber Mahanandia, IOP Conference Series: Materials Science and Engineering, 178 (2017) 012017.
- Synthesis and characterizations of $\text{Cu}_2\text{ZnSnS}_4$ nanoparticles/carbon nanotube composite as an efficient absorber material for solar cell application, Sonali Das, Kadambinee Sa, Injamul Alam, Prakash Chandra Mahakul, Jagatpati Raiguru, B V Ramagouri Surya Subramanyam, and Pitamber Mahanandia, AIP Conference Proceedings: International Conference on Nanomaterials for Energy Conversion and Storage Applications, 1961 (2018) 020006.
- Preparation of few layer graphene sheets (FLGS) prepared by an electrochemical method, Injamul Alam, Kadambinee Sa, Sonali Das, Jagatpati Raiguru, B V Ramagouri Surya Subramanyam, Prakash Chandra Mahakul, and Pitamber Mahanandia, IOP Conference Series: Materials Science and Engineering, 338 (2018) 012063.
- Synthesis of quaternary chalcogenide CZTS nanoparticles by a hydrothermal route, Sonali Das, Kadambinee Sa, Prakash Chandra Mahakul, Jagatpati Raiguru, Injamul Alam, B V Ramagouri Surya Subramanyam, and Pitamber Mahanandia, IOP Conference Series: Materials Science and Engineering, 318 (2018) 012062.
- Scalable synthesis of reduced graphene oxide using FeSO_4 , Kadambinee Sa, Prakash Chandra Mahakul, B V Ramagouri Surya Subramanyam, Sunirmal Saha, Jonaki Mukherjee, and Pitamber Mahanandia, AIP Conference Proceeding of 61st DAE Solid State Physics Symposium, 1832 (2017) 050133.
- Structural and electrical characteristics of solution processed P3HT-carbon nanotube composite, Prakash Chandra Mahakul and Pitamber Mahanandia, IOP Conference Series: Materials Science and Engineering, iop conference : materials science and engineering 178 (2017) 012024.
- Effect of embedded polyelectrolyte chains on microstructure of polyacrylamide hydrogels, Santripati Khandai, Mithra K, Banani Mishra, and Sidhartha S. Jena, AIP Conference Proceedings 1942 (2018) 040015.
- Effect of polymer concentration on structure and rheology of poly (sodium acrylate) hydrogels, Mithra K, Santripati Khandai, Banani Mishra, and Sidhartha S. Jena, AIP Conference Proceedings 1942 (2018) 040009.
- Probe diffusion of labeled polymers inside polyacrylic acid solutions: A polyelectrolyte effect, Banani Mishra, K. Mithra, Santripati Khandai, and Sidhartha S. Jena, AIP Conference Proceedings 1953 (2018) 030033.
- Impedance Study of sol-gel derived nanoparticle $\text{SrFe}_{12}\text{O}_{19}$, Sahu. Priyanka, Panigrahi. Simanchalo, International Conference on Nanomaterials and Nanotechnology (ICNANO-2017), Allahabad, India, 01 - 03 March, 2017.
- Effect of yttrium substitution on the structural and magnetic properties of SmFeO_3 , Subhajit Raut, P. D. Babu, and Simanchalo Panigrahi, AIP Conference Proceedings, 1942 (2018) 030012.

Paper Accepted for Publication

Conferences:

Books/Book Chapter

Patent

Awards Received/Distinction Achieved

By Faculty:

- Dr. D. K. Pradhan has been nominated as Consultant, Commission of Mathematical and Theoretical Crystallography, International Union of Crystallography since September, 2017.

By Students:

Technical Association/Societies

Faculty members:

Students:

Seminar, Symposia, Winter School, Short Term Course/ Workshops Conducted by Department, Participation by Faculty Members

Seminars conducted by the Department

International School on Fundamental Crystallography and Workshop on Structural Phase Transitions : A Satellite Event of 24th IUCr Congress, 2017 (ISFCWSPT-2017) 30th August to 4th September 2017 (Coordinator: Dr. Dillip K. Pradhan)

Participation of faculty members in workshops/symposia

- Prof. D. Behera participated in ICAN2018), University of Madras, Chennai, 8-9 June, 2018.
- Prof. D. Behera participated in IUAC, New Delhi, Users workshop in December 17, 2017
- Crystal structure and ferroelectric properties of $(1-x)\text{Na}_0.5\text{Bi}_0.5\text{TiO}_3 - x\text{BaTiO}_3$ ceramics.
- Dillip K. Pradhan, Hari Sankar Mohanty, Tapabrata Dam, Hitesh Borkar, K. K. Mishra, Ashok Kumar, Shrabanee Sen, Balaram Sahoo. 24th Congress & General Assembly of the International Union of Crystallography (IUCr), 2017, 21st August to 28th August 2017, Hyderabad International Convention Centre (HICC), Hyderabad.

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Investigation of the magnetoelectricity in co-doped BiFeO_3 multiferroics	UGC-DAE CSR Mumbai Centre, Mumbai	Dr. D. K. Pradhan	6.81	11th February, 2015	10th February, 2018

Consultancy Services

Institutional Programme Support/Centre of Excellence

Equipment Acquired

Sl. No.	Name of the Equipment	Amount (Rs. in Lakhs)

List of Laboratories

Sl. No.	Name of the Laboratories
1	Thin Film Lab.
2	Low Temp Physics Lab.
3	Computational Physics Lab.
4	Electroceramic Lab.
5	Polymer Physics & Soft Matter Lab.
6	Cryomagnetism Lab.
7	Ferroics Lab.
8	Magnetism Lab.
9	Electronics Materials & Device lab.
10	Mesoscopic Lab-I
11	Mesoscopic Lab-II
12	Multifunctional Material Science Lab.
13	Astronomy Lab.
14	XRD Lab.
15	B. Tech Physics Lab.
16	Waves and Optics Lab.
17	Spectroscopy Lab.
18	General Physics Lab.
19	Condensed Matter Physics Lab.
20	Instrumentation Lab.
21	Computer Lab.
22	Properties of Matter Lab.
23	Thermal Physics Lab.
24	PL and Raman Lab.
25	Fortran Programming Lab
26	Low temperature and Thin film Lab
27	Electricity and Magnetism Lab.

Ph.D. Degrees Awarded by the Department

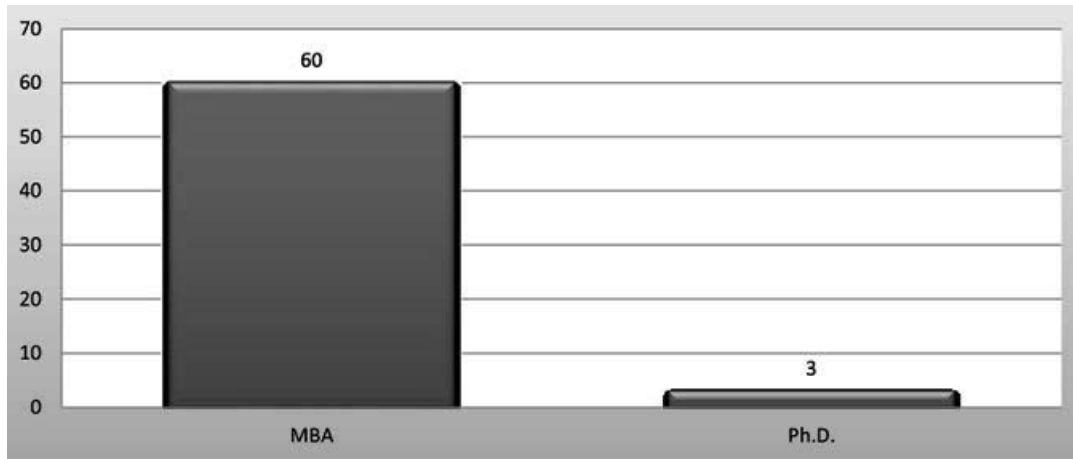
Name of the Student	Title of Thesis	Supervisor
Chandra Sekhar Mallam	Synthesis and Characterization of ST and NN modified BNT-KNN, BNT-BT-BKT Ceramics for Energy Storage Applications	Prof. P. Kumar

M.Tech. Research Degrees Awarded by the Department

Name of the Student	Title of Thesis	Supervisor

Department of SCHOOL OF MANAGEMENT

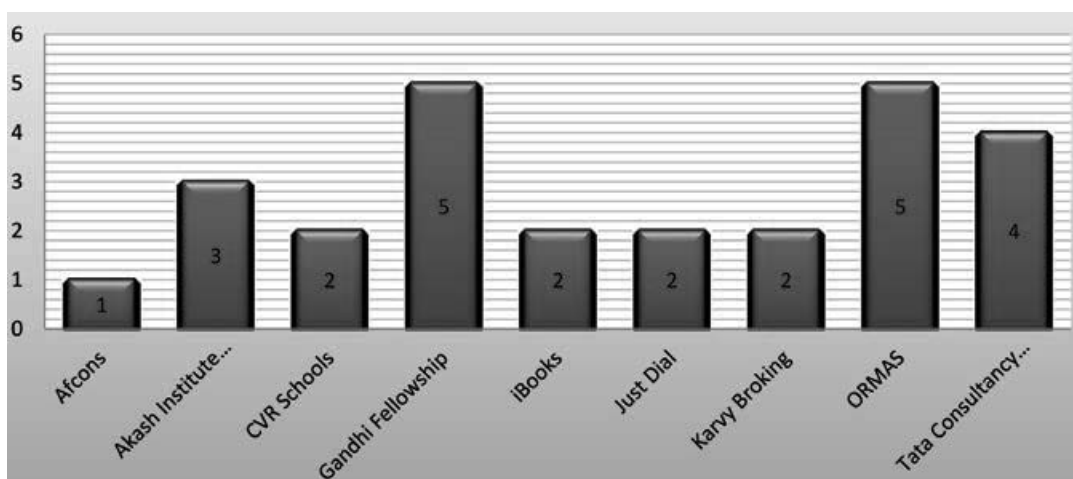
Student Intake in 2017-18



Total Student Strength



Placement Statistics



Faculty

Sl. No.	Name & Specialization
1	Prof. Dinabandhu Bag (bagd@nitrkl.ac.in) Associate Professor, Ph. D. (Mysore) Finance, Banking, Economics
2	Prof. Rajeev Kumar Panda (rkpanda@nitrkl.ac.in) Assistant Professor, Ph. D. (Sambalpur University), FDP (IIMA) Marketing Research, Service Quality, Strategic Branding, Agricultural Marketing, Entrepreneurship Development.
3	Prof. Chandan Kumar Sahoo (sahooc@nitrkl.ac.in) Associate Professor, Ph. D. (Utkal University) Competency Mapping, Quality of Work Life, Talent Management, Organizational Restructuring and People Management, Employee Relations, Corporate Social Responsibility.
4	Prof. Shigufta Hena Uzma (uzmas@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Roorkee) Intangible Asset Valuation & Accounting, Financial Derivatives, Corporate Brand Management, Brand Valuation, Corporate Governance
5	Dr. Vikas Thakur (thakurv@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT, Roorkee) Operations management, supply chain management, waste management, healthcare delivery systems, sustainable development.
6	Prof. Dushyant Mahadik (mahadikd@nitrkl.ac.in) Assistant Professor, Ph. D. (University of Hyderabad), PGP (IIM Ahmedabad) Corporate Finance, Infrastructure Development, Risk Management
7	Prof. Binita Tiwari (tiwarib@nitrkl.ac.in) Assistant Professor, Ph. D. (IIT Roorkee) Talent Management, Leadership Development, Change Management, Employee Engagement, Learning Organizations, High Performance Work Systems, Competency Mapping

Publication

Publications in Journals

- Tiwari, B. & Lenka, U. (2018). Engaging workforce in downsized firms: Scenario of Indian IT/ITES sector. *Industrial and Commercial Training*, 50 (1): 32-38 (Emerald) (Scopus Indexed)
- Adhikari, K. and Rajeev Ku. Panda (2017). Social media brand communities and brand loyalty: An integrated ahp approach, *International Journal of Virtual Communities and Social Networking*, 9 (2), 62-79.
- Misra, Siddharth and Rajeev Ku. Panda, (2017). Environmental consciousness and brand equity: An impact assessment using analytical hierarchy process (AHP), *Marketing Intelligence and Planning*, 35 (1), 40-61.
- Nayak, T., Sahoo, C. K. and Mohanty, P. K. (2017). Impact of HR interventions on quality of work life: evidence from healthcare units", *International Journal of Indian Culture and Business Management*, 14 (2): 214-236.
- Sahoo, K. K., Sahoo, C. K. and Tripathy, S. K. (2017). Outcome of training and development measures in public sector banks of India: An overview", *Productivity*, 57 (4): 401-409.
- Gupta, R. K. and Sahoo, C. K. (2016). HRD interventions, employee competencies and organizational effectiveness: an empirical study, *European Journal of Training and Development*, 40 (5): 345 – 365.
- Nayak, T., Sahoo, C. K., Mohanty, P. K. and Sundaray, B. K. (2016). HR Interventions and quality of work life of health care employees: An investigation, *Industrial and Commercial Training*, 48 (5): 234-240.
- Sahoo, K. K., Sahoo, C. K. and Tripathy, S. K. (2016). Performance enhancement through human resource development interventions, *Personnel Today*, 37 (2): 11-18.
- Thakur, V., and Ramesh, A. (2018) "Analyzing the composition and generations rates for different medical waste categories in selected hospitals in Uttarakhand, India", *Journal of Material Cycles and Waste Management*, Vol. 20 (2), 877-890.

- Thakur, V., and Ramesh, A. (2017) "Quantitative Grey-ANP-TOPSIS based model for evaluating healthcare waste disposal partner", *International Journal of Procurement Management*, Vol. 10 (6), pp. 683-705.
- Thakur, V., and Ramesh, A. (2017) "Healthcare waste disposal strategy selection using Grey-AHP approach", *Benchmarking: An International Journal*, Vol. 24 (3), 735-749.
- Thakur, V., and Ramesh, A. (2017) "Management practices and modeling the seasonal variation in healthcare waste at CBWTF: A case study of Uttarakhand, India", *Journal of Modeling in Management*, Vol. 12 (1), 162-174.
- Thakur, V., and Ramesh, A. (2016) "Healthcare waste management: Interpretive structural modelling approach", *International Journal of Health Care Quality Assurance*, Vol. 29 (5), 559-581.
- Thakur, V., and Ramesh, A. (2016) "Shift from Product Supply Chain Management to Services Supply Chain Management: A Review", *International Journal of Services and Operations Management*, Vol. 23(3), 316-346.
- Tiwari, B. & Lenka, U. (2016). Building psychological safety for employee engagement in post-recession. *Development and Learning in Organizations: An International Journal*, 30 (1): 19–22 (Emerald) (Australian Business Deans Council (ABDC) Quality Journal Listed) (Scopus Indexed).
- Lenka, U. & Tiwari, B. (2016). Achieving Triple 'P' bottom line through Resonant Leadership: An Indian perspective. *International Journal of Productivity and Performance Management*, 65 (5): 694–703 (Emerald) (Australian Business Deans Council (ABDC) Quality Journal Listed) (Scopus Indexed)
- Tiwari, B. & Lenka, U. (2015). Building and branding talent hub: An outlook. *Industrial and Commercial Training*, 47 (4): 208–213 (Emerald) (Scopus Indexed)
- Kishalay Adhikari, and Rajeev Kumar Panda, "Social media brand communities and brand Loyalty: an integrated AHP approach", *International Journal of Virtual Communities and Social Networking*, vol. 9, no. 2, pp. 62-79 2017, 10.4018/IJVCN.2017040104.
- Siddharth Misra, and Rajeev Kumar Panda, "Scale transformation of analytical hierarchy process to Likert weighted measurement method: an analysis on environmental consciousness and brand equity", *International Journal of Society Systems Science*, vol. 9, no. 3, pp. 242-255 2017, 10.1504/IJSSS.2017.10008323.
- Rajeev Kumar Panda, and Rama Koteswara Rao Kondasani, "Customers' precedence for service quality dimensions in Indian private healthcare setting: a ridit approach", *Hospital Topics*, vol. 95, no. 4, pp. 90-99 2017, 10.1080/00185868.2017.1345571.
- Kishalay Adhikari, and Rajeev Kumar Panda, "Users' information privacy concerns and privacy protection behaviors in social networks", *Journal of Global Marketing*, vol. 31, no. 2, pp. 96-110 2018, 10.1080/08911762.2017.1412552.
- Vivek Kumar Pathak, Ashim Kumar Das, and Rajeev Kumar Panda, "Application of RIDIT Analysis in Prioritizing Perceived Service Quality Dimensions of Management Graduates in Indian Universities", *Indian Journal of Marketing*, vol. 48, no. 2 2018, 10.17010/ijom/2018/v48/i2/121332.
- Mishra S. & Bag D (2015). Latent Perspectives of investments in new Infrastructure projects: A conceptual exploration. In Pradhan R.P. (Ed.), *Frontier of Infrastructure Finance: Issue and Challenges ICFIF-2014*, edited vol 2 (pp.22-31). New Delhi, Blumsburry Publishing Indian Pvt. Ltd. (ISBN: 978-93-84-898-89-2).
- Mishra S. and Bag D (2016). Compensation Provisions in a Venture Capital-Limited Partner (VC-LP) Contract: A Theoretical Framework. *Indian Journal of Finance*. 10 (5). 50-61.
- Mishra S., Bag D and Mishra S. (2017). Venture Capital Investment Choice: Multi-criteria Decision Matrix. *The Journal of Private Equity*. 20 (2). 52-68.

Publications In Conferences

- Sahoo, K. K. and Sahoo, C. K. (2017), Enhancement of employee competencies through strategic HRD interventions, Internal Seminar on "Strategic Human Resource Management" Organized by Dept. of Personnel Management & Industrial Relations, Utkal University, Bhubaneswar held during 13th – 14th May, 2017.
- Tiwari, B. & Lenka, U. (2016, May). Human Resource Development Interventions for Employee Engagement in ASEAN. 5th International Conference on Advancement of Development Administration (ICADA), NIDA, Bangkok.
- Tiwari, B. & Lenka, U. (2015, March). Role of Resonant Leaders in Engaging Employees of Firms Facing Economic Crisis. International Conference on Trends in Economics, Humanities and Management. ICTEHM, Singapore.

- Tiwari, B. & Lenka, U. (2015, February). An empirical investigation of the role of strategic leadership in engaging knowledge workers of Indian IT sector. 3rd International Conference on "Creating Opportunities in Emerging Markets – A Global Approach. Symbiosis centre for management studies (SCMS), Noida.
- Tiwari, B. & Lenka, U. (2013, December). Role of resonant leaders to develop survivors in downsized firms. 23rd International Business Research Conference, Melbourne, Australia.

Technical Association/Societies

- IIRA, ISTD, ISLE, ISTE, NHRDN, NIPM, SSAI, NAOP, AOM, SHRM
- IIBF Mumbai, TIES, Delhi
- AMS, EMAC, IEDRC, ISAM, AIMS International

Seminar, Symposia, Summer/Winter School, Short Term Course/Workshops Conducted by Department, Participation by Faculty Members

- Healthcare Management: Current State and Future Trends NIT Rourkela 01 Feb 2018 BY R. K. Panda.
- Ten Days Course on Research Methodology in Social Sciences (CRMSS – 2018)". SOM, NIT Rourkela 02 Apr 2018 by C K Sahoo
- Leadership and Capacity Building of the Executives of RINL, VSP, Visakhapatnam".

Research Projects

Name of the Project	Sponsoring Agency	Name of the PI / Co-PI	Total Value (Rs. in Lakhs)	Start Date	Close Date
Comprehensive Evaluation of Schedule Tribe(ST) Girls' Hostels in Odisha	Department of Planning & Convergence, Govt. of Odisha	Prof. Rajeev Kumar Panda	1287850	01-03-2018	30-11-2018

List of Laboratories

Sl. No.	Name of the Laboratories
1	OR Laboratory
2	Banking Operations Laboratory
3	Project Laboratory
4	Marketing Laboratory
5	Basic Computer Laboratory
6	Business Simulation Laboratory
7	Statistics Laboratory
8	HR Laboratory
9	IGBO Laboratory
10	Management Games Laboratory

Ph.D. Degrees Awarded by the Department

Name of the Student	Title of Thesis	Supervisor
Sunita Panda	Organizational Efforts towards Effective Executive Talent Management: An Analytical Study	Chandan Kumar Sahoo
Shriti Mazumdar	Cash Flow for Indian Industry: An Analysis using an Advanced Framework	Dinabandhu Bag

7. ACADEMIC CENTRES

Computer Centre

Head

Prof. Chandan Kumar Biswas, Ph.D. in Mechanical Engineering

Scientific Officers

1. Mr. M.R. Pattanayak, MCA
2. Mr. B.B. Behera, B.Tech
3. Mr. T.K. Pattnaik, B.Tech

Technical Assistants

1. Mrs. S. Mohapatra, Dip. in Electronics & Tele Comm.	2. Mr. P. K. Tripathy, Dip. in Electronics & Tele Comm.
3. Mr. M. K. Patnaik, MCA	4. Mr. D. K. Barik, M.Com., PG Dip.in Computer Mgmt.
5. Mr. B. K. Sahoo, B. Tech	6. Mr. S. Sarangi, B. Tech.

Assistants

1. Mr. S. S. Dandapat, BA

Attendants

1. Mr. A. Jate	2. Mr. N. Susani

Information regarding CC activities to be published in the Annual Report of the institute for the period 2016-17

Computer Centre has 9 Laboratory at LA complex are equipped with 750 numbers of Desktop systems with Intel i7 Computer systems with 2 GB DDR3 RAM, 320 GB HDD and 18.5" TFT monitors. All the Laboratories have got backup power supply from 40 KVA x 4 Emerson make UPS systems as well as from Diesel generator 750 KVA set. With these Computer Centre facilitates conductance of laboratory classes i.e., Machine Drawing and Solid Modelling (ME-170), Engineering Drawing (CE-171), Language Lab (HS-270) are also being conducted at Computer Centre along with Computing Laboratory-I (CS-171), Computing Laboratory-II (CS-172), Design & Calculation Lab (MM-473), Computational Modelling & Metallurgical Process (MM-697), Data Analysis Lab (ER-565), MATLAB Introduction Lab (ER-563), Computational Biology Lab-I (LS-275), Computational Biology Lab-II (LS-371), Computer aided Drawing Design Lab (LS-573), Bio Informatics Lab (LS-472), Computational Nuclei Acids & Proteins (LS-478), Object Oriented Programming Practice Lab (MA-471), Laboratory work on Mathematical software (MA-371), Computational Chemistry Lab (CY-571) and Computer Work on Numerical Methods (MA-270) for UG & PG students. Computer Centre is in the verge of adding three more Computing Laboratories.

Software Purchased

- MATLAB – Unlimited user license for three years.
- Solidworks – Solidworks Edu edition 2016-17 Network – Campus license (500 users) with three years' subscription.
- OriginLab – Concurrent Network Floating Life Time Perpetual License for Academic use.
- SYSTAT 13 – SYSTAT 13 Software - One Hundred User Perpetual (Life Time) License (Network License) with all modules.

- SPSS – Upgrade of IBM SPSS from version 20 to version 24, Network version with 3 years AMC.
- ANSYS – Renewal & Upgradation of ANSYS 15.0 to 18.1 with 3 years.

Central Facilities provided by Computer Centre for the Institute includes:

- Computational facilities during recruitment test for non-teaching posts.
- Online voting facilities from halls during Student Election process.
- Online video presentation of President's address to student and teachers' community
- On the eve of New Year Day.
- Online recruitment test by Training and Placement cell for final year students.
- Conducting GATE Examination.
- Gaming events during various SAC festivals.
- Seminar facility to departments like Humanities and Biju Patnaik Central Library.
- Demo online sessions for faculty members and staffs to show the use of various software modules developed by automation cell, like File Tracking, HR Leaves, Estate Management etc.
- Training sessions for technical staffs of the institute on MS-WORD, MS-EXCEL, MS-POWERPOINT, Basic of Windows.
- High Performance Computing facility for research
- eMail Service.
- Internet Facility.
- Single sign-on authentication.
- File Storage.
- Backup facility for servers.
- Website & Web Hosting service.
- Terminal service for computer laboratory.
- Domain Naming Facility.
- Support for Licensed Software used by department.
- Repository services for Software.
- DHCP and IP registration and allocation facility for campus network.
- Video Conferencing support.
- Cable and wireless networking facility to hall, academic and residential areas.
- 24x7 Facility Management Service for Server, Storage & Network.
- 24x7 uninterrupted power backup facility for data centre.
- Biometric attendance management system.

Workshop

The workshop is a place where an idea is translated to a tangible product. The Central Workshop is a separate department with its own staff. However, it runs with the help of faculty members drawn from other departments. The department of Central Workshop is equipped with various manufacturing facilities distributed in four constituent shops namely Machine Shop, Carpentry and Fitting Shop, Welding & Foundry Shop, and Electrical & Electronics Shop. It has also specialized machines like CNC lathe, CNC milling machine, CNC drill and tap centre, Tungsten Inert Gas welding, and a range of power driven portable tools. It is used for workshop practice related laboratory classes for undergraduate students of all other departments. Basically, it handles the teaching of workshop practical courses meant for all the 1st year students at undergraduate level in addition to that for higher semester students of a few departments namely Mechanical Engineering, and Materials and Metallurgical Engineering departments at both undergraduate and postgraduate levels. Besides curriculum courses, its facilities are extended to all the other departments of the institute in conducting various project or

research works at UG, PG and Doctoral level under the guidance of the respective guides. It supports students and faculty members of all the departments in fabricating and modifying experimental setups, making various products required in their project works, making models and products. It facilitates in imparting practical skill to the students in major fields of engineering and technology. It also provides all sorts of facilities to students for making products to participate in various competitions including racing cars of national repute etc. Besides conventional machines and equipments, it also has most modern fabrication and production units in tune with the recent technological developments. It regularly conducts training programme for the technical staff of the institute as well as outside participants.

