Resume of
Dr. Santanu Kumar Rath

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Date of Birth: 15th June 1957

1. *About myself*

- I am working as **Professor (HAG scale) of the Department of Computer Science and Engineering (CSE), N. I. T. Rourkela, Odisha, since 28th February 2019.** I am working as Professor of the Department of Computer Science and Engineering (CSE), N. I. T. Rourkela, Odisha, since 28th August 1997. I was the Head of this Department of Computer Science and Engineering, NIT Rourkela during different periods such as 1st July 2016 to 30th June 2013, 1st June 2004 till 30th June 2002 and 1st July 2001 to 30th June 1999.
- I was the Head, School of Management, NIT Rourkela since 1st April 2008 till 30th June 2013 (for more than five years).
- I was the Dean of Academic Affairs of NIT Rourkela during 1st July 2006 till 30th June 2008.
- I was the Examination Superintendent of REC Rourkela during 1st July 2001 to 30th June 2002.

2. *Professional Preparation:*

- My skills on subjects: Software engineering, Management information System and Operations Research and Bioinformatics**.**
  - **Ph. D. students supervised by me** at NIT Rourkela: Nine till today.
    - The evaluation process is going on for one student who has submitted thesis under me recently. One more Ph. D. student at NIT Rourkela is expected to submit thesis by middle of June 2018.
    - Two more Ph. D. students have been enrolled under me here and their work is in progress
- All students have worked as full time students under me.

3. Academic Qualification:

Degree	**Institute**	**Year**	**Specialization**
Ph. D.	Indian Institute of Technology, Kharagpur	1994	Thesis on: Studies on some aspects of *Cellular Manufacturing Systems*
M. Tech.	Indian Institute of Technology, Kharagpur	1986	Computer aided analytical study of costs: a case study (Tata Bearings, Kharagpur)
B. S. in Engineering	Ranchi University	1978	Electronic & Comm. Engg
1st Sc.	Utkal University, Orissa	1973	Physics, Chemistry , Mathematics and Biology

H. S. C.	B. S. E. Orissa	1971	Mathematics (Optional)

4. Research Interest:

Software Engineering, Software architecture, Service oriented architecture
Formal Modeling specifically on Petri Net, Management information system, Bioinformatics

5. Professional Experience:

a) Teaching Experience:

i) National Institute of Technology, Rourkela
Duration: 20th June 1988 till date
Positions held: As Professor, from 28th August 1997 onwards
- As Associate Professor, from 20th June 1988 till 28th August 1997

Courses taught: Software architecture, Service oriented architecture, Software engineering, System analysis and design, Management Information system, Operations research

New Courses developed: Services based Software design

ii) Asian Institute of Technology, Bangkok, Thailand:
Duration: 2nd January 2003 to April 2003
Subject: Information Technology strategy, and System analysis and design.

iii) Visiting faculty at CET Bhubaneswar and Utkal Univ. Bhubaneswar during Jan 1987 till June 1988

a) Research Interaction on **International educational assignments:**

- Visiting Faculty member at the Institute for Software Integrated Systems, a research organization of the School of Engineering at Vanderbilt University, Nashville, Tenn, USA, nominated by MHRD. New Delhi, during February 2006 (Two weeks) and collaborated research on Software engineering particularly on the area of Formal modeling.

- Visiting Faculty member at the Electrical Engg. dept., Technical University of Budapest, Hungary, nominated by U. G. C. New Delhi, during October-November 1999 (Two weeks) to extend work on Petrinet models.

- Visiting Faculty member at the School of Business Administration, University of Connecticut, Storrs, U. S. A., during May - June 1995 (One week).

b) Industrial experience:
- Organisation: ABB Bangalore
  Type of exposure: Data consultancy
  Period: Since January 2016
- Organisation: Department of Energy, Govt. of Odisha

Position held: Assistant executive Engineer, Telecommunications

Nature of work: Planning and Implementation of Telecom network in Energy dept.
Duration: 23rd February 1980 to 19th June 1988

6. Membership in professional societies:

- IEEE USA: **Senior** *Member No. 40213176 (Since 01 June 2013)*
- ACM, USA: **Senior** *Member No. 3102985 (Since 24 April 2018)*
- The Petri Net Society, Germany: *Member No. PN 384*
- Fellow of the Institution of Engineers, India*: Member No. F105280/9*
- Fellow of the Computer Society of India: *Member No.* 00*917002*

7. Seminars Organized:

- *Workshop organised on "Software Quality Assurance" during 25th to 26th July 2015 at CSE Dept. NIT ROURKELA.*
- *Workshop organised on "Managing Market intelligence (MMI)" during 19th to 21st Dec. 2011 at NIT ROURKELA.*
- *Workshop organised on "Software engineering applications for Computer Networks (SEA-CN)" during 8th to 10th Dec. 2011 at NIT ROURKELA.*
- *Organized the Workshop on Data Mining Techniques for Bioinformatics (DMTB)" at NIT Rourkela during 3rd Dec. to 5th Dec. 09.*
- *General Chair for IEEE sponsored 10th International Conference on Information Technology (ICIT 2007), Rourkela, India, during 17- 20 December 2007.*
- *Organized Short Term Course on "Recent Trends In Object Oriented Software Development" during 25th - 29th June 2007, at NIT Rourkela.*
- *National seminar funded by M. I. T., Govt. of India, during Feb. 17 -18, 2001, on "Software Quality Management".*
- *National seminar funded by M. H. R. D., Govt. of India, during Dec. 26-27, 1997, on "Computer Based Decision Making Tools".*

8. Sponsored projects:

Sponsoring Agency	Period in years	Title of project	Amount of grant in lakhs	My role	Status
DST project, GOI	FIVE years During 2015 - 20	Augmentation of research on Web engineering and cloud computing	50	Principal investigator	Work in progress
MHRD	Two, During 2000-2002 And 2001 - 03	Development of Software Engineering Lab."	7 + 7	Principal investigator	Work completed
MHRD	ONE During 1997-98	High level Petri Net Modeling	2	Principal investigator	Work completed
UGC	THREE During 1996-99	Petri Net Modeling for Flexible Manufacturing	5	Principal investigator	Work completed
AICTE	TWO During 1995-97	Petri Net Modeling of Flexible Manufacturing Systems	3	Principal investigator	Work completed

9. National Assignments:

b) National:

- Expert for project funding in Sonar and Signal Behavior (SSB) in Navy under NRB – DRDO from 2017 June onwards. (Next meeting is on 28th February 2018 at Naval base, Vishakhapatnam, AP).
- At present, the TEQIP MENTOR / AUDITOR for MA NIT Bhopal, CIT Coimbatore and MBM College Jodhpur, appointed by MHRD Delhi
- Acted as Members/Chairman of NBA teams of AICTE Delhi and UPSC selection committees.
- Selected in October 1996, as Professor, Dept. of Business Administration, Sambalpur University, Burla, Orissa. India.; but did not join over there.

10. Papers presented by me, at International conferences:

- Chaired session and presented paper at 29th International Conference on Software Engineering & Knowledge Engineering SEKE 2017 Pittsburgh, USA in July 7, 2017.
- Presented a paper at IC2IT 2015, Bangkok Thailand, in July 2015
- Presented at 26th International Conference on Software Engineering & Knowledge Engineering SEKE 2014, Vancouver Canada, July 2014
- Presented a paper at IEEE International Conference on Systems Man & Cybernetics, October 8 -11, 2000, Nashville USA
- Presented a paper at the International Industrial Engineering Research Conference, during May 22 - 25, 1995, at Nashville, USA