Academic Staffs:

Prof. Suman Ghosh (ME) (Head of Department) (Course Teacher, B.Tech 1st Semester Batch of all the Department)	: Ph.D. (IIT Kharagpur)
Prof. Sandhyarani Biswas (ME) (PIC, Machine Shop)	: Ph.D. (NIT Rourkela)
Prof. Manoj Masanta (ME) (PIC, Welding and Foundry Shop) (Course Teacher, B.Tech. ME 5th Semester Batch)	: Ph.D. (IIT Kharagpur)
Prof. Suraj Kumar Behera (ME) (PIC, Carpentry and Fitting Shop)	: Ph.D. (NIT Rourkela)
Prof. Gopalakrishna Srungavarapu (EE) (PIC, Electrical, Electronics & Computer Shop)	: Ph.D. (IIT Madras)
Prof. Syed Nasimul Alam (MM) (Course Teacher, B.Tech. MM 3rd Semester Batch)	: Ph.D. (IIT Kharagpur)

Facilities Available

Machine Shop

Lathe Machine (HMT, TUSSOR MACHINE TOOLS, MYSORE KIRLOSKAR LTD, HMT), Hydrocopying Lathe (HMT), Horizontal Milling Machine (BHARAT FRITZ WERNER), Universal Horizontal Milling Machine (HMT), Cylindrical Grinding Machine (RIAT & SONS), Surface Grinding Machine (BHURJI), Bench Pedestal Grinder (PREM BROTHER), Pedestal Grinder (YESCO), Bench Drill (EIFCO MACHINE TOOLS, COIMBATORE), Radial Drilling Machine (HMT), Tools & Cutter Grinding Machine (MITTER INDIA), CNC Drilling and Tapping Machine (MTAB/ SREYAS), CNC Milling Machine (MTAB/ MAXMILL), CNC Surface Grinding Machine (PRAGA), CNC Turning Machine (MTAB/ MAXTURN), Vertical Band Saw (ULTRACUT INDUSTRIES), Power Hacksaws (HIPAT, HMT)

Carpentry and Fitting Shop

Bosch Power tools (Nibbler, shear, router, angle grinder, straight grinder, chop saw, sabre saw, Mitre saw, Double swivel mitre saw, Single swivel mitre saw, Circular saw, Jig saw, Table Saw, Chain saw, planer, Eccentric sander, Orbital sander, Rotary Drill, Impact Drill, Impact Wrench), Pillar drilling machine (Maya Engg.), Hollow Chisel Mortiser

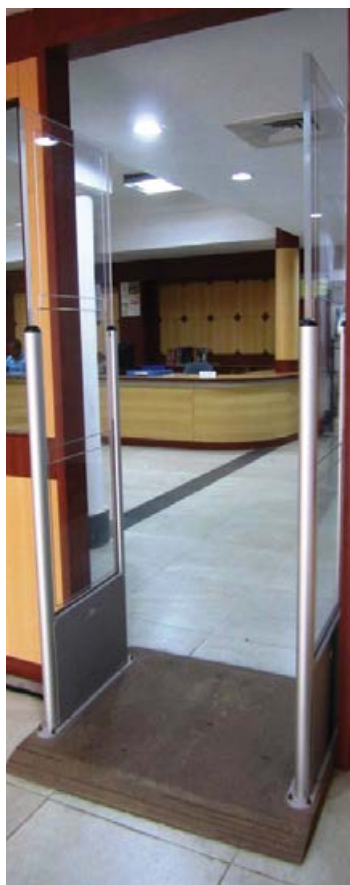
Welding and Foundry Shop

AC ARC Welding and Gas welding system (L&T), Pipe Bending M/C (SHIVAJI), Pedestal Grinder (FLOTTIT BIJLI, Bestron Engg), Cut-off saw (BOSCH), Lathe (PATHAK)

Electrical, Electronics and Computer Shop

- Digital storage oscilloscope, 100 mhz, inbuilt function generator.
- Hand operated transformer winding machine.
- Bench drilling machine, 0.5 hp.
- Small grinding machine, 0.25kw.
- Electrical load board equipped with different lamp loads.
- Digital multimeter, 10a, ac 750v, dc 1000v, 5 ½ digit.
- Armature winding machine.

Biju Patnaik Central Library



Biju Patnaik Central Library

Prof. K. P. Maity (kpmaity@nitrkl.ac.in) – Professor In-Charge Library

Dr. Bhojaraju Gunjal (gunjalb@nitrkl.ac.in) - Head & Deputy Librarian

Biju Patnaik Central Library (BPCL) of NIT Rourkela, named after the legendary industrialist and statesman, and the founding Chairman of Board of Governors of REC Rourkela, is functioning since 1965. It acts as main learning resource center of the institute, which constitutes robust collections in both print and electronic resources. It presently holds over 82,000+ books, 90 print journals, 28 e-resources (full text + numerical databases) which provide access to over five thousand five hundred titles of serials including archive collections and around 18,000 back volumes of periodicals. The library has purchased license to access online Science and Technology, Management, Humanities & Social Sciences journals along with few provided by e-ShodhSindhu consortium to support teaching and research activities by faculty, students and research scholars. Approximately Rs. 5.5 crores has been incurred on procurement of books, e-books, e-journals and other resources. The library also has a rich collection of IS codes, educational video courses and audio-visual materials.

Every year, BPCL organizes the Annual Book Fair to facilitate easy access and procurement of the latest publications for both the Institute and individuals. It is fully automated with integrated library management open source software 'Koha' and modernized with latest Radio Frequency Identification (RFID) based automation system that facilitates self-check-in/check-out with automatic security system. This technology offers an easy, fast and an efficient means of tracking, locating and managing of library resources. The circulation system counts more than 1.2 lakhs transactions per year including visits, issue, return and renewal of books.

BPCL also manages institutional repositories such as e-Papers@NITR (DSpace) – an Institutional Repository has 2874 numbers of scholarly work and e-Theses@NITR (ePrints) - a repository has 6542 e-theses and dissertations and also manages around 776 numbers of hard-copy theses of PhD and MTech-R in Koha LMS.

Library Collections:

Books

General Books	:	82,000 +
Book Bank	:	134
Hindi collections	:	95
e-Books	:	15000 + (including complimentary)
e-Journals	:	5500 + Titles
Database	:	28 (Full Text + Abstract Database)
Print Periodicals	:	90
Video Cassettes	:	688
CD-ROMs (accompanied with Books)	:	1000+
Back Volumes of Journals	:	17974
IS Codes & Tables	:	10000+

Library Team:

Sl. No.	Name & Responsibilities
1.	Dr. Bhojaraju Gunjal (gunjalb@nitrkl.ac.in) Head & Deputy Librarian Library Administration & Management
2.	Shri Vinod Kumar Mishra (mishrav@nitrkl.ac.in) Assistant Librarian Acquisition & Technical Section In-Charge
3.	Shri Dibya Kishor Pradhan (dkpradhan@nitrkl.ac.in) Assistant Librarian Digital Resource Centre Section In-Charge
4.	Smt. Puspita Mishra (mishrapuspita@nitrkl.ac.in) Assistant Librarian Circulation Section In-Charge
5.	Shri D. P. Tripathi (tripathidp@nitrkl.ac.in) Assistant Librarian Periodicals & E-Resources Section In-Charge

Sl. No.	Name & Responsibilities
6	Shri K. Das (kdas@nitrkl.ac.in) Sr. Technical Assistant Circulation
7	Shri Srikanta Sahu (sahus@nitrkl.ac.in) Library Information Assistant Digital Resource Centre
8	Shri Sanat Kumar Behera (beherasanat@nitrkl.ac.in) Library Information Assistant Acquisition & Technical Section

Library Services

Apart from procuring, processing and distributing books, periodicals and other documents, the library offers several innovative services to the institute community such as:

- Current Awareness Services – New Arrivals Alert, e-Newsletter
- User education programmes for faculty and students on literature search, patent search and accessing information from across the globe etc.
- Organizing workshops/training programmes/conferences on various latest tools and technology in library and information science at national level.
- BPCL staff actively participates in implementing open source tools and technology.
- Provides consultation and technical services to other libraries.
- Conducting Book Fair, Departmental display of books to make the latest books available to the faculty and students.
- Alert services to the users such as New Arrivals, Overdue Notice, Collect Notice, different e-mail alerts regarding services
- Self-service (check-in/check-out and renewal) system using RFID technology
- Web-based public access catalogue (OPAC)
- Archival of Scholarly publications (Articles, Presentation, Theses etc)
- Article / Document Delivery Service on request
- Dissemination Management System (In-house scholarly publications database)
- Digitization of documents (Odia Book & official documents)
- Reference Services
- Book Bank
- Trial Access and demonstrations of latest resources
- User Awareness Workshops (UAW) on various resources
- Liaison Program with Departments (LPD)
- Research/Project Support Services (RPS)
- Subject / Research Guide

Library website: <<http://library.nitrkl.ac.in>> The web pages of BPCL inside NITR web site is based on Joomla open source content management system. Approximately 1 Lakhs users visited this website within one year; it contains information about the BPCL resources, staff, manuals etc. for the benefit of users.

Library e-Newsletter <<http://library.nitrkl.ac.in/index.php/e-newsletter-archive>> BPCL has started publication of e-News Letter from January 2014; it is the best tool for marketing of library services and to provide useful information services relevant to NITR community.

Web-based Video Courses <<http://dlib.nitrkl.ac.in/videocourse/>> called 'Open Course Ware' of the national NPTEL (Phase – I & II) programme is available to the students and faculty of NIT Rourkela over the institutional network. The library has acquired course work in five major engineering disciplines: Civil Engineering, Computer Science and Engineering, Electrical

Engineering, Electronics and Communication Engineering and Mechanical Engineering at the undergraduate (B.E./B.Tech) level. More than 10,000 video lectures & web course are available in local streaming media.

IEEE-SWEBOK – a learning management system (LMS) developed by IEEE Computer society is available at NITR for the Software Engineers and the Computer Science students.

Blog <<http://192.168.1.126/blog/>> called 'Library Services Blog' is an intellectual tool for documentation of information among local users and to support research support and awareness activities. It alerts and informs patrons about the latest developments in the field of science, engineering, technology, management and humanities.

Library facilities

RFID based Book Circulation System: Library is fully automated with LibSys and integrated with RFID devices, which control the circulation system for self/issue return easily. Users are free to access the Circulation KIOSK at any time during normal library working hour. Koha LMS pilot implementation is under progress now.

Seminar Room: BPCL is also having separate seminar room with seating capacity of 30 people at a time, which is used mainly for educating the trainees / internal staff. Seminar room is also used for educating the users on demand basis in order to educate the users.

General Reading Hall: BPCL facilitates a general reading hall adjacent to the library users for self-study with their personal books.

Scholar Zone: A silent zone with reading area for research scholars has been facilitated.

Reference Section: A reference section is facilitated reference collection like books, hard copy theses, AV materials etc.

CCTV Surveillance: CCTV surveillance has been installed at the entrance of the library.

Other facilities: Wi-Fi access, Centralized Air Conditioning, Seating capacity – Reading rooms, Elevator

Special Projects

Open Access to Odia Books (OAOB) (<http://oaob.nitrkl.ac.in/>) is a non-profitable project, initiated by NIT Rourkela, Srujanika, Bhubaneswar and Pragati Utkal Sangh, Rourkela. The mission of the project is to preserve the cultural history of Odisha by digitizing old, rare and new literary and other texts written in the Odia language.

The primary focus is to digitize rare and copyright-free Odia documents (books, texts and manuscripts) which are under deteriorating condition in libraries, archives and individual collections in order to make them openly accessible to all, and to preserve them for posterity. Around 779 books are digitized and archived as open access.

New initiatives

Liaison Program with Departments (LPD): BPCL has started Liaison Program with Departments to educate the NITR academic fraternity about the resources and services available at BPCL. This program helps in promoting and marketing the library services.

Research / Project Support Services (RPS): BPCL has also started the Research / Project Support Services for NITR academic fraternity in which users are educated by conducting the user education programs and training on current tools such as reference manager; plagiarism checker; grammar checking etc. and other techniques on research writing in order to educate them how to use the resources for their own research.

Library Survey: BPCL conducts a library survey "My Views-Feedback on Library" for all users once in two years. The objective of this survey is to collect the feedback about library services and its infrastructure. Survey result will help BPCL team in improving the services and preparing a plan for its future initiatives.

Subject / Research Guide: BPCL has customized and designed Subject/Research Guide – a guide of all useful resources on a particular subject/department for the benefit of NITR community. The objective of this guide is to provide information about the key resources accessible to all NITR community in a particular subject.

Library Timings

Library remains open from 9:00 am to 10:00 pm on all working days and from 9:00 am to 6:00 pm on Saturday, Sunday and Holidays. General reading Hall is open from 9:00 am to 10:00 pm on all days.

Library Resources

Books: Library has successfully built up a comprehensive collection of over 84000+ books from which 8684 books are reference.

E-Resources: BPCL subscribes to a number of important databases, which are accessible within the campus network at <http://library.nitrkl.ac.in> are:

- E- journals consists of more than 5500+ titles including e-ShodhSindhu provision which are accessible within campus as well as over Internet
- E-Databases consists of Abstract Databases (06) and Full Text Databases (22) which are accessible within campus as well as over Internet
- E-Books collections of 15,600+ titles (including 5000 Complementary Vol. from Springer and Elsevier) and can be searched over OPAC.

Institutional Repositories: BPCL manages the following Institutional Repositories (IR) to preserve the scholarly output of the institute.

- E-Papers (DSpace@NITR)** <<http://dspace.nitrkl.ac.in/dspace>> is an open access repository of institutional research output of the faculty, researchers and students. At present, the repository holds nearly 2853 documents consisting of scholarly publications such as journal papers, conference papers, book chapters, presentations and doctoral theses and it is accessible openly and globally.
- E-Theses@NITR** <<http://ethesis.nitrkl.ac.in/>> is an institutional open access electronic thesis and dissertations (ETD) repository contains 6542 theses of the Institute. This repository is an attempt to make all locally produced theses more visible to global users. It is mandatory for students of all disciplines [BTech, M.Tech., M.Sc, MA, MBA eralier] and (Ph.D & MTech (Res)-Present] to upload the final version of their theses submitted to the institute as a part of their academic requirement.
- NITR Documents** <<http://documents.nitrkl.ac.in/jspui/>> is a repository of official documents of NIT Rourkela which contains 199 documents such as minutes of BOG, HOD, Senate meetings, etc.. The archive is being maintained using DSpace – open source digital library software.

Other Collections

a. Back Volumes	:	17900+
b. Videocassettes	:	670+
c. CD-ROMS (including accompanied with Books)	:	960+
d. IS Codes	:	10000+

Documents/Equipments Acquired

Expenditure incurred (in Rs) by the library during 2017-18

A. Expenditure on Books (FY 2017-18)

• No. of Books available up to 31.03.2018	:	82240
• No. of Books added during 01.04.2017 to 31.03.2018	:	4880
• Expenditure on purchase of books during the financial year 2017-18	:	Rs.1,37,46,742

B. Expenditure on Periodicals (CY* 2017)

• No. of E-resources subscribed in CY 2017	:	25 (Full Text E-resources) 8 Database, 1 e-book series (625), 1 Learning E-Content (SWEBOOK)
• Print periodicals in CY 2017	:	90 Titles
• Expenditure on e-resources & print periodicals	:	Rs.3,60,98911 Crores in CY 2017

*Calendar Year

C. Expenditure on Other items (FY 2017-18)**Infrastructure**

Item	Qty	Price (Rs.)
Water Cooler Modification of Wooden racks	1	39,500
Book Trolley		9440
Total		48,940
Computer Accessories		
Computer Accessories		9611
RFID Tags	3000	47,790
Total		57,401
Stationeries		
Office stationeries		24,189
Miscellaneous		
Books		29,288
Other expenses		6749
Binding of Books		5,99,500
Repairing of SMPS, Power Supply, UPS		7434
Total		6,42,971

D. Expenditure on Library management (FY 2017-18)

Description	Price (Rs.)
General cleaning and Shelving of Books	13,28,796

Any other facilities added : Central AC, Wi-fi,

Library Advisory Committees

BPCL Library Advisory Committee (BPCLAC) is constituted with one member from every department. PIC is the Chairman and HOC, BPCL is the Member Secretary of the committee. The meeting is conducted twice in a year and also as and when required to discuss about the development of library activities.

Other sub-committees for library exist such as Purchase, Negation Committee, Book Bank, Stock Management, Book Fair, Library Automation and Digitization to handle the library activities smoothly.

Awards & Achievements/Honors**For BPCL/NITR**

- Certificate from National Digital Library of India for Workshop Host and Content Contribution to NDIL at IIT Kharagapur.
- Highest usage award from Royal Society of Chemistry (RSC) for 2015-17
- Highest usage award from Web of Science (Clarivate Analytics) for 2017

For Library staff

- Dr. Bhojaraju Gunjal received "Global Innovation Awards 2017: Honorable Mention" by Turnitin
- Dr. Bhojaraju Gunjal received Certificate from National Digital Library of India for Nodal Coordination and Workshop Coordination at IIT Kharagapur.
- Mr. DP Tripathi received "A.G. Motiwale Young LIS Professional Award-2017" from Indian Library Association during ILA Conference.
- Mr. DP Tripathi received "Best Paper and Presentation Award" by IISER Bhopal during ROALER 2018.

Publications by Library Staff

Publications in Journals

- Das, K., & Mahapatra, R. (2018). Collaboration and Knowledge Sharing via Facebook Groups: Analysis of Postings of Library and Information Science Community. DESIDOC Journal of Library & Information Technology, 38(2), 95-101. Url: <http://publications.drdo.gov.in/ojs/index.php/djlit/article/view/10949>

Publications in Conferences

- Behera, S K (2018) Transforming The Role of Librarianship in The Current State. Paper presented at Nation-al Seminar On Current Trends and Practices in Librarianship 24-25 March, P.G. Department of Library & Information Science, Sambalpur University, Sambalpur.

Paper Accepted for Publication

- Gunjal, Bhojaraju and Gaitanou, Panorea (2017) Research Data Management: A proposed framework to boost research in Higher Educational Institutes, IASSIST Quarterly, 41 (1-4), pp. 1-13. DOI: <https://doi.org/10.29173/iq12>. ISSN: 0739-1137
Url: <https://iassistquarterly.com/index.php/iassist/article/view/12/6>.
- Tripathi, DP & Pandey, Shri Ram (2018). Developing a conceptual framework of Research Data Management for Higher Education Institutions. ETTLS 2018.
- Tripathi, DP (2018). What Next in Academic Library – A Conceptual Framework. National Seminar on Role of libraries in promoting Quality education and Research, NIT Raipur, Chattisgarh, India, 08 – 09 December, 2017.

Books/Book Chapter

- Das, K., Behera, S. K. and Gunjal, B. (2017). Enhancing Library Services through Subject Guide: A Case Study of NIT Rourkela. In V. K. Singh and A. Kumar (Eds.), Librarianship in New Millennium. New Delhi: Today and Tomorrow's Printer and Publishers. Pp. 73-84. ISBN: 81-7019-590-6. Url: <http://www.ttp.in/books/view/id/21333>.

Member of Technical Association/Societies

BPCL of NITR is a member of following associations/library projects:

- E-ShodhSindhu (ESS) Consortium, MHRD, India
- NIT Libraries Consortium
- National Digital Library of India (NDLI), MHRD, India
- World e-Book Library (WEL) till Sep 1, 2017
- Networked Digital Library of Theses and Dissertations (NDLTD)
- South Asia Archive (SAA)

Outreach Programs

Seminar, Symposia, Winter School, Short-Term Course/ Workshops Conducted by Centre, Participation by Library Staff Members

Sl. No.	Event Name & Place	Dates
1	User Awareness Workshop (UAW-13) on J-Gate as Discovering Scholarly Journals platform	Aug 2, 2017
2	User Awareness Workshop (UAW-14) on Web of Science, JCR and EndNote	Aug 9 2017
3	Author Workshop on Scholarly Publishing and eBook Awareness Program by Elsevier	Aug 23, 2017
4	9th Annual Book Fair 2018	Jan 4-6, 2018
5	User Awareness Workshop (UAW) - 17 on Turnitin Originality Check	Jan 10, 2018

Sl. No.	Event Name & Place	Dates
6	TEQIP-III Sponsored Workshop on “Gender Sensitization at Workplace” (GSW-2018) (Awareness and Prevention of Sexual Harassment), Organized by Internal Complaints Committee, NIT Rourkela	Feb 07, 2018
7	Author Workshop on Scholarly Writing and Publishing by Springer Nature	Mar 7, 2018
8	Three days Workshop on IEEE SWEBOK Certificate Programme jointly organized by BPCL, Dept. of CSE, NITR & IEEE Computer Society	16-18 March 2018

Trainings attended

Participation of library staff in Workshop/Training/Conference/Consultancy etc.

Institute/Event Name	In the Capacity of	Name of the Staff
NDLI Partners Meet & National Workshop on Copyright Issues in Digital Libraries, IIT Kharagpur, February 8-10, 2018	Participant	Dr.Bhojaraju Gunjal
One Week National Workshop on Advanced Training Programme on Bibliometrics and Research Output Analysis organised by Information and Library Network (INFLIBNET) Centre, Gandhinagar, November 20-24, 2017	Participant	Dr.Bhojaraju Gunjal
33rd Annual Convention of the Society for Information Science (SIS) & Conference on Open Access: The Road to Freedom, organized by SIS and Library CSIR - Indian Institute of Chemical Biology, Kolkata, April 7-8, 2017	Resource Person	Dr.Bhojaraju Gunjal
Research Support Tools and Techniques, School of Management, NITR on April 4, 2018	Resource Person	Dr.Bhojaraju Gunjal
UNESCO-NDL India International Workshop on Knowledge Engineering for Digital Library Design, UNESCO Bhawan, New Delhi, 25-27 Oct, 2017	Participant	Mr.D. K. Pradhan

Students Activity Centre (SAC) and Technical Clubs

Games and Sports Society

The year started with the orientation programme for the fresher's by organizing friendly matches in different games involving newly admitted students.

Inter-Hall tournaments in various games were conducted among the halls throughout the year, **Vikram Sarabhai Hall of Residence** won the group championship in games for the year 2017-18. Weight Lifting, Power Lifting and Best Physique competition was conducted on 07.02.2018. **Sri Jeeva S**, adjudged “**NIT SHREE**” in Best physique competition amongst the students of the institute.

IIT- Kanpur Sports fest “**UDGOSH**” which held from 12th to 15th October ‘2017 at Kanpur. Our Institute outshined in the majority of the events. In Hockey we emerged as **Winners**, In Kabaddi Institute Team secured **Runners-up** position. In Kho-Kho and Handball our teams bagged **Third Position**. Institute player **Sunil Yadav** won the best player award in Hockey.

Institute's contingent participated in IIT-BHU sports fest name ‘**SPARDHA**’ from 27th to 29th October 2017 in which Institute' Badminton Women Team emerged as winners, **Smurti Snigdha Behera** bagged best player title in the tournament.

Our Institute Football Team has participated in All India Inter NIT Tournament 2017 held at Agartala from 26th to 28th October 2017 and secured **4th position**.

Institute teams have participated in All India Inter-NIT Athletics and Gymnasium Tournament held at MNIT Jaipur from 3rd to 5th November 2017. Our Institute Team won **2 Gold, 2 Silver** and **3 Bronze** medals in Athletics and Gymnasium we won **1 Gold, 1 Silver** and **1 Bronze**.

Institute Teams have participated in All India Inter-NIT Hockey, Swimming, Kabaddi and Handball tournament held at NITK –Surathkal from 12 to 14th January'18. Institute Hockey Team sustained their outclass performance by ending up securing **3rd Position**, **Ramesh Chandra Oram** adjudged as best Goal Keeper award. Kabaddi Team emerged as **Runners up**

in the tournament. Institute Swimmers (M&W) won many accolades with **2 Golds, 1 Silver, 4 Bronze** in various Individual and Team events.

Institute Badminton Team (M&W), Tennis and Basketball (M&W) have participated in All India Inter NIT Tournament held from 27th to 29th January'18 at NIT Warangal. Institute Badminton Women Team has brought laurels by winning **Gold** in Individual and Team events. Institute Tennis (M) Team has secured **Third** position.

Institute Teams; Gymnasium, Table Tennis, Volleyball and Football have participated in IIT-Roorkee Sports Fest **SANGRAM** conducted from 29/03/2018 to 01/04/2018. Whereas Institute Athletics (M&W) and Kho-Kho (M) Teams have participated in IIT Bombay Sports Fest **AAVHAN** from 29th March to 1st April at IIT Bombay, Institute Athletics Team Captain Mahaveer.T successfully won **Bronze medal** in Triple Jump event.

Annual Open swimming competition in various events for students, campus children and institute staff was also conducted during 2017-18 session. **56th Annual Athletic Meet** was conducted 10-11th February 2018 in which **SD Hall of Residence** adjudged the **Behera Cup** for overall Championship.

On the basis of annual sports performance Institute has bestowed **Games Blue Award** to **Rajat Kumar Dalai** (Swimming and Athletics), **Pandit Venu Bhushan** (Swimming) and **B.Susrisweta** (Athletics) for the year 2017-18.

Film and Music Society

Drill n' Bass Is a Music Club (Under The Arts and Cultural Society of SAC,Nit Rourkela),Specializing In Electronic Dance Music, DJ-ing. We also perform as a band.

List of Activities Undertaken In the Academic Year 2017-18

Sl. No.	Event/Participation/Activity	Description of the Event	Date/Month
1	Performance at Freshers 2017	Performance for the Freshers Celebration at BBA.	Aug 2017
2	Rendezvous-Fest At IIT Delhi	Participation of the club in the music events at Anahad-Battle of the bands.	Oct 2017
3	TranceNation 3.0	EDM Night by the Club during the Technical fest of NITR - InnoVision.	Nov 2017
4	Own Production (EDM/Pop) Songs	1) Carmine-Official Track for Innovision 2017 was produced by us. 2) Dominatrix(Original Mix)	Nov 2017
5	SpringFest – IIT Kharagpur	Participation of the club in the music events at SpringFest – IIT Kharagpur.	Feb 2018
6	RAPNesia 1.0	Open event of the club during the Cultural fest of NITR – NITRutsav. A Competetion For Rappers and Beat Boxers.	Feb 2018
7	Social Night of IMUN	Performance for the Social Night of International Model United Nations conducted by NITR.	Feb 2018

The Mavericks

Official Dance Club of NITRKL

Sl. No.	Event or Activity and Description	Dates of events
1	Jazz and Bollywood dance workshop Jazz is the new trend now although its origin is long back and we took this opportunity to bring it to NITR. The participants were taught one choreo each from both the dance forms.	29th-30th July, 2017
2	The Mavericks Orientation & Inductions. The attended people were given a glimpse of Mavericks dance style followed by inductions	1st August, 2017
3	Performance on Institute Foundation Day. The performance was based on the theme "A rich boy and a rag picker" where the rich one craves for outside life and the other for studies.	15th August, 2017
4	Performance on Institute Fresher's Day. The performance was made on medley of trending songs.	29th August, 2017
5	Performance during Innovision Fest 2017 on DAY-2.	4th November, 2017
6	The Mavericks Inductions.	20th November, 2017

Sl. No.	Event or Activity and Description	Dates of events
7	Performance during Alumni Meet of 1992 batch and volunteered for the event. We actively participated in engaging the alumni in various fun events and gave them a tour around the campus. A small performance was done as a part of it on behalf of The Mavericks.	25th December, 2017
8	Paradesi Cover by collaboration of The Mavericks and Anurag Mishra music. It was a contemporary dance showcase whose music was given by Anurag Mishra, and Sanjog K Seth and Sonkashi Bhattacharjee of Mavericks were the cast.	7th January, 2018
9	Semi-Classical Workshop by Prasanti Jena (Alumnus of The Mavericks). A choreo on semi-classical was taught.	6th – 7th January, 2018
10	Participated in Footloose group dance competition during NITRUTSAV-2018 and stood 2nd place.	3rd February, 2018
11	The Mavericks Inductions.	9th March, 2018
12	Participated in group dance competition of SRIJAN-2018, The cultural fest of IIT ISM Dhanbad.	31st March, 2018

Technical Society

NIT Rourkela has organized its annual techno-management festival **Innovision'17 on 3rd-5th November 2017**. The fest is inaugurated by a guest lecture Mr. Priyadarshi Mohapatra in the presence of dignitaries Prof.K.K.Mahapatra (Director Incharge), Prof.S.Panigrahi (Dean students welfare) and Prof.S.Chakravarti (President ,SAC). Mr. Priyadarshi Mohapatra currently working as a country head manage, consumer electronics devices Microsoft India, is an alumni of NIT. He emphasized on digitalization and its impact on consumer electronics. The definition of Innovision is well narrated to student's participants by Prof. S. Panigrahi, Dean Student & Welfare.