11. **a) Ph. D. degrees awarded to students my supervision (single supervisor)**:

i) Dr. S. Chinara: Ph. D. degree has been awarded on 5th August 2011 at NIT Rourkela. Caption of Thesis was "Analysis and Design of Protocols for Clustering in Mobile Ad Hoc Networks". Examiner from India: Dr. Shiva Prakasha, IISC., Bangalore. Now she is working as Asst. Prof. CS dept., NIT Rourkela, India

ii) Dr. Swati Vipsita: She has been awarded Ph. D. on 30th Jan. 2014 at NIT Rourkela, with thesis, captioned as "Protein superfamily classification using computational intelligence technique". Examiner from India was Dr. Subhansu Bandyopadhyay, Calcutta Univ., Kolkata. Now she is working as Asst. Prof. CS dept., IIIT Bhubaneswar, India

iii) Dr. Yeresime Suresh: Ph. D. degree has been awarded on 7th August 2015 at NIT Rourkela): Caption of Thesis was "Software fault prediction and test data generation using AI techniques". Examiner from India was Dr. D. Goswami, IIT Gowhati. Now he is working as Asst Prof. CS dept., PES College, Bangalore, India

iv) Dr. Shashank. M. Satapathy: Ph. D. degree has been awarded on 25th Oct. 2016 at NIT Rourkela. Title of thesis as: "Effort Estimation methods in software development using Machine Learning algorithms". Examiner from India was Dr. Swapan Bhattacharya, Jadavpur Univ., Kolkata. Now he is working as Associate. Prof. in CS dept., at School of Computer Science, Vellore Institute of technology, Vellore, India.

v) Dr. Abinash Tripathy: Ph. D. degree has been awarded on 19th May 2017 at NIT Rourkela. Title of thesis is "Application of machine learning techniques for

Sentiment analysis". Examiner from India was Dr. N. P. Gopalan, NIT Trichy. Now he is working as Asst. Prof. CS Dept., at NIST, Behampur, Odisha.

vi) Dr. Mukesh Kumar: Ph. D. degree has been awarded on 23rd May 2017 at NIT Rourkela. Title of thesis is "Analysis of Microarray Data using Machine Learning Techniques on Scalable Platforms. Examiner from India was Dr. Swapan Bhattacharya, Jadavpur Univ., Kolkata. Now, he is working as Asst. Prof. CSE dept., NIT Patna.

vii) Dr. Sukanya Panda: She has been awarded Ph. D. degree in "Management" at NIT Rourkela on 20th September 2017, and she has worked in the area on "IT capability and Organizational Performance". Examiner from India was Dr. Pingali Venugopal, XLRI Jamshedpur. Now, she is working as Asst. Prof. HR dept., Tata institute of Social Science, Hyderabad.

viii) **Dr. Lov Kumar** has been awarded Ph. D. degree at NIT Rourkela on 30th Dec. 2017 whose dissertation was on "Complexity analysis for Service oriented architecture". Examiner from India was Dr. Amey Karkare, Dept. of CSE, IIT Kanpur. Now he is working as Asst. Prof. CS dept., BITS Pilani Hyderabad campus.

ix) ***Dr. Jitendra K.* Rout**: has been awarded Ph. D. Degree at NIT Rourkela on the topic of "Detecting deceptive online reviews use labeled and unlabeled data" in CS dept., NIT Rourkela. Now he is working as Asst. Prof. CS dept., Kalinga Institute of Technology (KIIT) Bhunaeswar. His defense examination was held on 7th May 2018. Dr. S. R. Singh, Asso. Prof., Dept. of CSE, IIT Guwahati was the examiner for the defense examination.

x) ***Dr. Ashish Dwivedi*** joined under me on 1st January 2014: Submitted Doctoral thesis on 21st August 2017, on the topic of "Predicting Software pattern using formal models" in CS dept., NIT Rourkela. His Ph. D. Viva voce examination is scheduled to take place on 5th January 2019. The examiner for defense examination is Prof. Chiranjeev Kumar, Dept. of CSE. IIT Dhanbad. Now Dr. Dwivedi is working as Asst. Prof. CS dept., Gayatri Vidya Parishad, Vishakhapatnam, Andhra Pradesh.

b) On-going Ph. D. students' work*:*

i. Mr. Ranjan Behera, joined with me on 1st July 2015 and is working on Bigdata analysis in social networking. He is expected to submit thesis in July 2019. He has taken withdrawal on 4th Sept. 2018 and presently working as Asst. Prof., Dept., of CSE, VSSUT Burla, Odisha.

ii. Ms. Vartika Mishra has joined with me on 27th Dec. 2017 to extend work on cancer feature detection.

iii. Mr. Deba Chudamani Prusti has joined with me on 27th Dec. 2017 to work on Design of Software security in financial transactions

d) Examined and evaluated, quite a large of number of Ph. D. thesis / dissertations of various institutes such as IITs, NITs and Different Universities of India.

e) Supervised about more than about more than 150 number of thesis of M. Tech students since 1995.

12. Awards / Honors:

- Recipient of Best Paper award at IEEE conference at BHU IIT Varanasi during 9th to 11th Dec. 2016
- Recipient of Best Paper award at COSMAR 2016, IISC, Bangalore during 11th . 12th Nov. 2016.
- Appointed as General Chair for IEEE sponsored 10th International Conference on Information Technology (ICIT 2007), Rourkela, India, during 17- 20 December 07.
    - Program Chair for SEKE conference 2017, at Pittsburg, USA
- WHO's who of different agencies in USA in the area of Software Engineering

13. Reviewer / Referee of the following journals:

- IEEE Transactions on Emerging Topics in Computational Intelligence
- Journal of Neuro-computing: Elsevier, and JSS Elsevier
- Soft computing (SOCO), Springer Verlag
- International Journal of Production Research, U. K.
- Opsearch, India.

14. Institute activities:

a. Head of Dept. for three terms
b. Dean Academic affairs, NIT Rourkela: 2006-2008
c. PIC Convocation 2005
d. Member and Chairman of AICTE Expert committees of NBA for various Engineering colleges in India.
e. Selection committee members of faculties in NITs, UPSC and state PSCs.
f. Examination superintendent of REC Rourkela: from July 1999 till June 2002.

15. <u>List Of Publications:</u>

a) International Journals : Forty seven

1.	Ranjan Kumar Behera, Santanu Kumar Rath, Sanjay Misra, Robertas Damaševič̆ius 4,* and Rytis Maskeliunas 2018; Large Scale Community Detection Using a Small World Model. MDPI journal of Appl. Sci. August 2018, no. 7, pp 02-18, 1173; doi:10.3390/app7111173
2.	Ashish Kumar Dwivedi, Anand Tirkey, and Santanu Kumar Rath 201**8**; "Software Design Pattern Mining using Classification-based Techniques" *Frontiers of Computer Science*, 12 (5): 908-922 Springer. DOI: DOI 10.1007/s11704-017-6424-y
3.	Kumar Lov, Anand Tirkey, and Santanu Kumar Rath 2018; Effective Fault Prediction Model Developed Using Extreme Learning Machine with Various Kernel Methods, *Journal of Frontiers of Information Technology & Electronic Engineering, SCI - Springer* 19(7), 864-888, Sept. 2018, DOI: 10.1631/FITEE.1601501.