As digitalization is the theme of the fest the entire transaction including advertisement has been done by digital media. Around **1460 participants** from all over the India has joined the fest and showcase their technical skills. There are 40 no.s of events, 12 no.s of exhibition and around 10 no.s workshops held to enhance the technical skills of the students. The workshop covers the latest area like IoT, ethical hacking and android app development. The guest lecture by Mr. Arvind Pani, an alumni of NIT, CEO Reverie language ,delivers a guest lecture on the second day of the event.

To increase the awareness on start-ups and entrepreneurship a start-up-meet is organized by renound panelist Mr. Gaurav Kapoor(IIMK), Mr.Amiya Samantray(CEO Phoenix Robotix), Prof.R. K. Panda(Faculty NIT RKL) and JustVish from BBSR. As part of the pro-Show a comedy nights with Ankita Srivastav and Tron laser dance is organized at the end of the fest. In the closing ceremony Dr. Animesh Biswas , director NIT Rourkela, has inaugurated the website of student activity center and distributed prizes to the winners. The fest is organized by the vice presidents of technical society Prof.S.N.Dash and Prof.A.K.Swain under the guidance of Prof.S Chakravarti, Presdent Student activity centre. Mr. Bhagwan Bharat kumar, Mr. Akhilesh and Mr. Satyaroop are the student conveners who have successfully organized the fest along with more than hundred numbers of volunteers. For further details, visit: <http://innovision.nitrkl.ac.in/>

The Technical society of student activity center has **launched first-ever edition of Tech-X**, which was a fully dedicated Tech Event in NIT Rourkela. Engaging the most influential and brightest minds of the Tech Industry. This event was held on 17th and 18th of March, 2018 in our institute. For further details, visit: <https://techx-nitrkl.tk>

The session were:

- Digital Marketing, AI and Sustainable Energy by SUBHOBROTO CHAKRABORTY.
- Fintech, AI in Marketing by HARSH GOELA AND Mr. ADITYA GOELA.
- Green Building Architecture by GURJEET DOGRA.

The workshop were:

- Artificial intelligence & machine learning.
- System verilog & verification methodologies (for semiconductor industry aspirants)
- Primavera: project portfolio management software.
- Linux Operating System and virtualization in Linux

A science exhibition by the school students of Rourkela and nearby places named **BEYOND THE BOX** was organized on 2018/03/18 from 8:30AM onwards at R.M. Exhibition Hall by GENESYS CLUB in association with Tech-X.

Under the banner of Literary Society have organized the following events.

- 1) Institute Foundation day
- 2) Freshers' welcome
- 3) Souvenir printing (UG & PG)
- 4) NITRUTSAV 2018

Literary and Cultural Society:

Event(s)

Performed in **Freshers Celebration-2017** at BBA.

Performed in **SCHMECON-2017** at BBA.

Collaborated with **Leo Club** to perform at Shanti Bhawan.

Several members of HeartBeats adjudicated Rhapsody – an event conducted by **Leo** at School level.

Organised and successfully conducted **MAKTUB – 2018**, a **flagship event** on NITRUTSAV with an overwhelming footfall of about **2000** audience.

Collaborated with **Cinematics** and provided Background Music for a short movie called **PHILOPHOBIA**.

Outside NITR Participation(s)

Participated in **MANTRA (War of Bands)** at **MOOD INDIGO 2017** – Cultural Fest of IIT Bombay and presented our own Original Composition.

Achievement(s)

Rajeshwar Mishra our Band Member qualified for **finals** of MOODI IDOL –

Singing competition at MOODI 2017 – IIT BOMBAY

Amrutha Varshini M another bona fide member of our band qualified for **semi – finals** at MOODI IDOL 2017.

Highlights of the Year 2017-18

Members of Student Activity Centre 2017-18

Prof. S. Panigrahi	-	Dean(SW)
Prof. S.Chakraverty	-	President SAC
Prof. D.Choudhury	-	VP, Literary Society
Prof. A.K.Rath	-	VP, Literary Society
Prof. A.K.Swain	-	Technical society
Prof. S.N.Dash	-	Technical Society
Prof. Arjun Mukherjee	-	Art & Culture Society
Prof. S.N.Alam	-	Art & Culture Society
Prof. R.C.Pradhan	-	Games & Sports Society
Prof. N.K.Vissa	-	Games & Sports Society

Director's Nominee

Name : Abhinav Gupta
Roll No. : 714CE3115

Name : Biswajit Sahoo
Roll No : 216ME1358

Name : Sandeep Kumar singh
Roll No : 216MM2455

Dean's Nominee

Film and Music Society
Name : Sumit Mohapatra
Roll No : 415MA5086

Literary Society

Name : Swayambodha Mohapatra
Roll No.115CS0223

Games & Sports Society

Name : Rayudu Roshan
Roll No 115CS0258

Technical Society

Name ; D. Hemanth Kumar
Roll No. 115EE0582

Health Centre

Infrastructure

The Institute maintains a dispensary which serves the students employees, their dependents and also non-entitled patients on outpatient basis. The dispensary has got its separate building and is situated centrally in the residential area.

At present it is manned by one full time Senior Medical Officer, two Medical Officers (including one lady medical officer) & six Supporting staffs (one Lady Nursing staff, one Dresser, two Attendants, one Stipendiary assistant and one Sweeper). The doctors reside in the campus.

Facilities Provided

Medicines are disbursed to the beneficiaries free of cost on doctor's prescription, generated online through M/s Apollo Pharmacy present just beside the dispensary.

Visiting specialists in the specialty of General Medicine, Gynaecology and Obstetrics, Paediatrics and Cardiology also visit health centre once in a week.

Health centre maintains a dressing room where minor surgeries are also taken care of. For resuscitation health centre also maintains nebulizer and oxygen cylinders.

During emergency patients can contact medical officers 24 x 7 through an emergency medical help-line number. There are two primary referral hospitals i.e. Ispat General Hospital (IGH), Rourkela & Community Welfare Society Hospital (CWSH), Jagda where patients are referred for specialist's opinion, pathological tests.

All indoor facilities are also provided there free of cost.

Patient Statistics

Health centre registered approximately 54500 visits during the last academic year. In between July 2017 to June 2018 on recommendation of IGH specialists or Institute Medical Board 145 patients were referred to outside hospital for specialized treatments either to the tied up hospitals or other reputed hospitals for better management.

Approximately not more than 7000 & 870 cases were referred to CWSH & IGH respectively for specialist OPD or in emergency. 527 & 64 cases were admitted in CWSH & IGH respectively. 5036 & 53 cases were referred for investigation to CWSH & IGH respectively.

Health centre periodically organizes various free health camps like Vision testing camp, Dermatology, Spirometry camp, Thyroid profile and Lipid profile camps, Uric acid estimation, HbA1C estimation camp for the benefit of beneficiaries. Pulse Polio Immunization camp is organized as per government notification with the help of Chief Medical Officer, Rourkela. Blood donation camps are also organized to meet the social responsibility.

Important information

The dispensary provides service 6 days a week (Except on Sunday).

The working hours of the dispensary is as follows:

1. Monday to Saturday: (FN) 9.00AM to 12.00 Noon
&
(AN) 4.00PM to 7.00PM
2. National Holidays & Holi : Closed
3. Institute Holidays: 9.00AM to 12.00 Noon

Staff Position

The institute functions under the leadership of Director. The number of faculty position sanctioned is 485 and 534 non-teaching posts have been sanctioned for the institute. Out of 534 non-teaching employees, 37 positions are at the level of officers and remaining 364 positions are of non-officers cadre, the distribution of faculty sanctioned for different departments is presented at Table 3 and the distribution of different officers along with designation is presented in Table 2. Non teaching employees are grouped under technical (higher and lower), admin (higher and lower) and support staff. Different designation along with sanctioned post for each is presented in Table 4.

Table 15 : Sanctioned manpower of NIT Rourkela

Category	Sanctioned Strength	People-in-position as on 30th June 2018
Director	01	01
Teaching Staff	485	316
Non-Teaching Staff	534	353
Total	1019	668

Administration and Scientific officer positions

Table 16 : Details of sanction of officer posts and position held as on 30th June 2018

CADRE	POST	PAY SCALE			
		PB	GP/AGP	SANCTION	In-Position
Officers (Group A)	Registrar	4	10000	1	1
	Deputy Registrar	3	7600	4	2
	Assistant Registrar	3	5400	7	6
	Librarian	4	10000	1	0
	Deputy Librarian	3	8000	2	1
	Assistant Librarian	3	6000	4	4
	Principal SAS Officer	4	10000	0	0
	Senior SAS Officer	3	8000	2	0
	SAS Officer	3	6000	4	2
	Principal Scientific/Technical Officer	3	7600	2	1
	Senior Scientific/Technical Officer	3	6600	4	1
	Scientific/Technical Officer	3	5400	7	4
	Superintending Engineer	4	8700	0	0
	Executive Engineer	3	6600	2	1
	Engineer/Asst. Exec.Engineer	3	5400	5	3
	Senior Medical Officer	3	7600	1	1
	Medical Officer	3	5400	2	2
	Security Officer	3	5400	1	1
	Total	49	30		

Teaching Staff (Faculty)

**Table 17 : Details of number of faculty members as on 30th June 2018
(Department wise)**

DEPT.	Professor		Associate Professor		Assistant Professor		Total Faculty in position	Total Sanctioned Strength
	Sanctioned Strength	In position	Sanctioned Strength	In position	Sanctioned Strength	In position		
Bio-Medical Engineering		1		4		13	18	
Civil Engg.		7		7		9	23	
Chemical Engg.		5		1		9	15	
Ceramic Engg.		4		5		5	14	
Comp. Sc.Engg.		4		3		17	24	
Electronics		3		6		16	25	
Comm. Engg.	69		138		278			485
Electrical Engineering		7		4		12	23	
Industrial Design		1		0		5	6	
Mechanical Engineering		12		4		13	29	
Metallurgical & Materials Engg.		3		6		10	19	
Mining Engg.		3		4		1	8	
Food Processing Engg.		0		1		5	6	
Planning & Arch. Engg.		0		0		9	9	
Chemistry		2		8		10	20	
Life Science		1		3		11	15	
Mathematics	69	4	138	2	278	10	16	485
Physics		3		5		10	18	
Earth & Atmospheric Science		0		1		7	8	
School of Management		0		3		5	8	
Humanities & Social Sc		1		3		8	12	
Total	69	61	138	70	278	185	316	485

Non-Teaching Staff (Non – faculty)

Table 18 : Summary of Non-teaching staff position sanctioned as on 30th June 2018

CADRE	POST	PAY SCALE			
		PB	GP/AGP	Sanctioned	In Position
TECHNICAL (Higher Cadre)	Tech. Asst. / SAS Asst. / Jr. Engr./LIA	2	4200	58	57
	Sr. TA / Sr. SAS Asst. / Asst. Engr./LIA	2	4600	44	11
	TA (SGII)/SAS Asst. (SGII)/AE(SGII)	2	4800	43	22
	TA (SG I)/ SAS Asst. (SG I)/ AE(SG I)	2	5400		
	Total	145	90		
ADMIN. (Higher Cadre)	Supdt. / Accountant / Secretary	2	4200	14	14
	Sr. Supdt. / Accountant / Secretary	2	4600	11	9
	Supdt./Accountant/Secretary (SG II)	2	4800	11	3
	Supdt./Accountant/Secretary (SG I)	2	5400		
	Total	36	26		

CADRE	POST	PAY SCALE			
		PB	GP/AGP	Sanctioned	In Position
TECHNICAL (Lower Cadre)	Technician / Lab/Work Asst.	1	2000	58	52
	Sr. Technician / Lab/Work Asst.	1	2400	44	8
	Technician / Driver/Lab/Work Asst. (SG II)	1	2800	43	16
	Technician / Driver/Lab/Work Asst. (SG I)	2	4200		
	Pharmacist (SG-II)	2	4600		
	Pharmacist (SG-I)	2	4800(MACP)		
		2	5400(MACP)		
	TOTAL	145	76		
ADMIN. (Lower Cadre)	Jr. Assistant	1	2000	34	9
	Sr. Assistant / Stenographer	1	2400	26	1
	Assistant (SG II) / Sr. Stenographer	1	2800	25	43
	Assistant (SG I) / Stenographer (SG II)	2	4200		
		2	4200(MACP)		
	Assistant (SG I) / Stenographer (SG I & II)	2	4600(MACP)		
		2	4800(MACP)		
	TOTAL	85	53		
SUPPORTING	Security Guard / Attnd. / Mali / CT	1	1800	30	0
	Sr. SG / Attnd. / Mali / Care Taker	1	1900	22	32
	SG / Attnd. / Mali / Care Taker (SG II)	1	2000	22	46
	SG / Attnd. / Mali / Care Taker (SG I)	1	2400		
		1	2800(MACP)		
	TOTAL			74	78
TOTAL OF ALL NON-TEACHING EMPLOYEES				485	323

The details of Fresh Appointments (Regular), Staff Relieved on Retirement, Teaching staff relieved on Resignation, Non-Teaching staff relieved on resignation, staff relieved on Voluntary retirement and staff expired in the academic year 2015-16 are presented in Annexure-4, Annexure-5, Annexure-6, Annexure-7, Annexure-8, Annexure-9 respectively.

Non-Academic Staff (Non-Teaching: The institute has 309 non-teaching staffs and the details of the employees are presented in Annexure-11. Training Status: The institute has sponsored for training and learning in the academic year and the details are presented in Annexure-12.

Convocation

The 15th convocation of NIT Rourkela was held on 20th January 2018. Dr. P. K. Mishra, Additional Principal Secretary to the Prime Minister, New Delhi was the Chief Guest on the occasion. Chairman, BOG & CEO, Carbon Black Business & Director, Group H. R. of Aditya Birla Management Corporation Pvt. Ltd. Dr. Santrupt B. Misra and Director of the Institute Prof. Animesh Biswas entwined the occasion. The Director of the institute presented the Director's Report highlighting the report of the institute.

The institute conferred Ph. D. degree on 110 individuals. M. Tech. (Research) was awarded to 19 individuals. Degrees were conferred for M. Tech., M. Sc., MA (Development Studies), MBA and B. Tech. institute academic Medals were also awarded of the occasion. The detail of the academic award winners is presented in Annexure-12, Annexure-13, Annexure-14, Annexure-15 and Annexure-16.

The course wise details of students awarded degree in the occasion is presented in Figure-1.

B. Tech.	570
M. Tech.	413
M. Tech. (R)	19

Dual Degree

(B. Tech & M. Tech)	117
Ph. D.	110
M. Sc.	104
Int. M. Sc.	44
MBA	33
MA	11



Cosmopolitan 2018

Day - 1





Major Equipment / Tools Purchased during the Financial Years 2017-18

During the financial year 2017-18, the institute added the infrastructure in terms of laboratory equipment. Major equipments that have been added along with department and in cost are presented in Table 18.

Table 19: Major equipments purchased during the academic year

Name of the Equipment	Department	Cost of the Equipment
Digital Storage Oscilloscope	EE	₹6,49,215.00
Summit X440-48T, Pwr Cord etc.	CC	₹24,42,428.00
Electric deck Oven, Spiral Mixer, Planetary Mixer etc.	FP	₹9,69,773.00
Head Space Gas Analyser With Computer	FP	₹11,05,374.00
Mixed Domain Oscilloscope	CoE-RES(EE)	₹5,41,212.00
Heat Transfer Through Composite Walls, Thermal Conductivity of Liquids etc.	CH	₹6,33,078.00
IP Bullet Camera	ME	₹6,79,090.00
Incubator & Shaker, Automatic Micro Plate Reader with Elisha Washer etc.	LS	₹7,70,000.00
Zimbra Network	CC	₹14,90,340.00
Laser Precipitation	ER	₹5,75,840.00
Lab Model Spiral Dryer	FP	₹5,03,100.00
Biosafety Cabinet & CO ₂ incubator	BM	USD 9,110.00
One diode/RTD one thermo couple input temperature	PH	USD 8317.00
Fully automated & Integrated Raman Spectrometer with accessories	PH	EUR1,96,000.00
4 Port Vector Network analyzer	EC	USD 88,738.00
HPE server with support	CC	USD 3,71,519.40
Sample Changer for 400 MHz FT NMR Spectrometer	CY	USD 29,590.00
Desktop Computer (253 Nos)	CC	₹79,31,090.00

International Relations and Collaboration

The institute is in a constant pursuit for international collaboration, over this academic year international collaboration has been signed with following Universities.

- San Diego State University, California, USA (www.sdsu.edu)
- University of South Carolina, Columbia, USA (www.usc.edu)
- University of Cape Town, Cape Town, South Africa (www.uct.ac.za)
- Mondragon Unibertsitatea, Mondragon, Spain (www.mondragon.edu)
- Konkuk University, Seoul, South Korea
- University of Massachusetts Lowell, USA
- The Netherlands Inter Disciplinary Demographic Institute, Netherland
- Faculty of Automation and Computer Engineering of Novosibirsk State Technical University, Russia
- Ngee Ann Polytechnic, Singapore
- Ecole Centrale de Nantes (ECN), France
- Technische Universität München (TUM), Germany
- Escuela Técnica Superior de Ingenieros, Universidad de Sevilla
- Tallinn University of Technology (TUT)
- Politecnico di Milano (POLIMI), Italy
- Politecnico di Torino (POLITO), Italy
- Warsaw University of Technology (WUT), Poland
- Instituto Superior Técnico (IST), Portugal
- Czech Technical University (CTU), Prague, Czech Republic
- Cardiff Met University (CMU), Cardiff, UK
- Georg-August- Universität Göttingen, Germany
- University of Oxford, United Kingdom
- Ghent University, Belgium
- Groningen University, The Netherlands
- Universitat Politècnica de València, Spain
- Uppsala University, Sweden
- University of Warsaw, Poland
- University Tunku Abdul Rahman, Malaysia

Large number of faculty members has visited foreign universities for collaborative discussion, conference paper presentation and joint research work. The detailed list is presented at Table 20.

Table 20: Participation of faculty members on collaboration with international universities and attending conferences (International Travel only)

Sl. No	Name & Designation	Dept.	Duration	Training/Conference	Place of Training/ Conference	Country
1	Prof. Nagendra Roy, Professor	CE	15/07/17 to 19/07/17	GeoMEast 2017	Sharm El-Sheikh	Egypt
2	Prof. Sarat Ku. Das, Asso. Professor	CE	15/07/17 to 19/07/17	GeoMEast 2017	Sharm El-Sheikh	Egypt
3	Prof. S. P. Singh, Professor	CE	15/07/17 to 19/07/17	GeoMEast 2017	Sharm El-Sheikh	Egypt
4	Prof. Manoranjan Barik, Asso. Professor	CE	15/07/17 to 19/07/17	GeoMEast 2017	Sharm El-Sheikh	Egypt
5	Prof. Pitamber Mahanandia, Asst. Professor	PH	04/07/17 to 07/07/17	GeoMEast 2017	University of Bologna	Italy
6	Prof. Jagabandhu Panda, Asst. Professor	ER	06/08/17 to 11/08/17	MECHCOMP 3	Suntec	Singapore
7	Prof. S. K. Bhutia, Asst. Professor	LS	06/07/17 to 07/07/17	AOGS 2017	Singapore	Singapore
8	Prof. Pradip Sarkar, Asso. Professor	CE	19/09/17 to 23/09/17	Scientific Frontiers in Natural Product Based Drugs	Vancouver	Canada
9	Prof. K. P. Maity, Professor	ME	05/07/17 to 07/07/17	39th IABSE Symposium	Mons	Belgium
10	Prof. Paresch Govind Kale, Assistant Professor	EE	25/09/17 to 29/09/17	SMT 31	Amsterdam	Netherlands
11	Prof. (Ms.) Sandhyarani Biswas, Asst. Professor	ME	09/10/17 to 13/10/17	33rd European Photovoltaic Solar Energy Conference & Exhibition EU PVSEC	Kuala Lumpur	Malaysia
12	Prof. Mahabir Panda, Professor	CE	27/08/17 to 30/08/17	25th POLYCHAR 2017 World Forum on advanced materials	Philadelphia	USA
13	Prof. Santanu Kumar Rath, Professor	CS	05/07/17 to 07/07/17	Highway Pavements and Airfield Technology	Pittsburgh	USA
14	Prof. Narayan Sethi, Asst. Professor	HS	21/08/17 to 22/08/17	SEKE 2017	Kuala Lumpur	Malaysia
15	Prof. Ayas Kanta Swain, Asst. Professor	EC	03/07/17 to 05/07/17	ISVLSI 2017	Bochum	Germany
16	Prof. Preetam Sarkar, Asst. Professor	FP	03/10/17 to 06/10/17	2nd Innovations in Food Packaging, Shelf Life and Food Safety Conference 2017	Munich	Germany
17	Prof. D. P. Tripathy, Professor	MN	05/10/17 to 06/10/17	2nd International Conference on Pollution control and Sustainable Environment	London	UK
18	Prof. Ruchira Naskar, Asst. Professor	CS	23/08/17 to 25/08/17	16th International Workshop on Digital Forensics and Watermarking	Madgeburg	Germany
19	Prof. Kanhu Charan Patra, Professor	CE	13/08/17 to 18/08/17	37th IAHR World Congress 2017	Kuala Lumpur	Malaysia
20	Prof. Lakshi Prosad Roy, Asst. Professor	EC	29/08/17 to 31/08/17	5th IEEE Microwaves, Radar and Remote Sensing Symposium MRRS 2017	Kiev	Ukraine
21	Prof. Bidyadhar Subudhi, Professor	EE	03/07/17 to 05/07/17	Portugal – India Workshop on Marine Science and Technology	Lisbon	Portugal

Sl. No	Name & Designation	Dept.	Duration	Training/Conference	Place of Training/ Conference	Country
22	Prof. G. K. Panda, Professor	MA	29/09/17 to 02/10/17	Number Theory Down Under	Bendigo	Australia
23	Prof. R. Jayabalan, Asst. Professor	LS	24-09-2017	AOAC Annual Meeting & Explosion 2017	Atlanta	USA
24	Prof. Chittaranjan Patra, Professor	CE	17/09/17 to 22/09/17	ICSMGE	Seoul	Korea
25	Prof. Amit Kumar Gorai, Asst. Professor	MN	10/09/17 to 13/09/17	Recent Advances in Environment Health Research	Mississippi	USA
26	Prof. Akhilesh Kumar Sahu, Asst. Professor	CH	09/10/17 to 13/10/17	Advances in Theoretical and Computational Modelling of Interface Dynamics in Capillary Two-Phase Flows	Lausanne	Switzerland
27	Prof. Santos Kumar Das, Asst. Professor	EC	16/10/17 to 19/10/17	NaNA 2017	Kathmandu	Nepal
28	Prof. Kasturi Dutta, Assistant Professor	BM	11/11/17 to 15/11/17	Challenges in Environmental Science & Engineering 2017	Kunming	China
29	Prof. Angana Sarkar, Assistant Professor	BM	11/11/17 to 15/11/17	Challenges in Environmental Science & Engineering 2017	Kunming	China
30	Prof. Sukadev Meher, Professor	EC	23/09/17 to 24/09/17	Seventh International Conference on Advances in Computing, Control and Networking – ACCN 2017	Bangkok	Thailand
31	Prof. Bidyadhar Subudhi, Professor	EE	05/11/17 to 08/11/17	IEEE TENCON 2017	Penang	Malaysia
32	Prof. Dipti Patra, Associate Professor	EE	05/11/17 to 08/11/17	IEEE TENCON 2017	Penang	Malaysia
33	Prof. Pabitra Mohan Khillar, Assistant Professor	CS	05/11/17 to 08/11/17	IEEE TENCON 2017	Penang	Malaysia
34	Prof. Shrishailayya M Hiremath, Assistant Professor	EC	05/11/17 to 08/11/17	IEEE TENCON 2017	Penang	Malaysia
35	Prof. Monalisa Pattnaik, Assistant Professor	EE	05/11/17 to 08/11/17	IEEE TENCON 2017	Penang	Malaysia
36	Prof. Kalipada Maity, Professor	ME	28/11/2017 to 29/11/2017	International Conference on Recent Advances in Materials & Manufacturing Technologies (IMMT 2017)	Dubai	UAE
37	Prof. Prasanta Kumar Bhuyan, Assistant Professor	CE	07/01/2018 to 11/01/2018	Transportation Research Board 97th Annual Meeting	Washington D.C.	USA
38	Prof. Sukadev Meher, Professor	EC	13/12/2017 to 14/12/2017	IEEE Student Conference on Research and Development (SCORed) 2017	Putrajaya	Malaysia
39	Prof. Rajesh Kumar Prusty, Assistant Professor	MM	26/01/2018 to 28/01/2018	3rd International Conference on Composite Materials and Material Engineering	Singapore	Singapore

Sl. No	Name & Designation	Dept.	Duration	Training/Conference	Place of Training/ Conference	Country
40	Prof. Manas Ranjan Tripathy, Assistant Professor	MA	28/12/2017 to 29/12/2017	IASSL International Conference 2017	Colombo	Sri Lanka
41	Prof. Kunal Pal, Assistant Professor	BM	21/05/2018 to 25/05/2018	Implementation of Indo-Korean Joint project sponsored by Department of Science and Technology, Govt. of India (under SRICCE)	Seoul	Korea
42	Prof. Kakoli Karar Paul, Assistant Professor	CE	11/03/2018 to 13/03/2018	International Conference on Environment Science and Engineering 2018	Barcelona	Spain
43	Prof. Sudip Dasgupta, Assistant Professor	CR	12/03/2018 to 14/03/2018	10th Asia Pacific Global Summit on Healthcare	Singapore	Singapore
44	Prof. Bidyut Kumar Patra, Assistant Professor	CS	26/03/2018 to 29/03/2018	40th European Conference on Information Retrieval	Grenoble,	France
45	Prof. Pravat Kumar Ray, Assistant Professor	EE	26/02/2018 to 28/02/2018	5th International Conference on Renewable Energy Generation and Application	Al Ain	UAE
46	Prof. Abanti Sahoo, Associate Professor	CH	11/03/2018 to 13/03/2018	International Conference on Environment Science and Engineering 2018	Barcelona,	Spain
47	Prof. Kanungo Barada Mohanty	EE	09/03/2018 to 11/03/2018	The 15th International Workshop on Advanced Motion Control (IEEE AMC 2018)	Tokyo,	Japan
48	Prof. Bipin Bihari Verma	MM	12/03/2018 to 13/03/2018	5th Annual International Conference on Materials Science, Metal & Manufacturing (M3 2018)	Singapore	Singapore
49	Prof. D. Nagarajan, Assistant Professor	MM	23/04/2018 to 25/04/2018	European Scientific Association for Material Forming (ESAFORM 2018)	Palermo	Italy
50	Prof. S. Murugan, Professor	ME	10/04/2018 to 12/04/2018	WCX SAE World Congress 2018	Detroit	USA
51	Prof. Sudipta Sen, Associate Professor	MM	12/03/2018 to 13/03/2018	5th Annual International Conference on Materials Science, Metal & Manufacturing (M3 2018)	Singapore	Singapore
52	Prof. Mukesh Kumar Gupta, Asso.Prof.	BM	15/04/2018 - 21/04/2018	training within the Erasmus+ International Credit Mobility Programme	Lisbon	Portugal
53	Prof. Monalisha Pattnaik, Asst. Prof	EE	22/05/2018 - 25/05/2018	2018 IEEE Innovative Smart Grid Technologies Asia (IGST Asia 2018)	Singapore	Singapore
54	Prof. Snehanshu Pal, Asst. Prof.	MM	10/05/2018 - 12/05/2018	Collaborative Research under SRICCE Project	Mogilev	Belarus