4.	Mukesh Kumar, Ransingh B Ray, and Santanu K Rath 2017; Spark based classification of microarray data using scalable artificial neural network, Int. J. Data Mining and Bioinformatics, Inder-science publishers. Vol. 19, No. 4, pp. 312 – 339 Doi.: 10.1504/IJDMB.2017.091363
5.	*S Panda and S K Rath* 2017: Modeling the relationship between information Technology Infrastructure and Organizational agility: A study in the context of India; Global Business Review, SAGE publications, 19 (2) 434-438, 2017. DOI: 10.1177/0972150917713545
6.	*S Panda and S K Rath* 2018, "Strategic IT-Business Alignment and Organizational Agility: from a developing country perspective"; JABS of Emerald publication vol 12, no. 4, pp. 422-440, https://doi.org/10.1108/JABS-10-2016-0132,
7.	*S Panda and S K Rath* 2017, The effect of human IT capability on organizational agility: an empirical analysis, Management Research Review of Emrald publication, Vol. 40 Issue: 7, pp.800-820, https://doi.org/10.1108/MRR-07-2016-0172.
8.	*S M Satapathy, and S. K Rath*, Empirical Assessment of Machine Learning Models for Agile Software Development Effort Estimation using Story Points, Innovations in Systems and Software Engineering, (NASA Journal) - Springer. Journal Innovations in Systems and Software Engineering, Volume 13, Issue 2-3, Pages 191-200 Publisher Springer London, June 2017. DOI 10.1007/s11334-017-0288-z
9.	Abinash Tripathy, Abhishek Anand, Santanu Kumar Rath, 2017 "Document level Sentiment Classification using Hybrid Machine Learning Approach", accepted as a Regular Paper for publication in the *Knowledge and Information Systems (KAIS) journal of Springer*. DOI: 10.1007/s10115-017-1055-z
10.	Lov Kumar, Santanu Kumar Rath 2017, "Software Maintainability Prediction using Hybrid Neural Network and Fuzzy Logic Approach with Parallel Computing Concept", Accepted for publication in *International Journal of System Assurance Engineering and Management, Springer*, DOI 10.1007/s13198-017-0618-4
11.	Lov Kumar, Sai Krishna Sripada, Ashish Sureka, Santanu Ku. Rath 2017, Effective Fault prediction Model Developed Using Least Square Support Vector Machine (LSSVM). *Journal of System and Software, Elsevier, In press,* DOI: http://doi.org/10.1016/j.jss.2017.04.016.
12.	Kumar, Lov, Sanjay Mishra and Santanu Ku Rath, 2017: "An Empirical Analysis of the Effectiveness of Software Metrics and Fault Prediction Model for Identifying Faulty Classes", *International Journal of Computer Standards & Interfaces, Elsevier* Vol. 53, no. 2,pp. 1-32, 2017. Doi.: org/10.1016/j.csi.2017.02.003

13.	Kumar, Lov, Aneesh Krishna, and Santanu Ku Rath 2017 " The impact of feature selection on maintainability prediction of service-oriented applications." *Service Oriented Computing and Applications*, *Springer*, June 2017, Volume 11, Issue 2, pp 137–161, DOI: 10.1007/s11761-016-0202-9.
14.	Kumar, Lov, Mukesh Kumar, and Santanu Ku Rath 2017. "Maintainability prediction of web service using support vector machine with various kernel methods. "*International Journal of System Assurance Engineering and Management, Springer* : **(June 2017) 8(2):pp 205–222** DOI: 10.1007/s13198-016-0415-5.
15.	Tripathy Abinash, Ankit Agrawal, and Santanu Kumar Rath 2016. "Classification of sentiment reviews using n-gram machine learning approach." *Expert Systems with Applications Elsevier,* 57 (2016): pp 117-126. DOI: 10.1016/j.eswa.2016.03.028
16.	Kumar Mukesh, Nitish Kumar Rath, and Santanu Kumar Rath 2016. "Analysis of microarray leukemia data using an efficient MapReduce-based K-nearest-neighbor classifier." *Journal of biomedical informatics, Elsevier,* 60 (2016): 395-409. Doi: 10.1016/j.jbi.2016.03.002
17.	Lov Kumar, Santanu Kumar Rath 2016, Hybrid Functional Link Artificial Neural Network Approach for Predicting Maintainability of Object-Oriented Software, *Journal of System and Software, Elsevier, vol. 121, Jan. 2016, doi:10.1016/j.jss.2016.01.003.*
18.	Mukesh Kumar, and Santanu Kumar Rath, 2015, Classification of Microarray using MapReduce based Proximal Support Vector Machine Classifier, *Knowledge-Based Systems, Journal, Elsevier,* Nov 2015; Vol. 89, Issue C, pp. 584-602, DOI: 10.1016/j.knosys.2015.09.005
19.	Ashish Kumar Dwivedi and Santanu Ku. Rath, 2015, Formalization of Web Security Patterns, *INFOCOMP Journal of Computer Science*, vol. 14, no.1, pp.14 - 25, 2015. http://www.dcc.ufla.br/infocomp/images/artigos/v14.1/art02.pdf,
20.	Mukesh Kumar, Sandeep Singh and Santanu Kumar Rath, 2015, "Classification of Microarray Data using Extreme Learning Machine Classifier", *International Journal of Information Processing (IJIP)*, Bangalore, vol. 9, no.3. pp. 1-16.
21.	Abinash Tripathy and Santanu Kumar Rath, 2015 "Object Oriented Analysis using Natural Language Processing concepts: A Review", *International Journal of Information Processing(IJIP),* IJIP, Bangalore, vol. 9, no.3, pp 28-38.
22.	Abinash Tripathy and Santanu Kumar Rath, Classification of Sentiment of Reviews using Supervised Machine Learning Techniques, International Journal of Rough Sets and Data Analysis (IJRSDA), IGI Global, Volume: 4, Issue: 1, pp. 56-74 DOI: 10.4018/IJRSDA.2017010104.
23.	Lov Kumar and Santanu Ku. Rath, 2015, *Hybrid neural network approach for predicting maintainability of object-oriented software*, *INFOCOMP Journal of*