Sl. No	Name & Designation	Dept.	Duration	Training/Conference	Place of Training/ Conference	Country
55	Prof. Anindya Basu, Asso. Professor	MM	10/05/2018 -12/05/2018	Collaborative Research under SRICCE Project	Mogilev	Belarus
56	Prof. Mahabir Panda, Professor	CE	16/04/2018 - 18/04/2018	International Conference on Advances in Materials and Pavement Performance Prediction	Doha	Qatar
57	Prof. Snehashish Chakraverty, Professor	MA	16/04/2018 -17-04- 2018	World Congress on Mechanical and Mechatronics Engineering	Dubai	UAE
58	Prof. Seemita Mohanty, Professor	HS	11/06/2018 -14/06/2018	38th International Academic Conference	Prague	Czech Republic
59	Prof. Nivedita Patra, Assistant Professor	BM	27/06/2018 -29/06/2018	Biotech France 2018 International Conference and Exhibition	Paris	France
60	Prof. Manoj Kumar Moharana, Assistant Professor	ME	10/06/2018 -13/06/2018	International Conference on Nanochannels, Microchannels, and Minichannels	Dubrovnik	Croatia
61	Prof. Sumanta Pyne, Asst. Professor	CS	23/05/2018 - 25-05- 2018	28th Great Lakes Symposium on VLSI	Chicago	USA
62	Prof. Kanhu Charan Patra, Professor	CE	23/06/2018 -24-06- 2018	8th International conference on advances in civil, structural and mechanical engineering	Paris	France
63	Prof. Arvind Kumar, Asst. Professor	CH	13/06/2018 -17-06- 2018	Innovative approaches in applied sciences & technologies 2018	Ho Chi Mihn City	Vietnam
64	Prof. Hrushikesh Naik, Professor	MN	23/06/2018- 24/06/2018	8th International conference on Advances in applied science and environmental technology –ASET 2018	Paris	France
65	Prof. Korra Sathya Babu, Assistant Professor	CS	15/06/2018- 18/06/2018	International Conference on Control and Computer Vision 2018	Singapore	Singapore

With a target to scale up research in practical direction, the Institute has signed MOU with large number of industry in India. A comprehensive list of these include –

- Ispat General Hospital, Rourkela, Odisha
- Dalmia Institute of Scientific and Industrial Research (DISIR), Rajgangpur, Odisha
- Welpsum Corporation Limited, Gujrat
- Department of Atomic Energy (DAE), Government of India, Mumbai
- Altera Semiconductor India Private Limited
- Regional Research Laboratory, Bhubaneswar, India
- Divine Life Society, Uttarakhand, India

Halls of Residence

The Institute is essentially a residential one and provides hostel accommodation to all the boarders. Separate Hall accommodation is available for lady students. It is mandatory for all the boarders to stay in the Halls. However, a student may be permitted to live with his/her parents or local guardian at Rourkela after obtaining permission from competent authority during the beginning of each semester. A Hall of Residence in NIT Rourkela is in true sense a home away from home. The rules followed in the Halls of Residence are basically whatever the boarders have learnt in their Schools, Colleges and home. However, there is a manual of Hall of Residence which serves as a guiding principle. There are also two display boards near the entrance of each Hall of Residence. The content of one board describes the 10 points protocol to succeed in NIT Rourkela. The other board contains the list of essential mobile phone numbers for contact at any point of time. For the convenience of the boarders, each Hall has its own night canteen, fruit juice center and xerox cum stationery shop. In the Hall of Residence area, facilities like ATM, four students' restaurants, stationery shop, one saloon and one cycle repairing shop are provided. Room allotment in the Halls is done in such a way that students from different regions of the country freely intermingle with each other depicting national integration. In true sense, hostel area is a real picture of India where all boarders from different parts of country stay together.

The institute has seven boys, two girls and one family hostel. The statistics of rooms & boarders of each Hall are as follows.

Sl. No.	Name of the Hall	No. of Rooms	No. of Boarders
1	S.S Bhatnagar Hall	145	145 Families
2	M. Visvesvaraya Hall	255	409
3	G.D. Birla Hall	322	513
4	Dhirubhai Ambani Hall	300	374
5	M.S. Swaminathan Hall	391	431
6	C.V. Raman Hall (For Ladies)	692	793
7	Homi Bhabha Hall	396	337
8	Vikram Sarabhai Hall	1024	971
9	Satish Dhawan Hall	1014	976
10	K.M. Shaw Hall (For Ladies)	166	359

Halls of Residence Administration

The Hall Management Council (HMC) comprising of Wardens, Asst. Wardens and elected student representatives headed by Chief Warden of Halls are responsible for management of Hall facilities. The HMC meeting is conducted every month to discuss various issues related to all activities of Halls and the resolutions taken in the meeting are implemented. The committee functions under the guidance and direction of Director. The Hall Management Council members for academic session 2017-18 were as follows:

• Prof. M. R. Barik	Chief Warden
• Prof. Swapan Kumar Karak	Warden (Shanti Swarup Bhatnagar Hall of Residence)
• Prof. M. R. Tripathy	Warden (M. Visvesvaraya Hall of Residence)
• Prof. Anil Kumar Singh	Asst. Warden (M. Visvesvaraya Hall of Residence)
• Prof. A. C. Pradhan	Warden (G.D Birla Hall of Residence)
• Prof. S. Kayal	Asst. Warden (G.D Birla Hall of Residence)
• Prof. Himanshu Bhusan Sahu	Warden (Dhirubhai Ambani Hall of Residence)
• Prof. Tarapada Roy	Asst. Warden (Dhirubhai Ambani Hall of Residence)
• Prof. Surajit Das	Warden (M.S. Swaminathan Hall of Residence)
• Prof. Gokarneswar Sahoo	Asst. Warden (M.S. Swaminathan Hall of Residence)
• Prof. (Mrs.) Poonam Singh	Warden (C.V. Raman Hall of Residence)
• Prof. (Ms.) Surabhi Verma	Asst. Warden (C.V. Raman Hall of Residence)
• Prof. Hara Mohan Jena	Warden (Homi Bhabha Hall of Residence)
• Prof. Priyabrat Dash	Asst. Warden (Homi Bhabha Hall of Residence)
• Prof. S. C. Mohanty	Warden (Vikram Sarabhai Hall of Residence)

- Prof. D. S. Nimaje Asst. Warden (Vikram Sarabhai Hall of Residence)
- Prof. Suman Jha Warden (Satish Dhawan Hall of Residence)
- Prof. BBBVL Deepak Asst. Warden (Satish Dhawan Hall of Residence)
- Prof. (Mrs.) Monalisa Mishra Warden (Kiran Mazumdar Shaw Hall of Residence)
- Prof. (Mrs.) Ruchira Naskar Asst. Warden (Kiran Mazumdar Shaw Hall of Residence)
- Mr. F C Chhatoi, Asst. SG II, CW Office

The student members of HMC were as follows

- Mr. Ashish Ranjan Dash Gen. Secy. (Shanti Swarup Bhatnagar Hall of Residence)
- Mr. Nair Anirudh Suresh Gen. Secy. (M. Visvesvaraya Hall of Residence)
- Mr. Pratap Sagar Nayak Gen. Secy. (G.D Birla Hall of Residence)
- Mr. Kiran Kumar Patra Gen. Secy. (Dhirubhai Ambani Hall of Residence)
- Mr. Jainendra Singh Gen. Secy. (M.S. Swaminathan Hall of Residence)
- Miss. Sudha Priyadarshini Gen. Secy. (C.V. Raman Hall of Residence)
- Mr. Aakash Kumar Gen. Secy. (Homi Bhabha Hall of Residence)
- Mr. Subrat Ku. Bhuyan Gen. Secy. (Vikram Sarabhai Hall of Residence)
- Mr. Bhaskor Jyoti Hazarika Gen. Secy. (Satish Dhawan Hall of Residence)
- Miss. Yasmin Kukul Gen. Secy. (Kiran Mazumdar Shaw Hall of Residence)

In each Hall of Residence, there is a Hall Executive Council comprising of Wardens, Asst. Wardens and elected student representatives like General Secretary, Cultural Secretary, Maintenance Secretary, Mess Secretary, Environment Secretary, Sports and Games Secretary. All policies related to the concerned Hall are discussed in the HEC before implementation. In each semester, the General Body Meeting of each Hall is organized where boarders participate and give different suggestions for the improvement of Hall Management.

The First year male students are accommodated only in G.D Birla Hall & M.V Hall of Residence. Hostel messes are run by caterers selected by a committee with an open tender and managed by nominated student representatives under the overall supervision of Wardens and Asst. Wardens of concerned Halls. Both vegetarian and non-vegetarian foods are served to the boarders inside the mess. The elections for the different posts for Hall Executive Council (HEC) are being elected by the boarders through online voting.

Hall Day Celebration and other activities of various Halls

Various multidimensional functions like cultural, literary, sports & games were organized by each Hall of Residence throughout the year. In addition each Hall celebrated, Garden Feast and Hall Day where students showed their talents in singing, dancing, classical music & laughter shows etc. Various programs were conducted on the Hall Day, which included games, quiz, essay writing, debate etc. The students from each Hall were awarded prizes, certificates and mementos on the basis of overall performance, in different competitions held during the whole year. All the Halls also chose their respective Best Persons, Best Valuable Boarders and Best Artists (Fine Art/Cultural).

The Grand Farewell Function was organized by the Hall Management Council to bid farewell to the final year students on 13.04.2018 (Friday). To keep the memory of Hall of Residence all outgoing students were given mementos and requested them to put their signature in a big plastic board which was kept in Chief Warden's office for years to come. A souvenir video was made containing the pictures of all the final year students and displayed at the Grand Farewell. All students of the institute attended the function and conveyed best wishes to the final year students for a grand success in their future life.

Annexure - 1: Practical Training/Internship undertaken by students in industries during May-July, 2017

Sl. No.	Name of Industries/Organizations	No. of Training/ Internships Sponsored
1	ADE, Defence Research Development Organisation, Bengaluru, KA	1
2	Aditya Birla Insulator, Kolkata, WB	2
3	Amara Raja Batteries Limited, Tirupati, AP	1
4	Amdocs Dev. Centre India (P) Ltd., Pune, MH	4
5	Anandapur Barrage Division, Salapada, Keonjhar, OD	3
6	Andhra Pradesh Power Generation Limited, Ibrahimpatnam, AP	2
7	Aandra Pradesh Transmission Corporation, Tadiconda, AP	1
8	Apollo Hospitals, Hyderabad, TS	1
9	Apollo Tyres Limited, Parampra, Ernakulam, Cochin, KL	2
10	Ashok Leyland, Chennai, TN	2
11	Automation & Control Systems, Pune, MH	1
12	Avantel Limited, Visakhapatnam, AP	2
13	Awalk Innovations Private Limited, TIIR, NIT Rourkela, OD	9
14	Abdullah Abdulghani & Bros. Co. WLL, Qatar	1
15	Alpha Data, Abu Dhabi, UAE	1
16	Bhabha Atomic Research Centre, Trombay, Mumbai, MH	3
17	Batoi System Private Limited, Bhubaneswar, OD	1
18	Bharat Coking Coal Limited, Dhanbad, JH	1
19	Bharat Electrical Limited, Bengaluru, KA	1
20	Bharat Heavy Electrical Limited, R.C. Puram, Hyderabad, TS	20
21	Bharat Heavy Electrical Limited, Bengaluru, KA	5
22	Bharat Heavy Electrical Limited, Bhopal, MP	1
23	Bharat Heavy Electrical Limited, Visakhapatnam, AP	1
24	Bharat Heavy Electrical Limited, Mysore, Bengaluru, KA	1
25	Bhilai Steel Plant, Bhilai, CG	3
26	Bihar State Co-operative Milk Federation Ltd., Ranchi Dairy, Ranchi, JH	1
27	BIOM, Bachel Complex, NMDC, Dantewada, CG	1
28	Bosch Limited, Packaging Technology Division, GA	1
29	Bundesanstalt for Materialforschung und-prufung, Berlin, Germany	1
30	Calderys India Refractories Limited, Katni, MP	1
31	Central Coalfields Limited, Ranchi, JH	1
32	Cerner Healthcare Solutions Pvt. Ltd., Bengaluru, KA	4
33	Chandrapura Thermal Power Station, Bokaro, JH	1
34	Codios Web Solutions Private Limited, Bengaluru, KA	1
35	Coromandel International Limited, Visakhapatnam, AP	6
36	Community Welfare Society Hospital, Jagda, Rourkela, OD	8
37	Computer Science & Engineering Department, NIT Rourkela, OD	2
38	Connexious Life Science Private Limited, Bengaluru, KA	1
39	Chennai Petroleum Corporation Limited, Manali, Chennai, TN	1
40	CSIR-Central Glass & Ceramic Research Institute, Kolkata, WB	5
41	CSIR-Central Institute of Mining & Fuel Research, Dhanbad, JH	5
42	CSIR-Institute of Minerals & Materials Technology, Bhubaneswar, OD	16
43	DBYDX Technologies Private Limited, Mumbai, MH	1
44	Defence Research & Development Organisation, Hyderabad, TS	12
45	Defence Institute of Bio-Energy Research, Haldwani, UK	1
46	Defence Electronics Research Laboratory, DRDO Hyderabad, TS	1
47	Delhi Metro Rail Corporation Limited, New Delhi, DL	1
48	Dhariwal Infrastructure Limited, Chandrapur, MH	2
49	Dhovel Solutions Private Limited, TIIR, NIT Rourkela, OD	2
50	Dr. Narla Tata Rao Thermal Power Station, Vijayawada, AP	2
51	Dr. Reddy's Institute of Life Sciences, Hyderabad, TS	1
52	DS Spiceco Private Limited, Noida, UP	1
53	Dryice Solutions Private Limited, Kupondole, Lalitpur, Nepal	1

Sl. No.	Name of Industries/Organizations	No. of Training/ Internships Sponsored
54	East Coast Railway, Khurda Division, Bhubaneswar, OD	2
55	Electrical Engineering, NIT Rourkela, OD	1
56	Edelwiss Broking Limited, Bengaluru, KA	1
57	Electronics Corporation India Ltd., Hyderabad, TS	4
58	Engineers India Limited, Amrut Project, Bhubaneswar, OD	5
59	Equinox Consulting, Navi Mumbai, MH	1
60	ESTINO Energy, TIIR, NIT Rourkela, OD	4
61	Excel India Protective Paints Pvt. Ltd., Badlapur, Thane, MH	1
62	Expro Gulf Limited, Kakinada, AP	1
63	ehAPI Technologies LLC, Dubai, UAE	1
64	Ferro Alloys Plant, Tata Steel Limited, Joda, OD	1
65	Flex Middle East, FZE, Dubai	1
66	GAIL (India) Limited, Visakhapatnam, AP	2
67	Genx Soft Technologies Pvt. Ltd., Jaipur, RJ	2
68	GET, IT Project Private Limited, Patna, BR	1
69	GORISCO Solutions, Bengaluru, KA	1
70	GPS Desk Infotech Pvt. Ltd., Bengaluru, KA	1
71	Gwynniebee India Pvt. Ltd., New Delhi, DL	1
72	Gulf News, Dubai, UAE	1
73	Haldia Energy Limited, Haldia, WB	2
74	Heavy Water Plant, Manuguru, AP	1
75	HINDALCO Industries, Hirakud, Sambalpur, OD	2
76	Hero Motocorp Ltd., Neemrana, RJ	1
77	Hindusthan Aeronautics Limited, Bengaluru, KA	5
78	Hindusthan Aeronautics Limited, Sunabeda, Koraput, OD	2
79	Hindusthan Coca-cola Beverages Pvt. Ltd., Hyderabad, TS	3
80	Hindusthan Petroleum Corporation Limited, Visakhapatnam, AP	1
81	Hirakhand Bundia Mines, Orient Area, MCL, Jharsuguda, OD	4
82	Hirakhand Bundia Mines, Rampur Colliery, Jharsuguda, OD	1
83	Homi Bhabha Cencer Hospital & Res. Centre, Visakhapatnam, AP	1
84	H&R Johnson (India) Ltd., Mumbai, MH	2
85	Helmholtz-Zentrum Geesthacht, Germany	1
86	Hit Factory Audio Reserch Institute, Colombo, Sri Lanka	1
87	Ispat General Hospital, Rourkela Steel Plant, Rourkela, OD	5
88	Image Diagnostic Centre, Khammam, TS	1
89	Imerys Ceramics India Pvt. Ltd., Begumpet, Hyderabad, TS	8
90	Indian Institute of Science, Bengaluru, KA	9
91	Indian Institute of Space & Technology, Trivandrum, KL	4
92	International Institute of Information Technology, Bhubaneswar, OD	2
93	International Institute of Information Technology, Bengaluru, KA	1
94	Indian Institute of Technology, Bhubaneswar, OD	6
95	Indian Institute of Technology, Bombay, MH	4
96	Indian Institute of Technology, Guwahati, AS	14
97	Indian Institute of Technology, Hyderabad, TS	5
98	Indian Institute of Technology, Kharagpur, WB	14
99	Indian Institute of Technology, Kanpur, UP	2
100	Indian Institute of Technology, Gandhinagar, GJ	1
101	Indian Institute of Technology, Madras, Chennai, TN	8
102	Indian Institute of Technology, Mandi, HP	1
103	Indian Institute of Technology, Patna, BR	1
104	Indian Institute of Technology, Ropar, PB	1
105	Indian Institute of Technology (BHU), Varanasi, UP	5
106	Indian Metals & Ferro Alloys Limited, Bhubaneswar, OD	1
107	Indian Oil Corporation Limited, Barauni Refinery, BR	4
108	Indian Oil Corporation Limited, Bhubaneswar, OD	1
109	Indian Oil Corporation Limited, Faridabad, HR	1
110	Indian Oil Corporation Limited, Haldia Refinery, WB	1

Sl. No.	Name of Industries/Organizations	No. of Training/ Internships Sponsored
111	Indian Oil Corporation Limited, Paradip, OD	6
112	Indian Oil Corporation Limited, Vadodra, GJ	1
113	Infoscience Labs, Hyderabad, TS	1
114	Inovas Tech., New Delhi, DL	1
115	Indian Rare Earths Limited, Chatrapur, Ganjam, OD	4
116	Indian Statistical Institute, Kolkata, WB	1
117	Intelligence Plus Edu. Vision, LLP, MH	1
118	IRCON International Limited, Kolkata, WB	1
119	ISMU Project Division-I, CPWD, Dhanbad, JH	1
120	ITR, DRDO, Chandipur, Balasore, OD	37
121	IFSTTAR, Nantes, France	2
122	Institute of Biomedical Engineering, National Tsing Hua University, Taiwan	1
123	Jamuna Colliery, Kotma, Anupur, MP	2
124	Jindal Stainless (Hisar) Limited, Vizianagaram, AP	1
125	Jubilant Life Science Limited, J.P. Nagar, UP	2
126	Jadavpur University, Kolkata, WB	1
127	Kiriburu Iron Ore Mines, RMD-SAIL, Singhbhum, JH	21
128	Kotagudem Thermal Power Station, Paloncha, TS	2
129	Khulna University, Khulna, Bangladesh	1
130	Larsen & Toubro Limited, Kansbahal Works, Kansbahal, OD	6
131	Larsen & Toubro Limited, ECC Division, Balasore, OD	1
132	Larsen & Toubro Limited, Mysore, KA	2
133	L&T Metro Rail Hyderabad Limited, Hyderabad, TS	1
134	Larsen & Toubro Limited, Kolkata, WB	1
135	Laxven Systems, Hyderabad, TS	1
136	LIV India Management Pvt. Ltd., New Delhi, DL	2
137	Logic Square Technologies Pvt. Ltd., Kolkata, WB	1
138	Lucknow Metro Rail Corporation Limited, Lucknow, UP	3
139	Lucknow Producer's Co-operative Milk Union Limited, Lucknow, UP	1
140	Larsen & Toubro (Oman) LLC, Muscat, Sultanate of Oman	1
141	MAD Street DEN Systems Private Limited, Chennai, TN	1
142	MKCG Medical College Hospital, Berhampur, OD	1
143	Mahindra & Mahindra, Medak, TS	1
144	Manipal Global Education Services Pvt. Ltd., Bengaluru, KA	1
145	Maruti Suzuki India Limited, IMT Manesar, Gurgaon, HR	5
146	MCL, Bharatpur Project, Jharsuguda, OD	1
147	MCL, Belpahar, Jharsuguda, OD	1
148	MCL, Nandira Colliery, Talcher, OD	1
149	MCL, Talcher Colliery, Talcher, OD	4
150	MCL, Orient Colliery, Jharsuguda, OD	7
151	Mercedes-Benz India Private Limited, Pune, MH	1
152	Meshup Online Services Private Limited, Mumbai, MH	1
153	Microsoft India (R&D) Private Limited, Hyderabad, TS	2
154	Mishra Dhatu Nigam Limited, Kanchanbagh, Hyderabad, TS	9
155	Mittal Engineering, Chinchwad, Pune, MH	1
156	MMP Industries Limited, Nagpur, MH	1
157	Moonidih Project, WJ Area, BCCL Dhanbad, JH	1
158	Modelicon Info. Tech LLP, Bengaluru, KA	2
159	MRT, Paloncha, TS	1
160	Masdar Al Hayat for Food Industries Limited, Riyadh	2
161	Nagarjuna Fertilizer and Chemicals Limited, Hyderabad, TS	1
162	National Aluminium Company Limited, Angul, OD	6
163	National Aluminium Company Limited, Damanjodi, Koraput, OD	6
164	National Aluminium Company Limited, Bhubaneswar, OD	1
165	National Thermal Power Corporation Limited, Korba, CG	2
166	National Thermal Power Corporation Limited, Talcher, Kaniha, OD	14

Sl. No.	Name of Industries/Organizations	No. of Training/ Internships Sponsored
167	National Thermal Power Corporation Limited, Barh, Patna, BR	1
168	National Thermal Power Corporation Limited, Singrauli, Sonebhadra, UP	1
169	National Thermal Power Corporation Limited, Visakhapatnam, UP	2
170	National Thermal Power Corporation Limited, Vindhyachal, UP	1
171	National Chemical Laboratory, Pune, MH	1
172	National Institute of Technology, Durgapur, WB	1
173	Native Bag, Bind E-Commerce Private Limited, Bengaluru, KA	1
174	NISER, Bhubaneswar, OD	1
175	NSPCL, Jaipur, RJ	1
176	Number Theory Software Private Limited, Gurgaon, HR	1
177	NASA's Jet Propulsion Laboratory, California, USA	1
178	National Taiwan University, Taipei, Taiwan	1
179	National Tsing Hua University, Taiwan	1
180	National University of Singapore, Singapore	1
181	Northwestern University, Evanston, Illinois, USA	1
182	Odisha Bridge & Construction Corporation Limited, Bhubaneswar, OD	4
183	Odisha Water Supply & Sewerage Board, Mahanadivihar, Cuttack, OD	1
184	Office of the Executive Engineer, Bidyadharpur (CD), Keonjhar, OD	1
185	Oil & Natural Gas Corporation, Rajahmundry, AP	1
186	Oil & Natural Gas Corporation, EOA, Kakinada, AP	1
187	Oil India Limited, Duliajan, AS	1
188	Omfed, Chandrasekharpur, Bhubaneswar, OD	4
189	Omfed, Keonjhar Dairy, Keonjhar, OD	1
190	Omfed, Rourkela Dairy, Rourkela, OD	6
191	Pack'O Flex, Pune, MH	1
192	Panchajanya Constructions, Visakhapatnam, AP	2
193	Paradip Port Trust, Paradip, OD	1
194	Paraswani Limestone Mines, Ultra Tech. Cement Limited, Hirni, CG	1
195	Pepsico, Kolkata, WB	1
196	Pepsico India Holding Private Limited, Visakhapatnam, AP	1
197	Pepsico India Holding Private Limited, Chittor, AP	1
198	Perfecti Van Meile India Pvt. Ltd., Manesar, Gurgaon, HR	2
199	P & B Machilipatnam, AP	1
200	Pal Rematerials India Private Limited, Ahmedabad, GJ	2
201	Power Grid Corporation of India Limited, Patna, BR	1
202	PXE, DRDO, Chandipur, Balasore, OD	13
203	Questease Solutions, Hyderabad, TS	7
204	Rail Vikas Nigam Limited, Chandrasekharpur, Bhubaneswar, OD	7
205	Rajendra Singh Kileder Construction Private Limited, Betul, MP	1
206	Rashtriya Ispat Nigam Limited, Visakhapatnam, AP	2
207	Regional Agriculture Research Station, Warangal, TS	2
208	Regional Medical Research Centre, Bhubaneswar, OD	4
209	Reliance Industries Limited, Navi Mumbai, MH	1
210	Reliance Infrastructure Limited, Nellore, AP	3
211	Research Centre Imarat, MOD, Hyderabad, TS	1
212	Rourkela Smart City Limited, Rourkela, OD	1
213	Rythu Dairy Products Pvt. Ltd., West Godavari, AP	1
214	S.S. Designers & Planners, Hastinapuram, Hyderabad, TS	1
215	S.B. Panchal & Company, Mumbai, MH	1
216	Sai Infrastructures Private Limited, Hyderabad, TS	4
217	SAIL, Refractory Company Limited, Salem, TN	2
218	SAIL, Rourkela Steel Plant, Rourkela, OD	75
219	Saint Gobain India Pvt. Ltd., Sriperumbudur, TN	1