	Computer Science, vol. 13, no. 2, p. 10-21, December 2014.
24.	Ashish Kumar Dwivedi and Santanu Kumar Rath, 2015, *Incorporating Security Features in Service-Oriented Architecture using Security Patterns, ACM SIGSOFT Software Engineering Notes*, Page 1, Volume 40 Number 1, January 2015. DOI:10.1145/2693208.2693229
25.	Mukesh Kumar and Santanu Kumar Rath, 2014, "Classification of Microarray Data using Kernel Fuzzy Inference System", ISRN Software Engineering, Hindawi Publishers, USA, pages 18, 2014. http://dx.doi.org/10.1155/2014/769159
26.	Suresh Yeresime and Santanu Kumar Rath, 2014, "Application of Meta-heuristic Algorithms for Automated Software Test Data Generation", *International Journal of Computational Intelligence Studies* , Inderscience, Volume 4 Issue 2, August 2015, Pages 113-133 doi>10.1504/IJCISTUDIES.2015.071179
27.	Suresh Yeresime and Santanu Kumar Rath, 2014, "Evolutionary Algorithms for Object-Oriented Test Data Generation", *ACM SIGSOFT Software Engineering Notes* , Vol. 39, Issue 4, pp. 1-6, 2014. doi>10.1145/2632434.2632446
28.	*Sukanya Panda and S K Rath: Investigating the structural linkage between IT capability and organizational agility: A study on Indian financial enterprises, Journal of Enterprise Information Management, Emrald, 29 (5), 751-773, 2016* DOI: http://dx.doi.org/10.1108/JEIM-04-2015-0033
29.	*SM Satapathy, BP Acharya, SK Rath, 2016: Early stage software effort estimation using random forest technique based on use case points, IET Software 10 (1), 10-17, 2016,* DOI: 10.1049/iet-sen.2014.0122
30.	Sukanya Panda and Santanu Ku. Rath, 2014, "An Empirical Analysis on Impact of Information Technology (IT) Capabilities on Firm Performance", IIM Indore Management Journal (IMJ), IIM Indore. (Accepted).
31.	Suresh Yeresime, Lov Kumar and Santanu Ku. Rath, 2014, "Statistical and Machine Learning Methods for Software Fault Prediction Using CK Metric Suite: A Comparative Analysis", *ISRN Software Engineering, Volume 2014, pp. 1 – 15, Hindawi Publishers,* USA, Article ID: 251083, 2014. DOI: http://dx.doi.org/10.1155/2014/251083.
32.	Suresh Yeresime, Lov Kumar and Santanu Ku. Rath, 2014, "A Cost Evaluation Framework for Software Fault Prediction using Radial Basis Function Network", *International Journal of Information Processing (IJIP).* (Accepted)
33.	Ashish Kumar Dwivedi, Santanu Kumar Rath, 2014, "Analysis of a Complex Architectural Style C2Using Modeling Language Alloy", *Computer Science Information Technology Journal, USA 2(3): 152-164, 2014.DOI: 10.13189/csit.2014.020305 http://www.hrpub.org*