Sl. No.	Name of Industries/Organizations	No. of Training/ Internships Sponsored
220	SCCL, Dipka Expansion Project, Dipka Area, CG	2
221	SCCL, Godavarikhani, Ramundam, TS	4
222	SCCL, Kothagudem, TS	1
223	SCIO Inspire Consulting Services India Pvt. Ltd., Chennai, TN	1
224	Shapoorji Pallonji & Company Private Limited, Kolkata, WB	1
225	Shreeji Infrastructure India Private Limited, Jabalpur, MP	1
226	Siemens Limited, Kolkata, WB	1
227	Sigma Analytics & Computing Pvt. Ltd., Bhubaneswar, OD	1
228	Smart Commute Technologies Pvt. Ltd., Hyderabad, TS	1
229	Social Worth Technologies Private Limited, Pune, MH	1
230	Somany Ceramics Limited, Jhajjar, HR	1
231	South Central Railway, Secunderabad, TS	3
232	South Eastern Railway, Tatanagar, JH	1
233	SRM University, Kottankulathur, TN	1
234	Studyowl Education Private Limited, Hyderabad, TS	1
235	Southtech Limited, Dhaka	1
236	Tata Motors, Jamshedpur, JH	1
237	Tata Motors Limited, Lucknow, UP	1
238	Tata Steel Limited, Jamshedpur, JH	19
239	Tech Mahindra, Kolkata, WB	1
240	Tega Industries Limited, Kolkata, WB	3
241	The LMN Institute of Information Technology, Jaipur, RJ	1
242	Thermax Boilers & Heaters Division, Pune, MH	1
243	Training Institute, Ibrahimpatnam, Vijayawada, AP	5
244	TRL Krosaki Refractories Limited, Belpahar, Jharsuguda, OD	5
245	Tata Consultancy Services, Jakarta, Indonesia	1
246	Technical University of Liberec, Czech Republic, Europe	1
247	Techtatva Private Limited, Lalitpur, Nepal	2
248	Ultratech Cement Limited, Vapi, GJ	1
249	Ushva Clean Technology Private Limited, Mumbai, MH	1
250	University College of Engineering, Osmania University, Hyderabad, TS	2
251	Urban Habitats Private Limited, Mugappair, Chennai, TN	1
252	Utkal Alumina International Limited, Rayagada, OD	1
253	University of Freiburg, Germany	1
254	University of Kansas, Lawrence, USA	1
255	University of Michigan, Ann Arbor, USA	1
256	University of Rajshahi, Bangladesh	1
257	University of Southern California, Los Angeles, USA	1
258	Vedanta Limited, Jharsuguda, OD	10
259	V. E. Commercial Vehicles Limited, Pithampur, AP	2
260	V. A. Tech. Ventures Private Limited, Bengaluru, KA	1
261	Rashtriya Ispat Nigam Ltd., Vishakhapatnam, AP	1
262	Vizen Design & Consulting, Bengaluru, KA	1
263	VSL Technologies Private Limited, Kanchipuram, TN	1
264	Water Resources Department, TRTS Division, Vizianagaram. AP	1
265	Wipro Digital, Bengaluru, KA	1
266	Wipro Limited, Chennai, TN	2
267	Wipro Technologies, Chennai, TN	5
268	Yi-Hsuan Yang, Taiwan	1
Total		768

Annexure - 2: Local Study Tours conducted (for students)

Local study tours were arranged for B.Tech. and M.Tech. (Dual Degree) students in their 3rd and 4th years by the Training & Placement centre. The students visited a total of 29 different industries/organizations in and around Rourkela pertinent to their respective curricula during the period September, 2017 – February, 2018, as detailed below:

Sl. No.	Date of Visit	Sem.	Branch	No. of Students	No. of Faculty	Name of Industry Visited
1	06.09.2017	7th	CH-1	35	2	Coke Oven & Coal Chemicals, Rourkela Steel Plant, Rourkela.
2	07.09.2017	7th	CS-1	40	2	Automation Cell, EDP dept., Rourkela Steel Plant, Rourkela.
3	13.09.2017	7th	EI & EC	45	2	Control & Instrumentation, Rourkela Steel Plant, Rourkela.
4	14.09.2017	5th	ID	29	1	Department of Design, Rourkela Steel Plant, Rourkela.
5	03.10.2017	7th	CE-2 & Dual	29	2	OCL India Limited, Rajgangpur.
6	12.10.2017	7th	CH-2 & Dual	26	2	Coke Oven & Coal Chemicals, Rourkela Steel Plant, Rourkela.
7	20.10.2017	7th	FP	29	2	Grihasthy Udyog, Chhend, Rourkela.
8	25.10.2017	7th	ME-2	40	2	Silicon Steel Mill, Rourkela Steel Plant, Rourkela.
9	27.10.2017	7th	ID	31	1	Larsen & Toubro Limited, Kansbahal.
10	30.10.2017	5th	EI & EC	41	2	Power Grid Corporation of India Ltd., Naya Bazar, Rourkela.
11	07.11.2017	7th	MN & Dual	44	2	Basundhara Opencast Project, MCL, Basundhara.
12	08.11.2017	7th	MM-1	30	1	Steel Melting Shop-II, Rourkela Steel Plant, Rourkela.
13	09.11.2017	5th	EE-1	40	1	Electrical Repair Shop, Rourkela Steel Plant, Rourkela.
14	14.11.2017	5th	CH-1	32	3	OCL India Limited, Rajgangpur.
15	15.11.2017	5th	EE-2 & Dual	43	1	Electrical Repair Shop, Rourkela Steel Plant, Rourkela.
16	16.11.2017	5th	ME-1	35	1	Pipe Plant, Rourkela Steel Plant, Rourkela.
17	20.11.2017	5th	MN & Dual	42	2	Lanjiberna Limestone & Dolomite Mines, OCL (I) Ltd., Rajgangpur.
18	21.11.2017	5th & 7th	FP	44	2	Omfed Dairy Plant, Luakera, Rourkela.
19	16.01.2018	6th	MN	42	2	Lakhanpur Opencast Project, MCL, Brajrajnagar.
20	18.01.2018	8th	EE	30	1	Electrical Repair Shop, Rourkela Steel Plant, Rourkela.
21	19.01.2018	6th	ME-2	35	2	Larsen & Toubro Limited, Kansbahal.
22	08.02.2018	6th	MM-1	30	1	Steel Melting Shop-II, Rourkela Steel Plant, Rourkela.
23	09.02.2018	6th	EE-2 & Dual	43	1	Larsen & Toubro Limited, Kansbahal.
24	15.02.2018	6th	CR & Dual	36	1	Blast Furnace, Rourkela Steel Plant, Rourkela.
25	05.03.2018	6th	CS-2	35	2	OCL India Limited, Rajgangpur.
26	06.03.2018	6th	MN & Dual	42	2	Hirakhand Bundia Mines, Orient Area, MCL, Brajrajnagar.
27	07.03.2018	6th & 8th	MM & Dual	34	1	Steel Melting Shop-II, Rourkela Steel Plant, Rourkela.
28	16.03.2018	6th	CR & Dual	36	2	OCL India Limited, Refractory Unit, Rajgangpur.
29	20.03.2018	8th	BM & BT	45	1	Veer Surendra Sai Institute of Medical Science & Research, Burla.

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Annexure - 4: Fresh Appointments (Regular)

Sl. No.	Name	Designation	Date of joining
TEACHING			
1.	Ms. Nabanita Saha	Assistant Professor	2-Feb-2018
2.	Mr. Tirthankar Sarkar	Assistant Professor	5-Feb-2018
3.	Dr. Upendar Gundala	Assistant Professor	5-Feb-2018
4.	Dr. Sumit Kumar	Assistant Professor	7-Feb-2018
5.	Dr. Tapas Kumar Mishra	Assistant Professor	7-Feb-2018
6.	Dr. Sivaraman. J	Assistant Professor	15-Feb-2018
7.	Dr. Mithun Biswas	Assistant Professor	15-Feb-2018
8.	Dr. Santosh Kumar	Assistant Professor	15-Feb-2018
9.	Dr. Arnab Ghosh	Assistant Professor	15-Feb-2018
10.	Dr. Biri Arun	Assistant Professor	15-Feb-2018
11.	Dr. Balaji. P. S	Assistant Professor	19-Feb-2018
12.	Dr. Sushil Kumar Rathore	Assistant Professor	21-Feb-2018
13.	Dr. Jnana Ranjan Senapati	Assistant Professor	22-Feb-2018
14.	Dr. Ranjit Mehatari	Assistant Professor	22-Feb-2018
15.	Dr. (Ms.) Sudipta Maity	Assistant Professor	23-Feb-2018
16.	Dr. Ram Sajeevan Maurya	Assistant Professor	23-Feb-2018
17.	Dr. Kaustav Chaudhury	Assistant Professor	26-Feb-2018
18.	Dr. Man Mohan Garg	Assistant Professor	1-Mar-2018
19.	Dr. Krunal Madhukar Gangawane	Assistant Professor	5-Mar-2018
20.	Dr. Hemant Sharma	Assistant Professor	5-Mar-2018
21.	Dr. (Ms.) Binita Tiwari	Assistant Professor	5-Mar-2018
22.	Dr. Vikas Thakur	Assistant Professor	5-Mar-2018
23.	Dr. Subhajit Mondal	Assistant Professor	5-Mar-2018
24.	Dr. Biswajit Saha	Assistant Professor	6-Mar-2018
25.	Dr. Prasun Chongder	Assistant Professor	6-Mar-2018
26.	Dr. Shubhobrata Rudra	Assistant Professor	7-Mar-2018
27.	Dr. Atin Mukherjee	Assistant Professor	8-Mar-2018
28.	Dr. Judhistir Mahapatro	Assistant Professor	8-Mar-2018
29.	Dr. Reetesh Kumar Gangwar	Assistant Professor	8-Mar-2018
30.	Dr. (Ms.) Anju R. Babu	Assistant Professor	9-Mar-2018
31.	Dr. Mahendra Sakare	Assistant Professor	12-Mar-2018
32.	Dr. Srinivasan Muthuswamy	Assistant Professor	14-Mar-2018
33.	Dr. (Ms.) Suman Dhaka	Assistant Professor	14-Mar-2018
34.	Dr. Nikhil Ninad Sirdesai	Assistant Professor	15-Mar-2018
35.	Dr. Subhash Chandra Mahapatra	Assistant Professor	19-Mar-2018
36.	Ms. Suparna Saha	Assistant Professor	3-Apr-2018
37.	Ms. Soumi Muhuri	Assistant Professor	14-Apr-2018
38.	Dr. Anupam Biswas	Assistant Professor	10-May-2018
39.	Ms. Roshmi Sen	Asst. Professor(G-II)	14-May-2018
40.	Dr. Dushyant Ashok Mahadik	Asst. Professor(G-I)	15-May-2018
41.	Dr. Madhuresh Dwivedi	Asst. Professor(G-II)	30-May-2018
42.	Dr. Sushil Kumar Singh	Asst. Professor(G-II)	30-May-2018
43.	Dr. Vijay Bhaskar Semwal	Asst. Professor(G-II)	11-Jun-2018
44.	Dr. Naresh Thota	Asst. Professor(G-II)	11-Jun-2018
45.	Dr. Arun Kumar	Asst. Professor(G-II)	25-Jun-2018
NON-TEACHING			
1.	Executive Engineer	3-Jul-2017	

Annexure - 5: Staff Relieved on Retirement

Sl. No.	Name	Designation	Date of Retirement
TEACHING			
1.	Prof. Bijoy Kumar Nanda	Professor	28-Feb-2018
2.	Prof. Bipin Bihari Verma	Professor	30-Jun-2018
NON-TEACHING			
1.	Sri Mathius Minz	Attendant(SG-I)	31-Jul-2017
2.	Sri Gopal Gouda	Sr. Attendant	31-Jul-2017
3.	Sri Prakash Jojo	Attendant(SG-II)	31-Aug-2037
4.	Sri Kashinath Barik	Attendant(SG-II)	31-Oct-2017
5.	Mr. Mangal Kumar Mohapatra	Technical Assistant	30-Jun-2048
6.	Sri Sunny Choudhary	Superintendent	31-Jul-2047
7.	Sri Sukhanath Dansana	Attendant(SG-I)	31-Jan-2018
8.	Sri Rabindra Kumar Sinha	Admn. Officer(AO)	31-Jan-2018
9.	Sri Mir Ayub Alli	Technician(SG-I)	31-Jan-2018
10.	Dr. Pranakrishna Rout	SAS Officer	31-Jan-2016
11.	Sri Bharat Chandra Nayak	Attendant(SG-II)	31-Mar-2018
12.	Sri Subhabrata Chakraborty	Technical Assistant	30-Nov-2044
13.	Sri Debesh Kumar Purohit	Principal Scientific Officer	30-Jun-2018
14.	Sri Balamram Champatiray	Security Officer	30-Jun-2018

Annexure - 6: Staff Relieved on Resignation

Sl. No.	Name	Designation	Date of Resignation
TEACHING			
1.	Dr. Prashanth Vooka	Asst. Professor	Relieved from service on Resignation w.e.f...24.07.2017, Vide No. ES/2857, dtd...24.07.2017 (Resignation accepted)
2.	Prof. V Vamshi Krishna Reddy	Asst. Professor	Relieved from service on Resignation w.e.f...19.07.2017, Vide No. ES/2815, dtd...19.07.2017 (Resignation accepted)
3.	Prof. Aditya Kumar	Asst. Professor	Relieved from service on Resignation w.e.f...04.08.2017, Vide No. ES/3006, dtd...004.08.2017 (Resignation accepted)
4.	Prof. Soumya Gangopadhyay	Asst. Professor	Relieved from service on Resignation w.e.f... 07.09.2017, Vide No. ES/3288, dtd...07.09.2017 (Resignation accepted)
5.	Dr. Reetesh Kumar Gangwar	Asst. Professor (G-II)	Relieved from service on Resignation w.e.f... 27.03.2018, Vide No. ES/1011, dtd...27.03.2018 (Resignation accepted)
6.	Dr. Arjun Mukerji	Asst. Professor	Relieved from service on Resignation w.e.f... 13.04.2018, Vide No. ES/1095, dtd...13.04.2018 (Resignation accepted)
7.	Dr. Nikhil Ninad Sirdesai	Asst. Professor (G-II)	Relieved from service on Resignation w.e.f... 20.04.2018, Vide No. ES/0178, dtd...23.04.2018 (Resignation accepted)
8.	Prof. D. Nagarajan	Asst. Professor (G-II)	Relieved from service on Resignation w.e.f... 11.05.2018, Vide No. ES/1348, dtd...11.05.2018 (Resignation accepted)
9.	Dr. Mahendra Sakare	Asst. Professor(G-II)	Relieved from service on Resignation w.e.f... 16.05.2018, Vide No. ES/1376, dtd...16.05.2018 (Resignation accepted)
10.	Prof. Mantu Kumar Mahalik	Asst. Professor(G-I)	Relieved from service on Resignation w.e.f... 16.05.2018, Vide No. ES/1377, dtd...16.05.2018 (Resignation accepted)

Sl. No.	Name	Designation	Date of Resignation
11.	Prof. Ashok Kumar Mondal	Associate Professor	Relieved from service on Resignation w.e.f... 01.06.2018, Vide No. ES/1501, dtd...01.06.2018 (Resignation accepted)
12.	Dr. Anupam Biswas	Asst. Professor(G-II)	Relieved from service on Resignation w.e.f... 04.07.2018, Vide No. ES/1806, dtd...04.07.2018 (Resignation accepted)
13.	Prof. (Ms) N M Leepsa	Asst. Professor(G-II)	Relieved from service on Resignation w.e.f... 09.07.2018, Vide No. ES/1843, dtd...09.07.2018 (Resignation accepted)
14.	Prof. Robin Davis P	Asst. Professor(G-I)	Relieved from service on Resignation w.e.f... 13.07.2018, Vide No. ES/1879, dtd...13.07.2018 (Resignation accepted)

NON-TEACHING

1	Mr. Mangal Kumar Mohapatra	Technical Assistant	Relieved on Resignation 10.11.2017(AN), vide ES/3892, Dtd.10.11.2017
2	Sri Sunny Choudhary	Superintendent	Relieved on Resignation 31.11.2017(AN), vide ES/4044, Dtd.30.11.2017
3	Sri Subhabrata Chakraborty	Technical Assistant	Relieved on Resignation 26.06.2018(AN), vide ES/1707, Dtd.26.06.2018

Annexure - 8: Staff Relieved on Voluntary Retirement

Sl. No.	Name	Designation	Date of Resignation
			Nil

Annexure - 9: Staff Expired

Sl. No.	Name	Designation	Date of Resignation
TEACHING			
NIL			
NON-TEACHING			
1.	Sri Prakash Jojo	Attendant(SG-II)	Expired on 08.09.2017(AN), vide ES/3303, Dtd.12.09.2017

Annexure - 10: Non-Academic Staff (Non-Teaching)

As on 30th June 2018

Sl. No.	Name of Employee	Designation	Deptt Code
1	Mr. Kumar Prabhanjan Panigrahi	Assistant Registrar	AC
2	Mr. Ashis Kumar Behera	Assistant Registrar	AC
3	Smt. Archana Acharya	Assistant (SG-I)	AC
4	Mr. Tapas Kumar Sarangi	Sr. Superintendent	AC
5	Mr. Manoj Kumar Das	Sr. Superintendent	AC
6	Mr. Prabir Kumar Dash	Sr. Superintendent	AC
7	Smt. M.J. Toppo	Assistant (SG-I)	AC
8	Smt. Asharani Beura	Assistant (SG-I)	AC
9	Mr. Jaya Prakash Shah	Superintendent	AC
10	Mr. Rakesh Kumar Maharana	Superintendent	AC
11	Ms. Diptimayee Rout	Junior Assistant	AC

Sl. No.	Name of Employee	Designation	Deptt Code
12	Mrs. Debasmita Pahi	Junior Assistant	AC
13	Mr. Vijaya Soreng	Sr. Attendant	AC
14	Mr. Lachhuman Kishan	Sr. Attendant	AC
15	Mr. Rama Chandra Behera	Pharmacist(SG-I)	BM
16	Mr. Nimain Sahoo	Assistant (SG-I)	BM
17	Mr. Rabindra Kumar Moharana	Technical Assistant	BM
18	Mr. Haladhar Behera	Technical Assistant	BM
19	Mr. Bikram Kumar Nayak	Technical Assistant	BM
20	Mr. Chittaranjan Bhoi	Technical Assistant	BM
21	Mr. Satyabrata Prusty	Technician	BM
22	Mr. Susanta Pradhan	Laboratory Assistant	BM
23	Smt. Pramodini Sahoo	Attendant(SG-II)	BM
24	Mr. Debesh Kumar Purohit	Principal Scientific Officer	CC
25	Mr. Manas Ranjan Pattanayak	Scientific Officer	CC
26	Mr. Tapan Kumar Pattanaik	Scientific Officer	CC
27	Mr. Brajendra Kumar Behera	Scientific Officer	CC
28	Mr. Pratap Kumar Tripathy	Technical Assistant(SG-II)	CC
29	Smt. Sabitarani Mohapatra	Technical Assistant(SG-II)	CC
30	Mr. Dillip Kumar Barik	Technical Assistant(SG-II)	CC
31	Mr. Manoj Kumar Patnaik	Technical Assistant(SG-II)	CC
32	Mr. Bikram Kumar Sahoo	Technical Assistant	CC
33	Mr. Sauravranjan Sarangi	Technical Assistant	CC
34	Mr. Shibasankar Dandapat	Assistant (SG-II)	CC
35	Mr. Augustus Jate	Attendant(SG-II)	CC
36	Mr. Neera Sunani	Attendant(SG-II)	CC
37	Mr. Himansu Satapathy	Engineer (Civil)	CE
38	Mr. Sunil Cipriyan Xess	Technical Assistant(SG-II)	CE
39	Mr. Ajit Kumar Nanda	Technical Assistant(SG-II)	CE
40	Mr. Kulamani Patra	Technical Assistant(SG-II)	CE
41	Mr. Harihar Mohapatra	Assistant (SG-II)	CE
42	Mr. Parmanand Pandit	Technical Assistant	CE
43	Mr. Prashanta Roy	Technical Assistant	CE
44	Mr. Ambuja Kumar Jena	Attendant(SG-I)	CE
45	Mr. Harmohan Garnaik	Attendant(SG-II)	CE
46	Mr. Prakash Chandra Mandal	Attendant(SG-II)	CE
47	Mr. Romanus Lugun	Attendant(SG-II)	CE
48	Mr. Suresh Majhi	Attendant(SG-II)	CE
49	Smt. Kanak Prabha Dasmohapatra	Technical Assistant(SG-II)	CH

Sl. No.	Name of Employee	Designation	Deptt Code
50	Mr. Samarendu Mohanty	Sr. Technical Assistant	CH
51	Mr. Bhakta Ballava Mishra	Stenographer(SG-II)	CH
52	Mr. Surendra Majhi	Attendant(SG-II)	CH
53	Mr. Bharat Chandra Sahu	Sr. Attendant	CH
54	Mr. Jhaja Naik	Sr. Attendant	CH
55	Mr. Bholanath Patel	Technician	CH
56	Mr. Bijay Kumar Majhi	Technician	CH
57	Mr. Utpal Kumar Swain	Laboratory Assistant	CH
58	Dr.(Mrs.) Smrutisikha Bal	Sr. Scientific Officer	CIF
59	Mr. Gopinath Behera	Technical Assistant(SG-II)	CR
60	Mr. Susil Kumar Sahu	Sr. Technical Assistant	CR
61	Ms. Hiramani Acharya	Assistant (SG-I)	CR
62	Mr. Arvind Kumar	Technical Assistant	CR
63	Mr. Sukanta Garai	Technical Assistant	CR
64	Mr. Shiv Kumar Verma	Technical Assistant	CR
65	Mr. Nishant Kumar	Technical Assistant	CR
66	Mr. Nakula Barik	Attendant(SG-I)	CR
67	Mr. Prasanta Kumar Mohanty	Attendant(SG-II)	CR
68	Mr. John Paul Holiday Nag	Technical Assistant(SG-II)	CS
69	Mr. Madan Mohan Behera	Technical Assistant	CS
70	Mr. Trinath Mahapatro	Technical Assistant	CS
71	Mr. Kalandi Tarai	Technical Assistant	CS
72	Mr. Chiranjib Chowdhury	Technical Assistant	CS
73	Ms. Bandana Panda	Junior Assistant	CS
74	Mr. Fagu Oram	Sr. Attendant	CS
75	Mr. Fakir Charan Chhatoi	Assistant (SG-II)	CW
76	Mr. Murali Dhara Jena	Attendant(SG-II)	CY
77	Smt. Swagatika Tripathy	Sr. Laboratory Assistant	CY
78	Mr. Samir Kumar Patra	Laboratory Assistant	CY
79	Mr. Manoj Kumar Saraf	Technician	CY
80	Mr. Pratap Chandra Behera	Laboratory Assistant	CY
81	Mr. Nityananda Rout	Attendant(SG-II)	CY
82	Mr. Arup Kumar Dey	Laboratory Assistant	CY
83	Mr. Bhanjan Kumar Sahu	Sr. Superintendent	DN
84	Mr. Chandra Sekhar Mohanty	Assistant (SG-II)	DN
85	Mr. Tutu Nayak	Sr. Attendant	DN
86	Mr. M. N. Anandbabu	Assistant Registrar	DN
87	Mr. Ajay Kumar Sahu	Secretary (SG-II)	DR

Sl. No.	Name of Employee	Designation	Deptt Code
88	Mr. Sumanta Kumar Moharana	Junior Assistant	DR
89	Mr. Rabindra Kumar Das	Sr. Attendant	DR
90	Smt. Perry Radha	Technical Assistant(SG-II)	EC
91	Mr. P. Prafulla Kumar Patro	Technical Assistant(SG-II)	EC
92	Mr. Bhubaneswar Das	Sr. Technical Assistant	EC
93	Mr. Mahesh Kumar Sahoo	Technical Assistant	EC
94	Mr. Sams Tabrez Akhtar	Technical Assistant	EC
95	Mr. Aditya Prasad Singh Biswal	Technical Assistant	EC
96	Mr. Sweta Basanta Sethi	Technical Assistant	EC
97	Mr. Kamaljeet Singh	Technical Assistant	EC
98	Mr. Kishore Kujur	Technician(SG-I)	EC
99	Mr. Pramod Oram	Assistant (SG-II)	EC
100	Smt. Mamita Behera	Sr. Technician	EC
101	Mr. Iswar Chandra Gour	Sr. Attendant	EC
102	Mr. Madhusudan Nanda	Attendant(SG-II)	EC
103	Mr. Mahendra Kumar Behera	Attendant(SG-II)	EC
104	Mr. Pravat Kumar Pattnaik	Assistant (SG-I)	EE
105	Mr. Sushanta Kumar Sahoo	Technical Assistant(SG-II)	EE
106	Mr. Chumnu Tirkey	Attendant(SG-II)	EE
107	Mr. Gangadhar Bag	Technician(SG-I)	EE
108	Mr. Sahadev Swain	Technician(SG-I)	EE
109	Mr. Maheswar Mahato	Technical Assistant	EE
110	Mr. Bhanu Pratap Behera	Technical Assistant	EE
111	Mr. N. Himansu Bhusan	Technical Assistant	EE
112	Ms. Ranjita Barla	Technical Assistant	EE
113	Mr. Rama Hari Swain	Technical Assistant	EE
114	Mr. Avijit Basak	Technical Assistant	EE
115	Mr. K Soumyakanta	Technical Assistant	EE
116	Mr. Laluprasad Tiriya	Technical Assistant	EE
117	Mr. Rabindra Kumar Nayak	Sr. Technician	EE
118	Mr. Rama Prasad Samantaray	Sr. Technician	EE
119	Mr. Pankaja Kumar Samal	Technician	EE
120	Ms. Manisha Patra	Technician	EE
121	Mr. Sushanta Sahoo	Technician	EE
122	Mr. Kunja Nayak	Attendant(SG-II)	EE
123	Mr. Joydip Mondal	Executive Engineer	EM
124	Mr. Rajesh Kumar Sahoo	Engineer (Elect.)	EM
125	Mr. Pravat Kumar Sahoo	Sr. Technical Assistant	EM

Sl. No.	Name of Employee	Designation	Deptt Code
126	Mr. Satyendra Das	Sr. Technical Assistant	EM
127	Mr. Ramakanta Behera	Sr. Technical Assistant	EM
128	Mr. Safikul Mondal	Technical Assistant	EM
129	Mr. Manoranjan Mahapatra	Technical Assistant	EM
130	Mr. Sambit Kumar Pradhan	Technical Assistant	EM
131	Mr. Soobrat Kumar Samal	Assistant (SG-I)	EM
132	Mr. Bijay Kumar Jena	Technician(SG-I)	EM
133	Mr. Prasanta Kumar Pal	Technician(SG-I)	EM
134	Mr. Mohit Kalyari	Attendant (SG-II)	EM
135	Mr. Gouri Sankar Barik	Technician	EM
136	Mr. Raghu Nath Sahu	Sr. Attendant	EM
137	Mr. Full James Sindur	Sr. Attendant	EM
138	Mr. Kandu Bada,	Attendant(SG-II)	EM
139	Mr. Ramesh Chandra Das	Attendant(SG-II)	EM
140	Mr. Umakanta Parida	Technician	EM
141	Mr. Ramkrishna Mandal	Technician	EM
142	Mr. Sriman Satyabrata Dhal	Technician	EM
143	Mr. Sanjay Kumar Nayak	Technician	EM
144	Mr. Satya Ranjan Jena	Technician	EM
145	Mr. Debabrata Kandi	Technician	EM
146	Mr. Ashutosh Singh	Technician	EM
147	Mr. Susanta Kumar Pattanaik	Technician	EM
148	Mr. Gouri Sankar Khatua	Sr. Attendant	EM
149	Mr. Bivas Das	Assistant (SG-I)	ER
150	Mr. Gobinda Chandra Barik	Sr. Attendant	ER
151	Ms. Sabita Behera	Laboratory Assistant	ER
152	Mr. Falguni Muduli	Technician	ER
153	Mr. Md. Hasan Seikh	Laboratory Assistant	ER
154	Mr. Bamadev Acharya	Deputy Registrar	ES
155	Mr. Chittaranjan Sahoo	Superintendent(SG-II)	ES
156	Mr. Rabi Shankar Singh	Superintendent(Hindi)	ES
157	Ms. Luna Bhowmick	Superintendent	ES
158	Dr. Soumya Ranjan Bag	Superintendent	ES
159	Smt. Rita Dungdung	Assistant (SG-I)	ES
160	Mr. Padma Bhusan Acharya	Assistant (SG-I)	ES
161	Mr. Biswanath Mondal	Assistant (SG-II)	ES
162	Mr. Jaya Krushna Sahu	Junior Assistant	ES
163	Ms. Sangita Sahoo	Junior Assistant	ES