34.	Shashank Mouli Satapathy, Mukesh Kumar and Santanu Kumar Rath, 2014, "Fuzzy-Class Point Approach for Software Effort Estimation Using Various Adaptive Regression Methods", *CSI Transaction on ICT*, Vol. 1, Issue 4, pp. 367 - 380, Springer, December 2013. ISSN(Online) : 2277 - 9086 and ISSN(Print) : 2277 – 9078. DOI: 10.1007/s40012-013-0035-z
35.	Shashank Mouli Satapathy and Santanu Kumar Rath, 2014, "Use Case Point Approach Based Software Effort Estimation Using Various Support Vector Regression Kernel Methods", *International Journal of Information Processing (IJIP),* Vol. 7, Issue 4, pp. 87 – 101, December 2013. ISSN(Online) : 0973 – 8215.
36.	Shashank Mouli Satapathy, Mukesh Kumar and Santanu Kumar Rath, 2014 "Optimised Class Point Approach for Software Effort Estimation Using Adaptive Neuro-Fuzzy Inference System Model", *International Journal Of Computer Applications In Technology (IJCAT), Special Issue On: "Current Trends And Improvements In Software Engineering Practices*", Inderscience, UK, Vol. 54, no. 4, pp323 to 333, 2016. DOI: 10.1504/IJCAT.2016.10001320
37.	Swati Vipsita and Santanu Kumar Rath, 2013, "Two Stage Approach for Protein Superfamily Classification," *Computational Biology Journal, Hindawi publication*, Canada, Article no. 898090, pp. 1 - 12 , 2013. doi:10.1155/2013/898090, Canada
38.	Swati Vipsita and Santanu Kumar Rath, 2014 "Sequence based Protein Superfamily Classification using Computational Intelligence Techniques : A Review" *International Journal of Data Mining and Bioinformatics*, Inderscience, Vol 11, Issue 4, **DOI**: http://dx.doi.org/10.1504/IJDMB.2015.067957
39.	Swati Vipsita and Santanu Kumar Rath, 2013, "Protein superfamily classification using adaptive evolutionary radial basis function", *International journal of computational intelligence and applications (ijcia)* , World Scientific press, Singapore, Volume no.11, issue no. 4., pp. 1-22, 2013. DOI: 10.1142/S1469026812500265
40.	Chinara, S. and Rath, S. K., 2011, "Topology Control by Transmission Range Adjustment Protocol for Clustered Mobile Ad Hoc Networks," *ISRN Communications and Networking, USA*, vol. 2011, Article ID 147925, 1-11 pp, 2011. doi:10.5402/2011/147925.
41.	Chinara, S. and Rath, S. K., 2009, "A survey on one-hop clustering algorithms in mobile ad hoc network" *International Journal of Network and Systems Management* (Springer Verlag publication) Vol 17, pp 183-207 (SCI Impact factor-0.438) doi:10.1007/s10922-009-9123-7
42.	Kumar Dhiraj and Rath, S. K., 2009, "Gene Expression Analysis Using Clustering". Paper accepted for publication in *International Journal of Computer and Electrical Engineering (IJCEE),* (Paper ID: E127: Print Version) of

	http://www.iacsit.org/IJCEE.htm, Published by: International Association of Computer Science and Information Technology Press (IACSIT). Singapore
43.	*Dhiraj, Kumar, and Rath, Santanu Kumar*, 2009, "Comparison of SGA and RGA based clustering algorithm for pattern recognition," *International Journal of Recent Trends in Engineering (Computer Science)*, vol. 1, no. 1, pp. 269-273, May 2009, Academy Publisher, Finland, ISSN: 1797-9617, ISBN 978-952-5726-05-3.
44.	*Dhiraj, Kumar and Rath, Santanu Kumar*, 2009, '*Review on K-means clustering Algorithmand its Application*', *The International Journal of Engineering and Technology*, 2009, Singapore, ISSN: 1793 - 8198. (*Accepted*) Website: http://www.ijetch.org/
45.	Rath, S. K., Das, C., and Sahu, S., 1994, Machine component cell formation using Boolean method. *Asia-Pacific Journal of Operations Research*, Vol. 11, No. 1, pp. 1-17. (Impact factor-0.22).
46.	Rath, S. K., Das, C., and Sahu, S., 1995, Graph coloring method for cell formation problems. *International Journal of Production Planning & Control*, Vol. 6, No. 5, pp.214-228. *(Impact factor-0.99)*
47.	Rath, S. K., Patel. D. K., and Das, C.,1989, New efficient cluster identification algorithm. *International Journal of Management & Systems*, Vol. 5, No. 3, pp. 161-171.

b) **Book Chapters: (Three):**

1. Mukesh Kumar and Santanu Kumar Rath, 2016, "Feature Selection and Classification of Microarray Data Using Machine Learning Techniques, "**Elsevier** book chapter published in "Emerging Trends in Computational Biology, Bioinformatics, and Systems Biology", Morgan Kaufmann publishers. (Paper Id. CBB3038) pp: 213-242. ISBN: 978-0-12-804203-8
2. Ranjan Kumar Behera, Kshira Sagar Sahoo, Sambit Mahapatra, Santanu K Rath, Bibhudatta Sahoo 2018, "Security issues in distributed computation for big data analytics" Book Chapter Published the Handbook of e-business security, edited by Tavares et al in **CRC press**, **Taylor and Fransis Group USA**, ISBN: 13:978-1-138-57130-3, Chapter 7, pp 167 -190.
3. Ranjan Kumar Behera, Monalisa Jena, Debadatta Naik and Santanu Kumar Rath, 2017 "Linkage based Social Network Analysis in Distributed Platform" in Big Data Analytics: A Social Network Approach-2017, a proposed Edited Book to be Published by **CRC Press, Taylor and Francis Group**. **(Accepted)**

c) <u>International Conference</u>: Ninety one

1)	Parul Chak, Ranjan Kumar Behera, Debadatta Naik, Santanu Kumar Rath, Dharavath Ramesh 2018, Content Matching Problem in Large Scale Network using Weighted b-matching Algorithm. 4th Int'l Conf. on Recent Advances in Information Technology RAIT-2018, IIT Dhanbad. Mar 15, 2018 - Mar 17, 2018. **DOI:** 10.1109/RAIT.2018.8389077
2)	Sushree Das, Ranjan Kumar Behera, Mukesh Kumar and Santunu Kumar Rath, 2018, Real-Time Sentiment Analysis of Twitter Streaming data for Stock Prediction.

	Procedia Computer Science of Elsevier, Volume 132, Pages 956-964, presented in International Conference on Computational Intelligence and Data Science (ICCIDS 2018) Delhi, https://doi.org/10.1016/j.procs.2018.05.111
3)	Shukla S., Behera R.K., Misra S., Rath S.K. (2018), Software Reliability Assessment Using Deep Learning Technique. Conference on Towards Extensible and Adaptable Methods in Computing. NSIT, UNiv. of Delhi. Springer. DOI: https://doi.org/10.1007/978-981-13-2348-5_5
4)	Ranjit Kumar ; Ranjan Kumar Behera ; Abhishek Kesarwani ; Santanu Kumar Rath**,** *2017: A Fast Algorithm for Enumerating Maximal Cliques in Large Scale Network.* 14th IEEE India Council International Conference (INDICON), 15-17 Dec. 2017, held at IIT Roorkee. **DOI:** 10.1109/INDICON.2017.8488050.
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