Sl. No.	Name of Employee	Designation	Deptt Code
164	Ms. Subasini Tanty	Sr. Attendant	ES
165	Mr. Nilamadhab Sahu	Sr. Attendant	ES
166	Mr. Bijay Singh	Sr. Attendant	ES
167	Mr. Ashok Chandra Giri	Sr. Attendant	ES
168	Mr. Ajit Kumar Soy	Sr. Attendant	ES
169	Mr. Abhimanyu Moharana	Attendant(SG-II)	ES
170	Mr. Kshiroda Kumar Sahoo	Assistant Registrar	FA
171	Mr. Chittaranjan Mishra	Sr. Accountant	FA
172	Mr. Kamal Kanta Pattajoshi	Accountant	FA
173	Mr. Abhishek Kumar	Accountant	FA
174	Mr. Deepak Sahoo	Superintendent	FA
175	Mr. Swarup Narayan Behera	Accountant	FA
176	Mrs. Manisha Das	Superintendent	FA
177	Mr. Chandan Kumar Prusty	Accountant	FA
178	Mr. Mayadhar Mishra	Assistant (SG-I)	FA
179	Mr. Pradip Kumar Mohanty	Assistant (SG-I)	FA
180	Mr. Krushna Chandra Naik	Assistant (SG-II)	FA
181	Smt. Anasuya Panda	Sr. Assistant	FA
182	Mr. Rama Chandra Barik	Sr. Attendant	FA
183	Mr. Sushil Pancham	Sr. Attendant	FA
184	Mr. Dusmanta Pradhan	Sr. Attendant	FA
185	Mr. Rajesh Beuria	Technical Assistant	FP
186	Mr. Toshamani Meher	Technician	FP
187	Mr. Manoranjan Nayak	Attendant(SG-II)	FP
188	Mr. Rajesh Kumar Khuntia	Technician	FP
189	Mr. Sanyasi Sahu	Attendant(SG-II)	FP
190	Dr. Samir Mohanty	Technical Assistant(SG-II)	GH
191	Dr. Champak Bhattacharyya	Sr. Medical Officer	HC
192	Dr(Mrs.) Anindita Debata	Medical Officer	HC
193	Dr. Sameer Patnaik	Medical Officer	HC
194	Mr. Suresh Ray	Attendant(SG-II)	HC
195	Smt. Kalabati Tanty	Sr. Attendant	HC
196	Smt. Manasi Baral	Assistant (SG-II)	HS
197	Mr. Badri Narayan Satapathy	Technician	HS
198	Mrs. Swatika Sahoo	Assistant Registrar	IA
199	Mr. Ranjan Kumar Nayak	Sr. Superintendent	IA
200	Mrs. Priti Suman Kullu	Sr. Accountant	IA
201	Mr. Bijay Kumar Panda	Assistant (SG-I)	IA

Sl. No.	Name of Employee	Designation	Deptt Code
202	Mr. Mangu Jate	Assistant (SG-II)	IA
203	Mr. Pandra Tanty	Sr. Attendant	IA
204	Mr. Jogiya Dhanwar	Assistant (SG-I)	ID
205	Mr. Nagmani	Technical Assistant	ID
206	Mr. Ranjan Kumar	Technical Assistant	ID
207	Mr. Akhil Raj K.V	Technical Assistant	ID
208	Mr. Bijay Kumar Behera	Technician	ID
209	Mr. Salku Marndi	Technician	ID
210	Mr. Prakasha Pradhan	Sr. Attendant	ID
211	Dr. Bhojaraju Gunjal	Deputy Librarian	LB
212	Mr. Vinod Kumar Mishra	Assistant Librarian	LB
213	Mr. Dibya Kishor Pradhan	Assistant Librarian	LB
214	Mrs. Puspita Mishra	Assistant Librarian	LB
215	Mr. Dhanwantari Prakash Tripathi	Assistant Librarian	LB
216	Mr. Kshirod Das,	Sr. Technical Assistant	LB
217	Mr. Srikanta Sahu	Library Information Assistant	LB
218	Mr. Sanat Kumar Behera	Technical Assistant	LB
219	Mr. Gopi Ranjan Jena	Assistant (SG-II)	LB
220	Mr. Babula Sethi	Sr. Attendant	LB
221	Mr. Rosan Kumar Panda	Technical Assistant	LG
222	Mr. Girish Chandra Naik	Assistant (SG-II)	LS
223	Mr. Jayanta Kumar Sahu	Technical Assistant	LS
224	Mr. Aniruddha Chhagan Patil	Technical Assistant	LS
225	Mr. Sanjiv Kumar	Technical Assistant	LS
226	Mr. Dhusasan Garmajhi	Sr. Attendant	LS
227	Ms. Chahat Kausar	Laboratory Assistant	LS
228	Mr. Sonu Bharti	Laboratory Assistant	LS
229	Mr. Chamudra Bada	Assistant (SG-II)	MA
230	Mr. Kamal Charan Das	Technical Assistant(SG-II)	ME
231	Mr. Kunal Nayak	Sr. Technical Assistant	ME
232	Mr. Narayan Prasad Bariki	Technician(SG-I)	ME
233	Mr. Jayanta Kumar Sahu	Stenographer(SG-I)	ME
234	Mr. Jnana Ranjan Nayak	Technician(SG-I)	ME
235	Mr. Arun Kumar Parhi	Technician(SG-I)	ME
236	Mr. Laxman Kumar Mahanta	Technical Assistant	ME
237	Mr. Sambit Senapati	Technical Assistant	ME
238	Mr. Naren Kumar Bisoi	Technician(SG-I)	ME

Sl. No.	Name of Employee	Designation	Deptt Code
239	Mr. Pratap Kumar Patra	Attendant(SG-II)	ME
240	Mr. Somnath Das	Sr. Technician	ME
241	Mr. Arabinda Khuntia	Technician	ME
242	Mr. Somnath Sethi	Technician	ME
243	Mr. Bijan Kumar Sethi	Attendant(SG-II)	ME
244	Mr. Pradip Kumar Mohanty	Attendant(SG-II)	ME
245	Mr. G. Syamagham Reddy	Attendant(SG-II)	ME
246	Mr. Sudhananda Pani	Technician	ME
247	Mr. Rajesh Patnaik	Technical Assistant(SG-II)	MM
248	Mr. Shyamu Hembram	Sr. Technical Assistant	MM
249	Mr. Anup Kumar Acharya	Technical Assistant	MM
250	Mr. Chinnam Sivateja	Technical Assistant	MM
251	Mr. Girish Chandra Dash	Assistant (SG-I)	MM
252	Mr. Uday Kumar Sahu	Technician(SG-I)	MM
253	Mr. Bhanja Naik	Attendant(SG-II)	MM
254	Mr. Kishore Tanty	Attendant(SG-II)	MM
255	Mr. Subrat Pradhan	Technician	MM
256	Mr. Kailash Rajak	Sr. Attendant	MM
257	Mr. Premananda Mallick	Technical Assistant(SG-II)	MN
258	Mr. Biswanath Murmu	Technical Assistant(SG-II)	MN
259	Mr. Basanta Kumar Pradhan	Technical Assistant(SG-II)	MN
260	Mr. Brahmananda Naik	Technical Assistant(SG-II)	MN
261	Mr. Madan Mohan Sethi	Technical Assistant	MN
262	Mr. Sudhir Chandra Das	Assistant (SG-II)	MN
263	Mr. Bhaskar Chandra Jena	Attendant(SG-II)	MN
264	Mr. Soma Oram	Attendant(SG-II)	MN
265	Mr. Abhay Kumar Mohanta	Technician	MN
266	Mr. Debananda Amat	Technician	MN
267	Ms. Arunima Dutta	Engineer (Civil)	PA
268	Mr. Pradeep Kumar Mohanty	Technician(SG-I)	PA
269	Mr. Lalit Kumar Tirkey	Assistant (SG-II)	PA
270	Mr. Binu Prasad	Sr. Attendant	PA
271	Mr. Inayat Alli	Technical Assistant(SG-I)	PH
272	Mr. Petrus Dungdung,	Assistant (SG-I)	PH
273	Mr. Radharaman Nayak	Technical Assistant	PH
274	Mr. Nitish Kumar	Technical Assistant	PH
275	Mr. Somnath Mahapatra	Technical Assistant	PH
276	Mr. Lokanath Behera	Attendant(SG-I)	PH

Sl. No.	Name of Employee	Designation	Deptt Code
277	Ms. Smita Mohanta	Laboratory Assistant	PH
278	Mr. Anant Kumar	Laboratory Assistant	PH
279	Mr. Karuna Kar Panda	Sr. Attendant	PH
280	Mr. Pradeep Kumar Panda	Deputy Registrar	PW
281	Mr. Surya Prakash Sonwani	Superintendent	PW
282	Mr. Subash Chandra Mall	Sr. Superintendent	PW
283	Mr. Rasmi Ranjan Dash	Assistant (SG-II)	PW
284	Mr. Chitta Ranjan Swain	Assistant (SG-II)	PW
285	Mr. Suraj Kumar Modak	Junior Assistant	PW
286	Mr. Sukra Kerketta	Sr. Attendant	PW
287	Er. Santosh Kumar Upadhyay	Registrar	RG
288	Mr. Braja Bandhu Behera	Secretary Gr.II	RG
289	Mrs. Indira Rani Behera	Superintendent	RG
290	Mr. Arindam Pal	Technical Assistant	RG
291	Mr. Dhansingh Bhumij	Sr. Attendant	RG
292	Ms. Rajeeta Patra	Junior Assistant	RG
293	Mr. K. M. Kamal	Attendant(SG-II)	SA
294	Dr. Tushar Ranjan Patnaik	SAS Officer	SA
295	Mr. Nalini Nihar Nayak	SAS Officer	SA
296	Ms. Purnima Anil Joshi	SAS Assisstant	SA
297	Mr. Rajendra Kumar Kar	Assistant (SG-II)	SA
298	Mr. Gopeeshree Krushna Mohanta	Technician	SA
299	Mr. Birsa Munda	Sr. Attendant	SA
300	Mr. Chama Oram	Sr. Attendant	SA
301	Mr. Methedius Kerketta	Sr. Attendant	SA
302	Mr. Prasanna Kumar Naik	Assistant (SG-II)	SM
303	Mr. Uma Kanta Sahani	Attendant(SG-II)	SM
304	Mr. Uttam Kumar Biswal	Assistant Registrar	SR
305	Mr. Gyanendra Kumar Swain	Sr. Accountant	SR
306	Mr. Bikash Chandra Sahoo	Accountant	SR
307	Mr. Trilochan Sahoo	Assistant (SG-I)	SR
308	Smt. Pramila Das	Assistant (SG-I)	SR
309	Mr. Ashok kumar Patnaik	Assistant (SG-II)	SR
310	Ms. Priyambada Jena	Junior Assistant	SR
311	Mr. Balaram Champatiray	Security Officer	SS
312	Mr. Parsuram Sethi	Assistant (SG-II)	SS
313	Mr. Panchanan Sahoo	Driver(SG-II)	SS
314	Mr. Mohan Singh Thapa	Attendant(SG-II)	SS

Sl. No.	Name of Employee	Designation	Deptt Code
315	Mr. Sanatan Choudhury	Attendant(SG-II)	SS
316	Mr. Paurush Kumar	Sr. Technical Assistant	TE
317	Mr. Hrusikesh Das	Sr. Technical Assistant	TE
318	Mr. Abinash Biswal	Technical Assistant	TE
319	Mr. Umesh Chandra Pati	Technical Assistant	TE
320	Mr. Ashwinee Kumar Mohanta	Technician	TE
321	Mr. Snehasish Parhi	Scientific Officer	TIIR
322	Mr. Dillip Kumar Nayak	Assistant (SG-II)	TIIR
323	Mr. Akshya Kumar Das	Attendant(SG-II)	TIIR
324	Mr. Lingaraj Koleth	Attendant(SG-II)	TIIR
325	Mr. Krushna Chandra Sahu	Technician	TIIR
326	Mr. Alok Kumar Sharma	Technician	TIIR
327	Mr. Deepak Kaushal	Technician	TIIR
328	Mr. Bijay Kumar Behera	Sr. Technician	TL
329	Mr. Tapan Kumar Das	Technician	TL
330	Mr. Jogeswar Majhi	Technician	TL
331	Mr. Harihar Barkey	Assistant (SG-I)	TP
332	Mr. Ramesh Chandra Mahapatra	Stenographer(SG-II)	TP
333	Mr. Sukhnath Mahali	Sr. Attendant	TP
334	Mr. Anil Kumar Pramanik	Sr. Attendant	TP
335	Mr. Rabindra Kumar Sahoo	Sr. Technical Assistant	WS
336	Mr. Parmanand Kumar	Technical Assistant	WS
337	Mr. Anup Prasad Sahoo	Technical Assistant	WS
338	Mr. Tanmaya Kumar Sahoo	Technical Assistant	WS
339	Mr. Nirod kumar Jena	Technician(SG-I)	WS
340	Mr. Soma Tigga	Technician(SG-I)	WS
341	Mr. Ashis Kumar Pradhan	Technician(SG-I)	WS
342	Mr. Sudhansu Sekhar Samal	Technician(SG-I)	WS
343	Mr. Manoj Kumar Roul	Sr. Technician	WS
344	Mr. Rabinarayan Jena	Technician	WS
345	Mr. Debasis Dubey	Technician	WS
346	Mr. Surendranath Murmu	Technician	WS
347	Mr. Bibekananda Parida	Technician	WS
348	Mr. Chandan Kumar Rahtey	Technician	WS
349	Mr. Manas Sutradhar	Technician	WS
350	Mr. Saroj Kumar Mallick	Attendant(SG-II)	WS
351	Mr. Trilochan Sahu	Attendant(SG-II)	WS

Sl. No.	Name of Employee	Designation	Deptt Code
352	Mr. Manglu Kispotta	Attendant(SG-II)	WS
353	Mr. Damodar Barik	Sr. Attendant	WS

Annexure - 11: Training Status (Staff Members deputed/Sponsored for Training & Learning)

(Period from 01-07-2017 to 30-06-2018)

Sl. No.	Name of the Staff	Duration	Title	Venue
1	Mr. P.K.Panda, Dy.Registrar Mr. Ranjan Ku.Nayak, Sr.Supdt. Mr. G.K.Swain, Sr.Accountant Mr. Sunny Choudhary, Supdt.	24-07-2017 – 29-07-2017	Public Procurement	Faridabad
2	Mr. Trilochan Sahoo, Asst (SG-I) Mr. Bikash Ch.Sahoo, Accountant	06-09-2017 – 08-09-2017	GST	Faridabad, Haryana
3	Mr.Chittaranjan Mishra, Sr. Accountant Mr. Pradip Ku.Mohanty, Asst.(SG-I) Mr. Subash Ch.Mall, Sr.Supdt. Mr. Rashmi Ranjan Dash, Asst. (SG-II)	08-11-2017 – 10-11-2017	GST	Faridabad Haryana
4	Mr. Pratap Chandra Behera, Lab. Asst.	13-12-2017 – 15-12-2017	Small Molecule Analysis by NMR Spectroscopy & Mass Spectrometry	Lucknow
5	Mr. Krushna Chandra Sahu, Technician	12-02-2018 – 23-02-2018	Auto Cad	A.T.I. Mumbai
6	Mr. Sudhananda Pani, Technician Mr. Somnath Seth, Technician	05-02-2018 – 09-02-2018	Repair and Maintenance of Laboratory and Workshop Equipment [TEQIP-III]	NITTR, Bhopal
7	Mr.Bamdev Acharya, Dy.Registrar	09-04-2018 – 10-04-2018	Disciplinary Proceedings	New Delhi

Annexure - 12: Institute Gold Medals

Sl. No.	Name of the Medal	Rollno	Student Name	Branch / Specialisation
1	Prof. Bhubaneswar Behera Gold Medal for Best All-rounder of the UG outgoing batch-2017	113ME0427	KARRA APOORVA TEJASWI	Mechanical Engineering
2	Institute Gold Medal for Best Graduate (B.Tech and B.Arch.)	113CS0513	ANAMAY SARKAR	Computer Science and Engineering
3	Institute Gold Medal for the Best Postgraduate (M.Tech.)	215CE3035	ABHISHEK CHAKRABORTY	Transportation Engineering
4	Institute Gold Medal for the Best Postgraduate with Dual Degree B.Tech and M.Tech.	712EC5124	B SNEHA	Communication and Networks
5	Institute Gold Medal for the Best Postgraduate with Integrated M.Sc Degree	412MA5079	SACHCHIDANAND PRASAD	Mathematics

Sl. No.	Name of the Medal	Rollno	Student Name	Branch / Specialisation
6	Institute Gold Medal for the Best Postgraduate (M.Sc. and MA)	415AG2010	POULOMMI MONDAL	Applied Geology
7	Institute Gold Medal for the Best Postgraduate (MBA)	315SM1013	NAMRATA NANDA	School of Management
8	Gold Medal for the Best Under-graduate Project (B.Tech and B.Arch)	113BM0012	PUNUGANTI SAI AKANKSHA	Biomedical Engineering
9	Gold Medal for the Best Postgraduate Project (M.Tech and Dual Degree)	215ID1176	ADITYA GUPTA	Industrial Design
10	Gold Medal for the Best Project (M.Sc. Integrated M.Sc. & M.A)	415CY2033	SUCHIT GUPTA	Chemistry

Annexure - 13: Institute Silver Medals B.Tech.

Sl. No.	Roll No	Student Name	CGPA
1	113BM0498	SOUMYA GUPTA	9.60
2	113BT0024	PRATIKSHA SARANGI	9.22
3	113CE0032	AKSHAY KUMAR AGARWAL	9.28
4	113CH0524	P LAKSHMI NARAYAN PATRO	9.43
5	113CR0119	MITASHA SWAIN	9.31
6	113CS0513	ANAMAY SARKAR	9.68
7	113EC0192	A R BALALAKSHMI	9.62
8	113EI0286	SAVITA BURNWAL	9.37
9	113EE0242	PRIYANKA CHOUDHARY	9.38
10	113FT0315	ANKITA NAYAK	9.38
11	113ID0331	SUMAN MISHRA	9.04
12	113ME0564	KUKKADAPU NISHANTH	9.68
13	113MM0434	ASHIKA AGRAWAL	9.27
14	113MN0483	ABHAYA KUMAR MISHRA	9.40

Institute Silver Medals Integrated M.Sc.

Sl. No.	Roll No	Student Name	CGPA
1	412CY5048	NISHESH KUMAR GUPTA	9.00
2	412MA5079	SACHCHIDANAND PRASAD	9.17
3	412PH5005	ITESH KUMAR PANDA	8.95

Annexure - 14: Institute Silver Medals B.Tech. M.Tech Dual Degree

Sl. No.	Roll No	Student Name	CGPA
1	712CE3155	NAMAN KUMAR	9.36
2	712CE4018	SITAM SUVAM JENA	8.37
3	712CH1099	SACHIN PANDEY	9.12
4	712CR2030	BARSA BAISALI PANDA	8.70
5	712CS1039	C SHWETA	9.17
6	712CS2043	ANMOL DALMIA	9.68
7	712EC2055	C RANGA SUMIRAN	9.09
8	712EC5124	B SNEHA	9.65
9	712EE1144	ABHISHEK PISIPATI	9.09
10	712EE3127	CHIKOTI AKASH GUPTA	8.98
11	712EE4086	GOURAV PRADHAN	8.96
12	712ME4147	ASIT KUMAR	9.25
13	712MM1117	SOHAN KUMAR GHOSH	9.38
14	712MN1106	AMAN MISHRA	8.43

Annexure - 15: Institute Silver Medals M.Tech.

Sl. No.	Roll No	Student Name	CGPA
1	215BM1001	DEEPANJALI PAVNESH GAUR	8.94
2	215BM2010	DEBADRITA PAUL	9.37
3	215CE1266	VIKRANT PATEL	9.45
4	215CE2268	MASULA SRINIVASULU	9.56
5	215CE3035	ABHISHEK CHAKRABORTY	9.93
6	215CE4286	PRATEEK KUMAR SINGH	9.39
7	215CH1051	GANGOTREE RAI	8.57
8	215CH2296	JYOTI SAHU	9.19
9	215CR2446	CHAVVA SWETHA	8.78
10	215CS1067	ARPITA DUTTA	9.78
11	215CS2081	SUGUMARAN S	9.08
12	215CS3087	ANAND TIRKEY	9.26
13	215CS4092	KAUSHIK PAL	9.26
14	215EC2327	AKSHDEEPIKA	9.73
15	215EC3334	RAUT SUKHADA ASHOK	8.98
16	215EC5118	DHRITIMAN DAS	9.39
17	215EC6133	GARGI V PILLAI	8.98
18	215EE1137	M GANESH	9.29
19	215EE3378	JYOTIRMAYA SAHOO	8.86
20	215EE4164	BISWAJIT SAHOO	8.70
21	215EE5388	RAGHAV TOMER	9.16
22	215ID1176	ADITYA GUPTA	9.34
23	215ME1186	SAKTISWARUP MOHAPATRA	9.23
24	215ME2402	MANDAPATI RAVI KUMAR	9.73
25	215ME3215	POOJA PATEL	9.21
26	215ME5222	ABEL CHRISTENA FRANCIS	9.46
27	215ME6420	SUBHRAJIT PRADHAN	9.30
28	215MM1240	KEVIN JACOB	9.20
29	215MM2436	GAURAV PANDEY	8.62
30	215MN1469	JITENDRA KUMAR TRIPATHI	8.31

Annexure - 16: Institute Silver Medals MA

Sl. No.	Roll No	Student Name	CGPA
1	415HS1006	PALLAVI KANUNGO	9.22

Institute Silver Medals M.Sc.

Sl. No.	Roll No	Student Name	CGPA
1	415CY2033	SUCHIT GUPTA	9.12
2	415AG2010	POULOMMI MONDAL	9.55
3	415AS2022	ABHISHEK KUMAR JHA	8.69
4	415LS2064	SARBARI SAHA	9.00
5	415MA2087	DEBASIS SHARMA	8.78
6	415PH2114	DEPANSHU VARSHNEY	9.11

Annexure - 17: Endowment Medals and Awards

Sl. No.	Name of the Medal	Roll No	Student Name	Branch / Specialisation
1	Prof. S.C. Naik Gold Medal for Best Graduate of Chemical Engineering	113CH0524	P LAKSHMI NARAYAN PATRO	Chemical Engineering
2	Snigdhashri Patra Memorial Gold Medal for the best Ph.D. Thesis of 2016-17	513EE1012	KUMAR PRASANNAJIT PRADHAN	Electrical Engineering
3	Saurav Ranjan Kar Memorial Award (Best Graduate of the Institute)	113CS0513	ANAMAY SARKAR	Computer Science and Engineering
4	Pranab Memorial Award (Best Graduate of Mechanical Engineering)	113ME0564	KUKKADAPU NISHANTH	Mechanical Engineering
5	Bhaswati Paul Memorial Award (Best Project on Environment Pollution)	113ME0423	NAUSHITA SHARMA	Mechanical Engineering
6	Santa Jain Prize Best product oriented project	215ID1176	ADITYA GUPTA	Industrial Design
7	Bunty Memorial Award (Best Engineering Graduate of the Institute)	113CS0513	ANAMAY SARKAR	Computer Science and Engineering
8	Sugat Kishore Mall Memorial Award (Best Graduate of Electrical Engineering)	113EE0242	PRIYANKA CHOUDHARY	Electrical Engineering
9	Prof. Ashok Kumar Mohanty Award (Best All-rounder of Metallurgical and Materials Engineering)	113MM0434	ASHIKA AGRAWAL	Metallurgical and Materials Engineering
10	Ronak Das Memorial Award (Best Undergraduate Project of Chemical Engineering)	113CH0069	SAMLESH CHOUDHURY	Chemical Engineering

Annexure - 18: Codes of different Departments and Offices Management

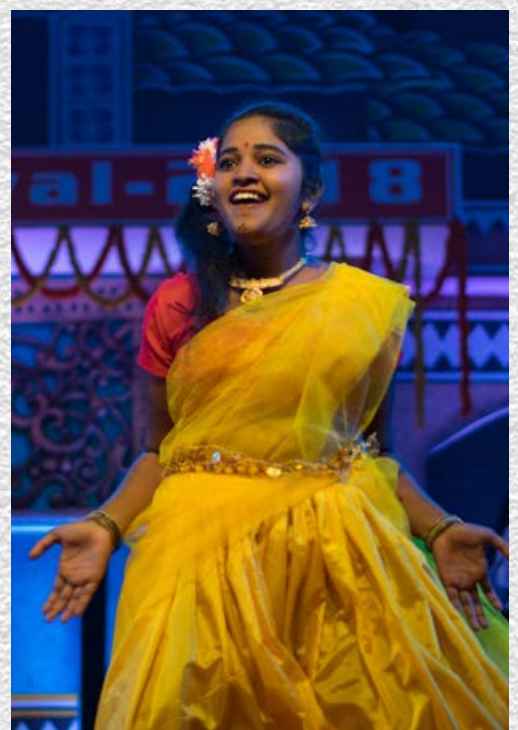
Director's Office	DR
Deans' Office	DN
Dean (Academic Affairs)	AA
Dean (Planning & Development)	PD
Dean (SRICCE)	SR
Dean (Student Affairs)	SA
Dean (Alumni Affairs & Resources Generation)	AR
Dean (Faculty & Welfare)	FW
Registrar	RG
Academic Departments	
Biotechnology & Medical Engineering	BM
Civil Engineering	CE
Chemical Engineering	CH
Computer Science & Engineering	CS

Director's Office	DR
Chemistry	CY
Electronics & Communication Engineering	EC
Electrical Engineering	EE
Earth & Atmospheric Sciences	ER
Food Process Engineering	FP
Humanities & Social Sciences	HS
Industrial Design	ID
Life Science	LS
Mathematics	MA
Mechanical Engineering	ME
Metallurgical & Materials Engineering	MM
Mining Engineering	MN
Planning & Architecture	PA
Physics & Astronomy	PH
School of Management	SM
Central Workshop	WS
Academic Centres	
Computer Centre	CC
Extra Academic Activities	EA
Biju Pattanik Central Library	LB
Examination Office	EX
Student Activity Centre	SA
Training & Placement Centre	TP
Alumni Relation Centre	AR
Technology Innovation & Industry Relation (TIIR)	TI
A N Khosla Centre for Technology Enabled Learning	TE
Administration	
Registrar's Office	RG
Establishment Section	ES
Academic Section	AC
Finance & Accounts Section	FA
Internal Audit Section	IA
Purchase & Works Section	PW
Sponsored Research, Industrial Consultancy & Continuing Education (SRICCE)	SR
Technical Services Section	TS
Support Services and Facilities	
Estate Management	EM
Civil Construction	CT
Guest Houses	GH
Electrical Construction	ET
Automation Cell	OA
Health Centre	HC
Safety & Security	SS
Telephone Exchange	TL
Halls of Residence	
Chief Warden's Office	CW
S S Bhatnagar Hall of Residence	SB
M Visweswaraya Hall of Residence	MV
G D Birla Hall of Residence	GB
Dhirubhai Ambani Hall of Residence	DA
M S Swaminathan Hall of Residence	MS
C V Raman Hall of Residence	CV
Homi Bhabha Hall of Residence	HB
Kiran Mazumdar Shaw Hall of Residence	KM
Vikram Sarabhai Hall of Residence	VS
Satish Dhawan Hall of Residence	SD



Cosmopolitan 2018

Day - 2





**FINANCIAL
STATEMENT**
2017-2018



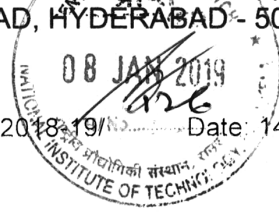
NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

STATEMENT OF ACCOUNTS FOR THE FINANCIAL YEAR 2017-2018



महानिदेशक लेखापरीक्षा(केंद्रीय) का कार्यालय
सैफाबाद, हैदराबाद-500004.

OFFICE OF THE
DIRECTOR GENERAL OF AUDIT (CENTRAL)
SAIFABAD, HYDERABAD - 500 004.



No.DGA(C)/BO-Odisha/CRA-V/SAR.2017-18/NIT/RKL/2018-19/ND Date: 14.12.2018

To
The Secretary to Government of India.
Ministry of Human Resource Development,
Department of Higher Education,
C-Wing, Shastri Bhavan, Dr. Rajendra Prasad Road,
New Delhi-110 001

Sir,

विषय: Separate Audit Report on the accounts of National Institute of Technology, Rourkela, Odisha, for the year 2017-18

Separate Audit Report on the Accounts of National Institute of Technology, Rourkela, Odisha, for the year 2017-18, Annexure thereof and one copy of the Annual Accounts of the year are forwarded herewith for placing before both the Houses of Parliament.

The dates of presentation of Separate Audit Report in both the Houses of Parliament may please be intimated.

Receipt of this letter along with the enclosures may kindly be acknowledged.

भवदीय,

Sd/-

महानिदेशक लेखापरीक्षा (केंद्रीय)
Director General of Audit (Central)

Endt. No.DGA(C)/BO-Odisha/CRA-V/SAR.2017-18/NIT/RKL/2018-19/1034 Date: 14.12.2018
26

Copy to the Director, National Institute of Technology, Rourkela-769 008, Odisha, along with one copy of Annual Accounts for the year 2017-18 (English version), with a request to furnish Hindi version of the approved Annual Accounts 2017-18 (2 sets), to Branch Office, Odisha.

संलग्नथोपरि

Director (CEA)

SEPARATE AUDIT REPORT ON THE ACCOUNTS OF THE NATIONAL INSTITUTE OF TECHNOLOGY (NIT), ROURKELA FOR THE YEAR ENDED 31 MARCH 2018

1. We have audited the attached Balance Sheet of National Institute of Technology (NIT), Rourkela as at 31.03.2018, the Receipts & Payment Account and Income & Expenditure Account for the year ended on that date under Section 19 (2) of the Comptroller & Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 read with Section 22(2) of the National Institutes of Technology Act, 2007. These financial statements are responsibility of the Institute's Management. Our responsibility is to express an opinion on these financial statements based on our audit.
2. This Separate Audit Report contains the comments of the Comptroller & Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transactions with regard to compliance with the Law, Rules & Regulations (Propriety and Regularity) and efficiency-cum-performance aspects, etc., if any, are reported through Inspection Report/CAG's Audit Reports separately.
3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidences supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.
4. Based on our audit, we report that:
 - (i) We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit.
 - (ii) The Balance Sheet, Income & Expenditure Accounts and Receipts & Payments Accounts dealt with by this Report have been drawn in the revised format approved by Government of India, Ministry of Human Resources Development for Central Higher Educational Institutions.
 - (iii) In our opinion, proper books of accounts and other relevant records have been maintained by the Institute as required, in so far as it appears from our examination of such books.

(iv) We further, report that:

Comments on Accounts:

A. GENERAL

1. Deviation from prescribed formats of MHRD:

The Schedules of Balance Sheet and Income & Expenditure account viz. schedule no. 1,2,2A,4,7,9,10,11,12 and 19 were not showing figures under each sub-head as prescribed under the format approved by MHRD.

2. Non-provisioning of Liabilities towards Retirement Benefits:

‘No provision for retirement benefits has been made in the accounts in contravention of accounting Standard 15 issued by ICAI.’

3. Depreciation rates adopted by the Institute in respect of Office Equipment was different from the rates given in the format of account prescribed by the MHRD.

B. Grant-in-Aid

Out of total Grants-in-Aid of ₹ 238.40 crore received during the financial year 2017-18, ₹ 135.55 crore was adjusted against excess expenditure made in the previous year i.e. 2016-17 and from the remaining balance of ₹ 102.85 crore, the Institute incurred an expenditure of ₹ 188.30 crore showing a deficit of ₹ 85.45 crore as on 31 March 2018.

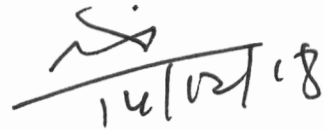
C. Management Letter

Deficiencies which have not been included in the Audit Report have been brought to the notice of the Institute through a management letter issued separately for remedial/corrective action.

(v) Subject to our observations in the preceding paragraphs, we report that the Balance Sheet, Income & Expenditure and Receipts and payment account dealt with by this Report are in agreement with the books of accounts.

(vi) In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read with the Accounting Policies and Notes on Accounts, and subject to the significant matters stated above and other matters mentioned in **Annexure-I** to this Audit Report give a true and fair view in conformity with accounting principles generally accepted in India.

- a. In so far as it relates to the Balance Sheet, of the state of affairs of the NIT, Rourkela as on 31 March 2018; and
- b. In so far as it relates to the Income & Expenditure Account of the deficit for the year ended on that date.

A handwritten signature in black ink, followed by a horizontal line and the date '14/02/18' written below it.

Director General of Audit (Central)

Annexure-I

1. Adequacy of Internal Audit System:

Internal Audit Wing of the Institute has completed Internal Audit and Internal Audit Reports were issued in respect of all Academic and Non-academic Departments. However, the Internal Audit Report was not published in a consolidated manner to take a view on the adequacy of the Internal Audit System.

2. Adequacy of Internal Control System:

The Internal Control System needs to be strengthened as no pursuance was made with bank authorities of different banks for reconciliation of the discrepancies between pass book balance and statement of Accounts issued by banks as on 31st March 2018.

3. System of Physical verification of fixed assets:

Physical Verification of Fixed Assets was conducted during the Financial Year 2017-18.

4. System of Physical verification of inventory:

Physical verification of Inventory was conducted during the Financial Year 2017-18.

5. Regularity in payment of statutory dues:

Statutory dues were paid regularly, but Tax Deducted at Source (TDS) on Consultancy Service in respect of Sponsored Research Industrial Consultancy & Continuing Education (SRICCE), NIT Rourkela amounting to ₹ 1,92,014/- for the year 2013-14 was not yet deposited with the concerned Income Tax Authority.


Director/CEA

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

BALANCE SHEET FOR THE YEAR ENDED ON 31.03.2018

Amount in ₹

Particulars	Schedule	As at 31-03-2018	As at 31-03-2017
FUNDS & LIABILITIES			
CORPUS/CAPITAL FUND	1	7,33,65,86,324.56	7,07,35,30,762.19
DESIGNATED/EARMARKED/ENDOWMENT FUNDS	2	2,38,21,76,179.64	2,04,23,68,372.81
CURRENT LIABILITIES AND PROVISIONS	3	1,18,53,22,455.86	88,51,57,501.49
TOTAL		10,90,40,84,960.06	10,00,10,56,636.49
ASSETS			
FIXED ASSETS	4		
Tangible Assets		4,68,64,54,169.90	4,57,39,79,470.62
Intangible Assets		-	-
Capital Work-in-Progress		2,56,51,58,680.19	2,45,64,67,779.19
INVESTMENTS FROM EARMARKED/ ENDOWMENT FUNDS	5		
Long Term		1,02,06,45,583.38	70,10,32,177.69
Short Term			
INVESTMENTS- OTHERS	6	-	-
CURRENT ASSETS	7	1,69,36,80,137.27	80,74,92,120.15
LOANS, ADVANCES & DEPOSITS	8	93,81,46,389.32	1,46,20,85,088.85
TOTAL		10,90,40,84,960.06	10,00,10,56,636.49



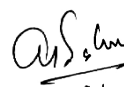
Asst Registrar (FA)

Asst. Registrar (F&A)
National Institute of Technology
Rourkela - 769008, Orissa



Registrar

Registrar
National Institute of Technology
Rourkela-769008 (Odisha)



Director

Director
National Institute of Technology
Rourkela-769008, Odisha

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED ON 31.03.2018

Amount in ₹

Particulars	Schedule	As at 31-03-2018	As at 31-03-2017
INCOME			
Academic Receipts	9	29,45,44,079.28	29,58,12,885.19
Grants & Subsidies	10	1,47,11,63,643.17	1,19,19,50,554.65
Income from Investments	11	-	-
Interest Earned	12	3,64,69,901.00	47,11,845.00
Other Income	13	5,27,65,943.88	3,67,50,727.73
Prior Period Income	14	-	-
TOTAL		1,85,49,43,567.33	1,52,92,26,012.57
EXPENDITURE			
Staff Payments & Benefits	15	1,05,14,03,880.00	79,57,91,167.94
Academic Expenses	16	34,83,41,298.16	36,22,52,655.50
Administrative and General Expenses	17	20,66,40,488.56	13,55,15,677.45
Transportation Expenses	18	3,57,421.00	7,29,429.00
Repairs & Maintenance	19	5,17,46,811.00	5,89,95,062.67
Finance Cost	20	1,88,292.73	2,86,370.51
Depreciation for the year	4	26,58,65,742.83	25,30,63,666.62
Other Expenses	21	-	-
Prior Period Item(s)	22	43,75,413.80	70,17,920.54
TOTAL		1,92,89,19,348.08	1,61,36,51,950.23
SURPLUS / (DEFICIT)		-7,39,75,780.75	-8,44,25,937.66
Fund Transfers [From / (To)]:			
Deferred Income-Capital Fund		26,58,65,742.83	25,30,63,666.62
Funds for Capital Expenditure		-7,50,00,000.00	-7,50,00,000.00
Funds for Academic Activities		-2,50,00,000.00	-2,50,00,000.00
Funds for Maintenance of Assets		-2,50,00,000.00	-2,50,00,000.00
Staff Development Fund		-2,50,00,000.00	-2,50,00,000.00
BALANCE SURPLUS /(DEFICIT) CARRIED TO GENERAL FUND (Sch-1)		4,18,89,962.08	1,86,37,728.96
SIGNIFICANT ACCOUNTING POLICIES	23		
CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS	24		


 Asst Registrar (FA)
 Asst. Registrar (F&A)
 National Institute of Technology
 Rourkela -769008, Orissa


 Registrar
 Registrar
 National Institute of Technology
 Rourkela-769008 (Odisha)


 Director
 Director
 National Institute of Technology
 Rourkela-769008, Odisha

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31.03.2018

SCHEDULE 01 - CORPUS / CAPITAL FUND

		Amount in ₹	
Particulars		As at 31-03-2018	As at 31-03-2017
A	DEFERRED INCOME - CAPITAL FUND		
	Balance as at the beginning of the Year	7,03,04,47,250.80	6,86,27,24,212.00
	Addition during the year:	48,70,31,343.12	42,07,86,705.42
		7,51,74,78,593.92	7,28,35,10,917.42
	Less: Refunds / Transfers	26,58,65,742.83	(25,30,63,666.62)
	TOTAL (A)	7,25,16,12,851.09	7,03,04,47,250.80
B	GENERAL FUND		
	Balance as at the beginning of the Year	4,30,83,511.39	2,44,45,782.43
	Add: Surplus/(Deficit) transfer from Income over Expenditure Account	4,18,89,962.08	1,86,37,728.96
	TOTAL (B)	8,49,73,473.47	4,30,83,511.39
	TOTAL (A+B)	7,33,65,86,324.56	7,07,35,30,762.19

SCHEDULE 02 - DESIGNATED / EARMARKED FUNDS (Supported by Sch-2A)

		Amount in ₹	
Particulars		As at 31-03-2018	As at 31-03-2017
1	Institute Corpus Fund	1,56,15,86,831.75	1,39,87,05,881.98
2	Funds for Capital Expenditure	31,71,54,862.03	24,03,71,011.45
3	Funds for Academic Activities	10,36,26,362.68	7,86,26,362.68
4	Funds for Maintenance of Assets	10,99,02,136.29	8,31,18,285.71
5	Staff Development Fund	9,22,77,850.00	6,54,96,520.42
6	SRICCE Fund	3,87,10,938.36	3,83,99,191.39
7	Student Aid Fund	1,31,63,290.93	1,67,38,407.73
8	Old Pension Fund	8,40,19,948.75	7,83,01,205.39
9	Retirement Benefit Funds	1,39,83,115.00	1,39,76,575.00
10	Endowment Fund	4,52,86,765.85	2,68,48,731.06
11	Staff Welfare Fund	24,64,078.00	17,86,200.00
	TOTAL	2,38,21,76,179.64	2,04,23,68,372.81

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31.03.2018

SCHEDULE 02A - DESIGNATED / EARMARKED FUNDS

Sl. No.	Particulars	Addition to Fund	Total	Refunds / Transfer	Capital Exp	Revenue Exp	Total Exp	Closing Bal. as on 31-03-2018
1	Institute Corpus Fund	1,39,87,05,881.98	1,56,19,33,334.75	3,46,503.00	-	-	3,46,503.00	1,56,15,86,831.75
2	Funds for Capital Expenditure	24,03,71,011.45	31,71,54,862.03	-	-	-	-	31,71,54,862.03
3	Funds for Academic Activities	7,86,26,362.68	10,36,26,362.68	-	-	-	-	10,36,26,362.68
4	Funds for Maintenance of Assets	8,31,18,285.71	10,99,02,136.29	-	-	-	-	10,99,02,136.29
5	Staff Development Fund	6,54,96,520.42	9,22,77,850.00	-	-	-	-	9,22,77,850.00
6	SRICCE Fund	3,83,99,191.39	6,70,01,842.89	-	-	2,82,90,904.53	2,82,90,904.53	3,87,10,938.36
7	Student Aid Fund	1,67,38,407.73	1,67,38,407.73	35,75,116.80	-	-	35,75,116.80	1,31,63,290.93
8	Old Pension Fund	7,83,01,205.39	8,40,19,948.75	-	-	-	-	8,40,19,948.75
9	Retirement Benefit Funds	1,39,76,575.00	1,39,83,115.00	-	-	-	-	1,39,83,115.00
10	Endowment Fund	2,68,48,731.06	4,63,85,379.10	10,98,613.25	-	-	10,98,613.25	4,52,86,765.85
11	Staff Welfare Fund	17,86,200.00	24,74,078.00	-	-	10,000.00	10,000.00	24,64,078.00
	TOTAL	2,04,23,68,372.81	2,41,54,97,317.22	50,20,233.05	-	2,83,00,904.53	3,33,21,137.58	2,38,21,76,179.64
	Previous Year	1,63,89,36,581.53	2,06,83,46,501.31	26,03,304.50	-	2,33,74,824.00	2,59,78,128.50	2,04,23,68,372.81

Amount in ₹

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31.03.2018

SCHEDULE 03 - CURRENT LIABILITIES AND PROVISIONS

		Amount in ₹	
	Particulars	As at 31-03-2018	As at 31-03-2017
A	CURRENT LIABILITIES		
1	Statutory Liabilities (GPF,TDS,WC TAX, CPS, GIS, NPS) :	11,65,68,969.92	1,53,19,712.00
2	Secured Loans	-	-
3	Security Deposits		
	a. Security Deposit (Contractor)	30,39,61,751.00	27,63,27,731.50
	b. Security Deposit (Staffs)	26,439.00	26,439.00
	c. Security Deposit (Students)	4,77,54,564.33	4,62,51,667.49
4	Sundry Creditors (For Supplies)	7,49,18,052.02	12,75,85,325.90
5	Accounts Payables and Other Liabilities	47,83,646.95	1,72,44,376.16
6	Advances Received	9,31,28,325.42	7,90,30,019.84
7	Grants / Other Funds (Supported by Sch-3A)	29,64,35,840.40	24,33,31,576.99
8	Other current Liabilities		
	a. TEQIP II (Payable)	1,74,341.00	23,34,794.00
	TOTAL (A)	93,77,51,930.04	80,74,51,642.88
B	PROVISIONS		
1	Salary	12,59,34,109.82	3,31,98,509.61
2	Gratuity	11,90,273.00	59,23,404.00
3	Pension	4,53,58,184.00	1,07,40,600.00
4	UEL	1,23,669.00	1,59,709.00
5	Expenses payable (Liability for Exp.)	7,15,84,456.00	2,33,09,142.00
6	Provision for D.A.	33,79,834.00	43,74,494.00
	TOTAL (B)	24,75,70,525.82	7,77,05,858.61
	TOTAL(A+B)	1,18,53,22,455.86	88,51,57,501.49

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31.03.2018

SCHEDULE 03A - GRANTS / OTHER FUNDS (having Credit Balance)

Sl. No.	Particulars	Opening Bal. as on 01-04-2017	Addition to Fund	Total	Refunds / Transfer	Capital Exp	Revenue Exp	Total Exp	Closing Bal. as on 31-03-2018
1	Grants / Subsidies								
a	TEQIP II Grants	5,09,76,540.63	33,37,267.00	5,43,13,807.63	-	2,70,46,700.00	99,93,723.75	3,70,40,423.75	1,72,73,383.88
b	TEQIP III Grants	-	17,80,521.00	17,80,521.00	-	49,698.00	17,20,823.00	17,70,521.00	10,000.00
c	Other Grant	1,95,11,164.00	20,00,000.00	2,15,11,164.00	-	98,13,000.00	1,49,083.00	99,62,083.00	1,15,49,081.00
2	Research & Consultancy Project Funds (SRICCE)	16,80,63,177.36	32,30,73,842.03	49,11,37,019.39	21,62,730.00	5,95,27,533.00	16,62,61,596.87	22,79,51,859.87	26,31,85,159.52
3	External Fellowship	26,40,830.00	74,75,912.00	1,01,16,742.00	72,26,249.00	-	-	72,33,520.00	28,83,222.00
4	External Scholarship	21,39,865.00	1,38,18,392.00	1,59,58,257.00	1,44,23,263.00	-	-	1,44,23,263.00	15,34,994.00
	TOTAL	24,33,31,576.99	35,14,85,934.03	59,48,17,511.02	2,38,12,242.00	9,64,36,931.00	17,81,25,226.62	29,83,81,670.62	29,64,35,840.40
	Previous Year	24,96,14,556.11	30,35,66,729.50	55,31,81,285.61	2,13,14,479.00	10,10,29,824.00	18,75,05,405.62	30,98,49,708.62	24,33,31,576.99

SCHEDULE 03B - GRANTS / OTHER FUNDS (having Debit Balance, shown under Sch-8)

Sl. No.	Particulars	Opening Bal. as on 01-04-2017	Addition to Fund	Total	Refunds / Transfer	Capital Exp	Revenue Exp	Total Exp	Closing Bal. as on 31-03-2018
1	Grants / Subsidies								
a	Plan Grant	(1,27,89,41,967.00)	2,38,40,00,000.00	1,10,50,58,033.00	-	44,77,39,965.12	1,47,11,63,643.17	1,91,89,03,608.29	(81,38,45,575.29)
	TOTAL	(1,27,89,41,967.00)	2,38,40,00,000.00	1,10,50,58,033.00	-	44,77,39,965.12	1,47,11,63,643.17	1,91,89,03,608.29	(81,38,45,575.29)
	Previous Year	(1,57,26,11,626.18)	1,88,21,43,000.00	30,95,31,373.82	-	39,65,22,786.17	1,19,19,50,554.65	1,58,84,73,340.82	(1,27,89,41,967.00)

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31.03.2018

SCHEDULE 04 - FIXED ASSETS AS ON 31.03.2018

SL No.	PARTICULARS	GROSS BLOCK				DEPRECIATION				NET BLOCK		Amount in ₹
		As At beginning of year	Additions during the year	Deletions/ adjustments during the year	As at the year end	As at beginning of year	For the year	Deletions/ adjustments during the year	Upto end of the year	As at the current year end	As at the previous year end	
A	FIXED ASSETS	A	B	C	D=A+B+C	E	F	G	H=E+F+G	I=D-H	J=A-E	
	INSTITUTE											
1	Land	4,38,879.00	-	-	4,38,879.00	-	-	-	-	4,38,879.00	4,38,879.00	
2	Building	4,25,34,44,582.29	49,79,710.00	-	4,25,84,24,292.29	72,82,03,882.97	8,51,66,693.00	900.00	81,33,69,675.97	3,44,50,54,616.32	3,52,52,40,696.71	
3	Science Equipments	1,02,99,54,976.34	3,04,97,587.75	-	1,06,04,52,564.09	58,80,32,708.43	8,48,36,192.00	-	67,28,68,900.43	38,75,83,663.66	44,19,22,268.00	
4	Computer / Peripherals	45,85,77,339.22	1,65,02,458.00	1,19,09,901.00	46,31,69,896.22	39,16,09,300.98	3,18,35,139.00	47,63,960.00	42,34,44,439.98	3,97,25,456.24	6,69,68,038.61	
5	Library Books	15,45,77,588.00	1,39,64,210.00	-	16,85,41,798.00	12,44,47,426.00	1,68,54,180.00	-	14,13,01,606.00	2,72,40,192.00	3,01,30,162.00	
6	Furniture & Fixture	22,73,92,021.56	35,24,273.00	-	23,09,16,294.56	9,70,50,717.18	1,73,18,774.00	-	11,43,69,491.18	11,65,46,803.38	13,03,41,304.82	
7	Plant ,Machinery & Equipments	29,99,66,805.58	28,83,88,566.00	-	58,83,55,371.58	17,65,56,796.46	2,45,58,525.83	-	20,11,15,322.29	38,72,40,049.29	12,34,10,009.47	
8	Vehicles	5,68,270.00	-	-	5,68,270.00	5,68,269.00	-	-	5,68,269.00	1.00	1.00	
9	Fixed Asset Below ₹ 5000	4,06,58,771.00	29,14,259.00	-	4,35,73,030.00	4,06,58,771.00	29,14,259.00	-	4,35,73,030.00	-	-	
	TEQIP-I											
10	Building	1,00,28,580.00	-	-	1,00,28,580.00	-	-	-	-	1,00,28,580.00	1,00,28,580.00	
11	Science Equipments	11,78,43,398.00	-	-	11,78,43,398.00	-	-	-	-	11,78,43,398.00	11,78,43,398.00	
12	Library Books	60,13,363.00	-	-	60,13,363.00	-	-	-	-	60,13,363.00	60,13,363.00	
13	Furniture	40,38,614.00	-	-	40,38,614.00	-	-	-	-	40,38,614.00	40,38,614.00	
	TEQIP II											
14	Science Equipments	10,78,93,739.00	1,96,47,370.00	-	12,75,41,109.00	-	-	-	-	12,75,41,109.00	10,78,93,739.00	
15	Computer / Peripherals	79,20,530.00	63,58,005.00	-	1,42,78,535.00	-	-	-	-	1,42,78,535.00	79,20,530.00	
16	Furniture	47,159.00	-	-	47,159.00	-	-	-	-	47,159.00	47,159.00	
17	Plant ,Machinery & Equipments	17,42,728.00	10,41,325.00	-	27,84,053.00	-	-	-	-	27,84,053.00	17,42,728.00	
	TEQIP III											
18	Science Equipments	-	24,800.00	-	24,800.00	-	-	-	-	24,800.00	-	
19	Furniture	-	24,898.00	-	24,898.00	-	-	-	-	24,898.00	-	
	TOTAL (A)	6,72,11,07,343.99	38,78,67,461.75	1,19,09,901.00	7,09,70,64,904.74	2,14,71,27,872.02	26,34,83,762.83	47,64,860.00	2,41,06,10,734.85	4,68,64,54,169.90	4,57,39,79,470.62	
	CAPITAL (WIP)											
1	Building	2,23,74,11,611.00	33,93,42,121.00	4,19,46,616.00	2,53,48,07,116.00	-	-	-	-	2,53,48,07,116.00	2,23,74,11,611.00	
2	Electrical Installation	20,49,55,164.00	2,49,52,125.00	22,95,67,866.00	3,39,423.00	-	-	-	-	3,39,423.00	20,49,55,164.00	
3	Plant, Machinery & Equipment	1,41,01,004.19	2,01,25,183.00	42,14,046.00	3,00,12,141.19	-	-	-	-	3,00,12,141.19	1,41,01,004.19	
	TOTAL (B)	2,45,64,67,779.19	38,44,19,429.00	27,57,28,528.00	2,56,51,58,680.19	-	-	-	-	2,56,51,58,680.19	2,45,64,67,779.19	
	GRAND TOTAL (A+B)	9,17,75,75,123.18	77,22,86,890.75	28,76,38,429.00	9,66,22,23,584.93	2,14,71,27,872.02	26,34,83,762.83	47,64,860.00	2,41,06,10,734.85	7,25,16,12,850.09	7,03,04,47,249.81	
	D. PREVIOUS YEAR	8,75,67,88,416.44	91,54,02,942.98	49,46,16,237.81	9,17,75,75,121.61	1,89,40,64,205.18	25,30,63,666.62	-	2,14,71,27,871.81	7,03,04,47,249.81	6,86,27,24,212.00	

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31.03.2018

SCHEDULE 05 - INVESTMENTS FROM EARMARKED/ENDOWMENT FUND

		Amount in ₹	
	Particulars	As at 31-03-2018	As at 31-03-2017
1	Term Deposits with Schedule Banks:		
	a. Corpus / Endowment / Earmarked Funds	88,02,51,982.30	52,18,60,639.61
	b. SRICCE Funds	7,41,57,652.00	7,62,01,589.00
	c. TEQIP Funds	1,18,43,547.00	4,08,43,547.00
	d. Old Pension Fund	5,43,92,402.08	6,21,26,402.08
	TOTAL	1,02,06,45,583.38	70,10,32,177.69

SCHEDULE 06 - INVESTMENTS OTHERS

		Amount in ₹	
	Particulars	As at 31-03-2018	As at 31-03-2017
1	Securities / Debentures /Bonds	-	-
2	Others	-	-
	TOTAL	-	-

SCHEDULE 07 - CURRENT ASSETS

		Amount in ₹	
	Particulars	As at 31-03-2018	As at 31-03-2017
1	Cash-in-hand (including cheques/ drafts and imprest)	1,487.59	1,487.59
2	Bank Balances:		
	a. In Current Accounts	7,99,18,814.54	13,39,25,845.48
	b. In Savings Accounts	77,64,681.41	79,34,977.67
	c. Term Deposits	1,38,37,49,480.75	54,39,08,295.81
3	Bank Accounts - TEQIP-II	56,02,919.88	94,55,299.63
4	Bank Accounts - TEQIP-III	10,000.00	-
5	Bank Accounts - SRICCE	21,62,49,867.53	11,18,97,078.40
6	Bank Balance - Old Pension Fund	3,82,885.57	3,69,135.57
	TOTAL	1,69,36,80,137.27	80,74,92,120.15

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31.03.2018

SCHEDULE 08 - LOANS, ADVANCES & DEPOSITS

		Amount in ₹	
	Particulars	As at 31-03-2018	As at 31-03-2017
A	Institute		
1	Loans & Advances		
	a. Advances to Supplier / Contractor	2,17,85,133.81	6,28,27,767.00
	b. Advances to Staffs	25,05,744.00	41,26,823.00
	c. Advances to Students	5,77,073.00	8,10,725.00
	d. Advances to Others	31,650.00	8,64,228.00
2	Accrued Interest	2,58,56,304.29	28,44,306.00
3	Prepaid Expenses	92,31,627.00	48,29,322.00
4	Deposits	1,52,78,500.00	1,32,28,111.00
5	Other Receivables		
	a. Debit balances of Grant-in-Aid (Sch-3B)	81,38,45,575.29	1,27,89,41,967.00
	b. Debit balances in Sponsored Projects		-
	c. Debit balances in Fellowship & Scholarship		-
	d. Grants Receivable	-	5,21,43,000.00
	e. Other Receivables	16,62,176.48	2,13,696.76
	f. Maintenance WIP	66,38,108.00	40,73,286.00
B	TEQIP-II		
1	Loans & Advances	1,258.00	30,12,488.00
C	SRICCE		
1	Accrued Interest	37,26,943.20	42,76,987.20
2	Loans & Advances	77,61,635.15	1,40,86,714.15
3	Other Receivables		-
D	OLD PENSION FUND		
1	Accrued Interest	12,39,121.74	27,96,351.74
2	Loans & Advances	2,76,76,405.36	1,27,63,479.00
3	Other Receivables	3,29,134.00	2,45,837.00
	TOTAL	93,81,46,389.32	1,46,20,85,088.85

SCHEDULE 09 - ACADEMIC RECEIPTS

		Amount in ₹	
	Particulars	As at 31-03-2018	As at 31-03-2017
	FEES FROM STUDENTS		
1	Tuition Fee	29,17,79,479.28	29,28,59,534.19
2	Admission Fee	24,99,500.00	24,03,501.00
3	Mark Sheet, Certificate Fee	74,500.00	1,36,850.00
4	Other Fee	1,90,600.00	4,13,000.00
	TOTAL	29,45,44,079.28	29,58,12,885.19

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31.03.2018

SCHEDULE 10 - GRANTS & SUBSIDIES

		Amount in ₹	
Particulars		As at 31-03-2018	As at 31-03-2017
1	Central Government	1,47,11,63,643.17	1,19,19,50,554.65
2	State Government		-
3	Others (Specify)		-
TOTAL		1,47,11,63,643.17	1,19,19,50,554.65

SCHEDULE 11 - INCOME FROM INVESTMENTS

		Amount in ₹	
Particulars		As at 31-03-2018	As at 31-03-2017
1	Interest Income	4,81,79,439.74	4,75,21,825.89
2	Others		-
	Total	4,81,79,439.74	4,75,21,825.89
	Less: Transferred to Earmarked/Endowment Funds	4,81,79,439.74	4,75,21,825.89
TOTAL		-	-

SCHEDULE 12 - INTEREST EARNED

		Amount in ₹	
Particulars		As at 31-03-2018	As at 31-03-2017
1	Interest on Term Deposits:	3,09,58,017.00	41,36,778.00
2	Interest on Savings Accounts:	48,75,940.00	3,24,183.00
3	Interest on Loans:		
a	Employees/Staff		-
b	Supplier / Contractor		-
c	Others		-
4	Interest on Debtors & Other Receivables	6,35,944.00	2,50,884.00
TOTAL		3,64,69,901.00	47,11,845.00

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31.03.2018

SCHEDULE 13 - OTHER INCOME

		Amount in ₹	
Particulars		As at 31-03-2018	As at 31-03-2017
A	Income from Land & Building		
1	Hostel Room Rent	4,02,07,500.00	2,56,42,500.00
2	License fee	70,04,074.00	59,80,086.00
3	Guest House Rent / Hire Charges	23,11,516.26	26,23,967.00
4	Others	11,92,300.00	6,47,850.00
	TOTAL	5,07,15,390.26	3,48,94,403.00
B	Sale of Institute 's Publications		-
C	Income from holding events		-
D	Others		
1	RTI fees	620.00	988.00
2	Sale of Application Form (Recruitment)	12,37,001.00	11,82,688.55
3	Misc. Receipts (Sale of tender form, waste paper, etc.)	6,000.00	2,100.00
4	Profit on Sale/disposal of Assets:	-	-
5	Sale of Scrap	-	-
6	Other Income	8,06,932.62	6,70,548.18
	TOTAL	20,50,553.62	18,56,324.73
	GRAND TOTAL (A+B+C+D)	5,27,65,943.88	3,67,50,727.73

SCHEDULE 14 - PRIOR PERIOD INCOME

		Amount in ₹	
Particulars		As at 31-03-2018	As at 31-03-2017
1	Prior Period Income		-
	TOTAL	-	-

SCHEDULE 15 - STAFF PAYMENTS & BENEFITS

		Amount in ₹	
Particulars		As at 31-03-2018	As at 31-03-2017
1	Salary & Wages	77,14,48,308.00	56,48,39,989.00
2	Allowances & Bonus	22,95,183.00	22,26,099.00
3	Contribution to Provident Fund	72,44,877.00	15,51,148.00
4	Contribution to New Pension Scheme	4,07,54,395.00	2,87,15,310.00
5	Staff Welfare Expenses	1,00,39,207.00	1,10,31,748.00
6	Retirement & Terminal Benefits	18,46,13,823.00	15,02,11,750.00
7	LTC Facility	85,46,034.00	95,37,724.00
8	Medical Facility	2,11,02,667.00	2,32,97,922.94
9	Children Education Allowance	53,59,386.00	43,79,477.00
10	Other Payments	-	-
	TOTAL	1,05,14,03,880.00	79,57,91,167.94

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31.03.2018

SCHEDULE 16 - ACADEMIC EXPENSES

		Amount in ₹	
	Particulars	As at 31-03-2018	As at 31-03-2017
1	Departmental Operating Expenses	2,48,20,057.94	2,53,18,819.50
2	Remuneration to Visiting Faculty	29,32,177.00	33,65,605.00
3	Examination	-	-
4	Student Welfare Expenses	60,43,503.00	46,53,248.00
5	Admission Expenses	5,81,490.00	-
6	Convocation Expenses	12,85,856.00	5,40,623.00
7	Publications	-	-
8	Stipend/means-cum-merit scholarship	26,44,12,949.00	30,00,20,572.00
9	License Fee & Subscription Expenses	3,79,53,217.22	2,80,53,788.00
10	Institute of Eminence	1,00,00,000.00	-
11	Other Academic Expenses	3,12,048.00	3,00,000.00
	TOTAL	34,83,41,298.16	36,22,52,655.50

SCHEDULE 17 - ADMINISTRATIVE AND GENERAL EXPENSES

		Amount in ₹	
	Particulars	As at 31-03-2018	As at 31-03-2017
1	Advertisement and Publicity	61,64,121.00	23,36,521.00
2	Auditors Remuneration	78,300.00	50,000.00
3	Electricity and Power (Net)	6,45,31,820.00	5,93,02,795.00
4	Hospitality	11,56,557.00	7,35,845.00
5	Insurance	-	-
6	Internet Charges	35,13,505.00	28,44,630.00
7	Legal Expenses	4,86,485.00	99,260.00
8	Other Admin Expenses	47,76,515.06	49,92,138.58
9	Outsourced Services	10,07,65,220.50	4,29,20,932.00
10	Postage, Telephone & Communication Expenses	27,14,680.00	30,18,360.00
11	Printing & Stationary	42,32,771.00	50,38,753.00
12	Professional Charges	6,32,543.00	1,20,635.00
13	Rent, Rates and Taxes	-	-
14	Stipendiary Trainees / Teaching Asstt. Remuneration	44,12,025.00	53,69,580.00
15	Training to faculty & staff	-	-
16	Travelling and Conveyance Expenses	1,12,64,371.00	71,89,940.87
17	Water Charges (Net)	19,11,575.00	14,96,287.00
	TOTAL	20,66,40,488.56	13,55,15,677.45

SCHEDULE 18 - TRANSPORTATION EXPENSES

		Amount in ₹	
	Particulars	As at 31-03-2018	As at 31-03-2017
1	Vehicle Running & Maintenance	3,57,421.00	7,29,429.00
	TOTAL	3,57,421.00	7,29,429.00

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31.03.2018

SCHEDULE 19 - REPAIRS & MAINTENANCE

Amount in ₹

Particulars		As at 31-03-2018	As at 31-03-2017
1	Building	2,90,58,011.00	3,53,10,872.00
2	Furniture & Fixture	2,84,390.00	4,29,675.00
3	Plant, Machinery & Equipments	1,91,39,467.00	1,88,62,820.67
4	Computer	32,64,943.00	43,91,695.00
5	Others		-
TOTAL		5,17,46,811.00	5,89,95,062.67

SCHEDULE 20 - FINANCE COSTS

Amount in ₹

Particulars		As at 31-03-2018	As at 31-03-2017
1	Interest on Fixed Loans	-	-
2	Interest on Other Loans	-	-
3	Bank Charges	1,88,292.73	2,86,370.51
4	Others		
TOTAL		1,88,292.73	2,86,370.51

SCHEDULE 21 - OTHER EXPENSES

Amount in ₹

Particulars		As at 31-03-2018	As at 31-03-2017
1	Provision for Bad and Doubtful Debts/Advances	-	
2	Irrecoverable Balances Written-off	-	
3	Others	-	
TOTAL		-	

SCHEDULE 22 - PRIOR PERIOD ITEMS

Amount in ₹

Particulars		As at 31-03-2018	As at 31-03-2017
1	Prior Period Items	43,75,413.80	70,17,920.54
TOTAL		43,75,413.80	70,17,920.54

SCHEDULE 23 - SIGNIFICANT ACCOUNTING POLICIES

1. ACCOUNTING CONVENTION

The financial statements are prepared on the basis of historical cost convention, unless otherwise stated and on the accrual method of accounting.

The financial statements are broadly prepared on the basis of format prescribe by Ministry of HRD for Central Autonomous Bodies.

2. INVESTMENTS

Investments are valued at cost.

3. FIXED ASSETS

- a. Fixed Assets are stated at cost of acquisition inclusive of inward and other incidental expenses. Buildings / permanent structures are capitalized from the date project is taken over after due verification and corrections.
- b. Fixed assets acquired by grants or received by way of donation are capitalized at cost / value stated, by corresponding credit to Deferred Income - Capital Fund A/c.
- c. Fixed Assets acquired out of Earmarked/Endowment Funds (e.g. SRICCE Fund) being the assets of the Fund provider are deducted from the respective Fund Account as Capital expenditure & are not taken into Account in the Fixed Assets of the Institute shown under Schedule-4.

4. DEPRECIATION

- a. Depreciation method has been charged on Straight Line Method(SLM) as per rates specified in format of Financial Statement.
- b. Depreciation on assets where actual cost is equal to or less than Rs.5,000/- item-wise is provided at the rate of 100%. In case of capital works depreciation is charged from the date project is taken over by institute authorities, after its completion and verification for intended use.
- c. As specified in AS-12, Grants utilized for creation of capital assets are treated as Deferred Income (Schedule 1) and recognized in Income and Expenditure Account on a systematic and rational basis over the useful life of the assets, i.e. Capital grants / Funds are allocated to Income over the periods and in the proportion in which depreciation is charged.
- d. Depreciation is not charged on fixed assets acquired out of TEQIP Grants, as per the terms & condition of TEQIP-NPIU.

5. REVENUE RECOGNITION

- a. Fees from students, Interest on Saving Bank Account are accounted on cash basis.
- b. Income from Land, Buildings and Other Property and Interest on Investments are accounted on accrual basis.

6. GOVERNMENT GRANTS

- a. Government grants are accounted on the basis of sanction from Government Department.
- b. Grants utilized for meeting recurring expenses are credited to Grants / Subsidies Head under Income and Expenditure A/c.
- c. Grants / Funds utilized for capital expenditure is credited to Deferred Income – Capital Fund A/c (Schedule – 1).

7. INTEREST ON INVESTMENTS

Interest on investments out of Corpus, Endowment and other fund are allocated to respective Fund Account.

8. FOREIGN TRANSACTIONS

Transactions denominated in foreign currency are accounted at actuals.

9. RETIREMENT BENEFITS

- Amount received towards the Retirement Benefits to existing employees is credited to Retirement Benefit Fund Account.
- Liabilities towards gratuity payable on death/retirement of employees are provided based on actual valuation.
- Liabilities towards pension payable on retirement of employees are provided based on actual valuation.
- Leave encashment benefit (arrear) to the employee is accounted on actual valuation.

10. CONTINGENT LIABILITIES

Provision is made for all known liabilities, Contingent liabilities, if any are disclosed in the accounts by way of note.

SCHEDULE 24 - CONTINGENT LIABILITIES AND NOTES ON ACCOUNT**1. Plan and Non-Plan Grants**

Details of funds under Plan and IRG heads are as under:

Particulars	Amount in crore		
	Plan Grants	IRG	Total
Op Balance	(127.89)	0.00	(127.89)
Add: Received during the year	238.40	38.38	276.78
Grants available for expenditure	110.51	38.38	148.89
Less: Utilization			
a. Capital Expenditure	44.77	0.00	44.77
b. Revenue Expenditure	147.12	19.19	166.31
c. Transfer	0.00	19.19	19.19
Closing Balance(A)	(81.38)	0.00	(81.38)
Less: Advances Paid for Expenditure			
Advance Paid	2.48	0.00	2.48
Open L / c's for procurement	0.00	0.00	0.00
Maintenance WIP	0.67	0.00	0.66
Prepaid Expenses	0.92	0.00	0.92
Total Advances (B)	4.07	0.00	4.07
NET FUND (RECEIVABLE) FROM MHRD (A-B)	(85.45)	0.00	(85.45)

Debit balances of grants are carried over expecting its realization.

2. CONTINGENT LIABILITIES

- a. Income Tax demand in dispute Rs.69.36 Lakhs.

3. NOTES ON ACCOUNT

- a. In the opinion of management the Current Assets, Loans and Advances of the organization have a value on realization in the ordinary course of business, equal to or at least the aggregate amount shown in the Balance Sheet and the Provisions for liabilities are adequate.

- b. Corresponding figure for the previous years have been excluded/regrouped/rearranged, wherever found necessary.

c. Schedule-1:

Balance of Deferred Income - Capital Fund has been shifted to Schedule-1, as envisaged in New Format.

d. Schedule-4:

Fixed Assets:

- i. Straight Line Method has been adopted for charging depreciation from 01-04-2015, as envisaged in new format.

- e. Capital assets acquired out of Sponsored Project(s), amounts to:

Particulars	Prior to Incorporation of SRICCE	SRICCE Fund	Total
Opening Balance	8,27,50,334/-	48,31,60,466/-	56,59,10,800/-
Rectification for difference in opening balance	Nil	Nil	Nil
Addition during the year	Nil	5,95,27,533/-	5,95,27,533/-
Deletion during the year	Nil	Nil	Nil
Balance at the year end	8,27,50,334/-	54,26,87,999/-	62,54,38,333/-


Asst. Registrar (F&A)
National Institute of Technology
Rourkela -769008, Orissa


Registrar
National Institute of Technology
Rourkela-769008 (Odisha)


Director
National Institute of Technology
Rourkela-769008, Odisha

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD 01-04-2017 TO 31-03-2018

RECEIPTS

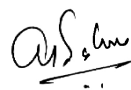
Particulars	Amount (₹)	Amount (₹)
1. OPENING BALANCE		14,18,62,310.74
a. Cash-in-hand(Institute)	-	
b. Bank Draft/Cheque-in hand	1,487.59	
c. Bank Balance		
i) In current Account(Institute)	13,39,25,845.48	
ii) In savings a/c(Institute)	79,34,977.67	
	14,18,62,310.74	
2. Corpus Fund	6,70,52,862.94	6,70,52,862.94
3. Restricted Funds		3,88,43,986.72
a. Staff Welfare Fund	6,36,000.58	
b. Depreciation Fund	5,31,719.58	
c. Maintenance Fund	5,31,719.58	
d. Endowment Fund(Inst.)	1,74,05,663.98	
e. External Fellowship	74,68,807.00	
f. External Scholarship	1,22,70,076.00	
	3,88,43,986.72	
4. Loans / Borrowings		-
a. Secured		
b. SRICCE (Unsecured Loan)	-	
	-	
5. Current Liabilities & Provisions		8,18,30,159.01
a. Sundry Creditors	48,74,547.76	
b. Accounts Payables and Other Liabilities	16,39,512.25	
c. Advance Receipts	1,03,77,264.00	
d. Security Deposit	3,89,41,905.00	
e. Statutory Liability	2,59,96,930.00	
	8,18,30,159.01	
6. Investments		1,61,45,15,653.87
a. Investment Application Fees A/c	24,18,727.57	
b. Investment Non-Plan A/c	23,42,66,224.00	
c. Investment PG Research A/c	75,51,203.75	
d. Investment Plan A/c	69,20,00,000.00	
e. Investment Security Deposit A/c	11,73,70,225.00	
f. Investment student Fee A/c	2,71,85,307.00	
g Investment Caution Money A/c	3,38,17,387.49	

RECEIPTS

Particulars	Amount (₹)	Amount (₹)
h Investment From Earmarked/Endowment	49,99,06,579.06	
	1,61,45,15,653.87	
7. Fixed Assets		-
Capital Work in Progress	-	
8. Current Assets		16,35,89,816.00
a. Loans & Advances (Asset)	7,19,30,709.00	
b. Other Current Assets	9,16,59,107.00	
	16,35,89,816.00	
9. Academic Receipts		64,57,76,872.50
a. Fees/Subscription	52,09,93,814.50	
b. Admission Fees (Autumn 2017-18)	12,47,83,058.00	
	64,57,76,872.50	
10. GRANT RECEIVED		2,38,40,00,000.00
a. Central Govt. (Plan)	2,38,40,00,000.00	
b. Central Govt.(Non-Plan)	-	
	2,38,40,00,000.00	
11. Income From Investments		4,05,21,870.18
a. Income From Investments	51,98,451.18	
b. Interest Earned	3,53,23,419.00	
	4,05,21,870.18	
12. Other Income		45,63,169.25
a. Other Income	3,27,868.25	
b. Sale of Application Form & Tender Paper	42,35,301.00	
	45,63,169.25	
13. Indirect Expenditure		56,31,007.81
a. Prior Period Expenses	5,25,835.00	
b. Academic Expenses	9,51,339.00	
c. Establishment Expenses	11,94,406.00	
d. Finance Cost	900.81	
e. Administrative and General Expenses	29,58,527.00	
	56,31,007.81	
GRAND TOTAL		5,18,81,87,709.02


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 Registrar
 Registrar
 National Institute of Technology
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 Director
 Director
 National Institute of Technology
 Rourkela-769008, Odisha

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD 01-04-2017 TO 31-03-2018

PAYMENTS

Particulars	Amount (₹)	Amount (₹)
1. Corpus Fund	74,102.00	74,102.00
2. Designated Fund		
a. Funds For Maintenance of Assets	-	-
b. Staff Development Fund	-	
c. Funds For Capital Expenditure	-	
	-	
3. Restricted Funds		13,536.25
a. Staff Welfare Fund	10,000.00	
b. Endowment Fund(Inst.)	3,536.25	
c. External Fellowship	-	
d. External Scholarship	-	
	13,536.25	
4. Current Liabilities & Provisions		2,21,76,52,452.97
a. Provisions	1,51,49,077.00	
b. Sundry Creditors	1,37,54,65,112.36	
c. Accounts Payables and Other Liabilities	14,70,98,042.83	
d. Advance Receipts	7,90,020.00	
e. Other Current Liabilities	-	
f. Security Deposit	-	
g. Grant/Other Fund	45,194.00	
h. Salary & Wages	47,80,52,587.78	
i. Statutory Liability	20,10,52,419.00	
	2,21,76,52,452.97	
5. Loans / Borrowings		-
a. Secured	-	
	-	
6. Fixed Assets		2,18,783.00
a. Science Equipments	2,18,783.00	
	2,18,783.00	
7. Investments		2,79,98,28,551.50
a. Investment Misc A/c	2,80,78,105.00	
b. Investment Non-Plan A/c	1,80,00,000.00	
c. Investment PG Research A/c	1,20,79,087.75	
d. Investment Plan A/c	1,10,99,90,104.00	

PAYMENTS

Particulars	Amount (₹)	Amount (₹)
e. Investment student Fee A/c	53,66,38,057.00	
f. Investment Application Fee A/c	45,31,720.00	
g. Investment Staff welfare A/c	1,00,979.00	
h. Investment Caution Money A/c	3,73,06,772.00	
i. Investment Security Deposit A/c	20,77,97,521.00	
j. Investments From Endowment Fund	84,53,06,205.75	
	2,79,98,28,551.50	
8. Current Assets		7,72,88,895.22
a. Loans & Advances (Asset)	4,35,37,778.50	
b. Other Current Assets	3,37,51,116.72	
	7,72,88,895.22	
9. Direct Income		-
10. Indirect Income		30,02,150.00
a. Income From Investments	10,850.00	
b. Other Income	29,91,300.00	
	30,02,150.00	
11. EXPENDITURE		24,24,254.54
a. Academic Expenses	5,89,063.00	
b. Establishment expenses	4,25,387.00	
c. Administrative and General Expenses	4,43,431.00	
d Finance Cost	1,89,193.54	
e Prior Period Items	7,77,180.00	
	24,24,254.54	
12. CLOSING BALANCE		8,76,84,983.54
a. Cash-in-hand		
b. Bank Draft/Cheques in hand	1,487.59	
c. Bank Balance		
i) In current Account(Institute)	7,99,18,814.54	
ii) In savings a/c(Institute)	77,64,681.41	
	8,76,84,983.54	
GRAND TOTAL		5,18,81,87,709.02



Asst Registrar (FA)

Asst. Registrar (F&A)
National Institute of Technology
Rourkela - 769008, Orissa



Registrar

Registrar
National Institute of Technology
Rourkela-769008 (Odisha)



Director

Director
National Institute of Technology
Rourkela-769008, Odisha

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

Fundwise Income & Expenditure Statement for the FY 2017-18

Particulars	Schedule	Plan	Non Plan	IRG	TEQIP-II	SIPDA	Inno-Icub Centre	Deferred Income	Total
INCOME									
Academic Receipts	9			29,45,44,079.28					29,45,44,079.28
Grants & Donations	10	1,47,11,63,643.17	-	-	-			-	1,47,11,63,643.17
Income from Investments	11	-	-	-	-				-
Interest Earned	12	-	-	3,64,69,901.00					3,64,69,901.00
Other Income	13			5,27,65,943.88					5,27,65,943.88
Transfer From Funds	4	-	-	-	-			26,34,83,762.83	26,34,83,762.83
Prior Period Income		-	-	-	-			-	-
Total (A)		1,47,11,63,643.17	-	38,37,79,924.16	-	-	-	26,34,83,762.83	2,11,84,27,330.16
EXPENDITURE									
Staff Payments & Benefits	15	1,05,14,03,880.00	-	-	-				1,05,14,03,880.00
Academic Expenses	16	26,44,12,949.00		8,39,28,349.16					34,83,41,298.16
Administrative and General Expenses	17	10,34,11,710.44	-	10,32,28,778.12					20,66,40,488.56
Transportation Expenses	18	-		3,57,421.00					3,57,421.00
Repairs & Maintenance	19	5,17,46,811.00							5,17,46,811.00
Finance Cost	20	1,88,292.73	-	-					1,88,292.73
Depreciation for the year	4	-	-	-	-			26,34,83,762.83	26,34,83,762.83
Other Expenses	21	-	-	-				-	-
Prior Period Items	22	-	-	43,75,413.80					43,75,413.80
Transfer to Funds				15,00,00,000.00					150000000.00
		1,47,11,63,643.17	-	34,18,89,962.08	-	-	-	26,34,83,762.83	2,07,65,37,368.08
SURPLUS / (DEFICIT) Transferred to General Fund (A-B)			-	4,18,89,962.08	-	-	-	-	4,18,89,962.08

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

Capital Expenditure from Plan Grant during the FY 2017-18.

Amount in ₹

Particulars	As at 31-03-2017	Debit	Credit	As at 31-03-2018
Capital Work in Progress	2,45,64,67,779.00	38,44,19,429.19	27,57,28,528.00	2,56,51,58,680.19
Building	3,52,52,40,696.00	49,80,613.36	8,51,66,693.03	3,44,50,54,616.33
Computers / Peripherals	6,69,68,038.68	1,65,02,458.00	4,37,45,040.44	3,97,25,456.24
Furniture and Fixtures	13,03,41,306.00	35,24,273.00	1,73,18,775.62	11,65,46,803.38
Land	4,38,879.00			4,38,879.00
Library Books	3,01,30,162.00	1,39,64,210.00	1,68,54,180.00	2,72,40,192.00
Plant, Machinery and Equipments	12,34,10,008.89	28,83,88,566.67	2,45,58,526.27	38,72,40,049.29
Science Equipments	44,19,22,268.23	3,04,97,587.75	8,48,36,192.32	38,75,83,663.66
Vehicles	1.00	-	-	1.00
Fixed Assets (Below Rs.5000/-)	-	29,14,259.00	29,14,259.00	-
TEQIP Phase-I	13,79,23,955.00	-	-	13,79,23,955.00
TEQIP Phase-II	11,76,04,156.00	2,70,46,700.00	-	14,46,50,856.00
TEQIP Phase-III	-	49,698.00	-	49,698.00
TOTAL	7,03,04,47,249.80	77,22,87,794.97	55,11,22,194.68	7,25,16,12,850.09
Add: Depreciation charged during the FY 2016-17				26,34,83,762.83
Prior Period Item (Depreciation)				-
Deferred Income - Plan Expenditure (reversal of revenue)				-
Less: Opening Balance of Fixed Asset				7,03,04,47,249.80
Cost of Assets acquired				48,46,49,363.12

Particulars	Plan	SIPDA	TEQIP PH-II	TEQIP PH-III
Computers / Peripherals			63,58,005.00	-
Science Equipments			1,96,47,370.00	24,800.00
Plant Machinery & Equipments		98,13,000.00	10,41,325.00	-
Furniture				24,898.00
Fixed Assets (Below Rs.5000/-)		-		-
Capital Expenditure Grant wise	44,77,39,965.12	98,13,000.00	2,70,46,700.00	49,698.00

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National Institute of Technology Rourkela

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