

## CURRICULUM VITAE

### Personal Details :

Name : Dr. Hrushikesh Naik  
 Post heed : Associate Professor  
 Department : Mining Engineering  
 Institute : N.I.T. Rourkela  
 Email Id : hknaik@nitrkl.ac.in  
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### Educational Qualification Details:

#	Examination	Specialization	College/Institute	Board/University	Year of Passing	Marking Mode	% of Marks/CGPA	Class/Grade/Division
1	B.Sc (Engg.)	Mining Engg.	N.I.T Rourkela (formerly REC Rourkela)	Sambalpur University	1984	Percentage	71 out of 100	1st Division
2	M.Tech.	Opencast Mining	I.I.T.(ISM)Dhanbad	I.I.T.(ISM)Dhanbad	1991	CGPA	4.03 out of 5.00	1st Class
3	Ph.D.	Power plant Coal ash/ Fly ash Management	National Institute of Technology, Rourkela	National Institute of Technology, Rourkela	2014	Awarded	NA	NA

### Details of Doctoral Degree:

#	Thesis Title	College/Institute	Board/University	Name of Supervisor(s)	Degree Awarded Date
1	Evaluation of Flow and in-Place Strength Characteristics of Fly Ash Composite Materials	National Institute of Technology, Rourkela	National Institute of Technology, Rourkela	Prof. M.K.Mishra, NIT Rourkela and Prof. K.U.M.Rao, I.I.T Kharagpur	12 May 2014

### Details of Teaching Experience:

#	Name of Organization	Address of Organization	Designation	Pay Scale	AGP/GP	From	To	Organization Type
1	N.I.T Rourkela	N.I.T Rourkela	Associate Professor	199100	9500	22 Jan 2018	Continue	Teaching and Research
2	N.I.T Rourkela	N.I.T Rourkela, Odisha	Associate Professor	43000-67000	9000	01 Jan 2006	21 Jan 2018	Teaching and Research
3	N.I.T Rourkela	R.E.C Rourkela, Odisha	Assistant Professor	12000-18300	Not Applicable	09 Dec 1995	31 Dec 2005	Teaching and Research
4	Regional Engineering College, Rourkela	R.E.C Rourkela, Odisha	Assistant Professor	3700-125-4950-150-	Not Applicable	30 Dec 1991	08 Dec 1995	Teaching and Research

				5700				
5	Regional Engineering College, Rourkela	R.E.C Rourkela, Odisha	Lecturer(Sr. Scale)	3000-100-3500-125-5000	Not Applicable	19 Aug 1991	29 Dec 1991	Teaching and Research
6	Regional Engineering College, Rourkela	R.E.C Rourkela, Odisha	Lecturer	700-40-1100-50-1600	Not Applicable	19 Aug 1985	18 Aug 1991	Teaching and Research

### Details of Industry Experience:

#	Name of Organization	Address of Organization	Designation	Pay Scale	AGP/GP	From	To	Organization Type
1	Coal India Limited	Coal India Limited, Kolkata	Junior Executive Trainee (Mining)	Rs. 1030	Not Applicable	05 Oct 1984	18 Aug 1985	Coal Mining

### Details of Research Experience in R &D:

#	Name of Organization	Address of Organization	Designation	Pay Scale	AGP/GP	From	To	Organization Type
1	Regional Engineering College, Rourkela	R.E.C Rourkela, Odisha	Project Officer and Head of Nodal Centre for National Technical Manpower Information System (NTMIS)	3700-125-4950-150-5700	Not Applicable	30 Dec 1991	08 Dec 1995	Technical Manpower Research

### Publication Details:

ResearcherID : O-4846-2017                      Scopus ID : 26424752200  
 Google Scholar ID : u5gGG1oAAAAJ                      ORCID ID : 0000-0002-9605-7081  
 Google Scholar h-index : 5                      Google Scholar i10-index : 5  
 Scopus h-index : 2                      Researcher ID h-index : 2

### Papers Published in National/International Journals:

#	Authors, Title, Journal. Volume Issue,Pages,Month, Year, DOI	Role	Publication Year	Paper Type	Indexed by
1	Naik, H.K. "Environment friendly large volume utilization of coal combustion by-products by the mining and other Industries-The present scenario", The Indian Mineral Industry Journal,pp.126-131.,May 2006.	First Author	2006	National	Other
2	H.K.Naik, M.K.Mishra, M.P.S. Das, V, Sahu. "Flow characteristics study of fly ash slurry	First Author	2007	National	Other

	for underground mine void filling by Fluent-A Computational Fluid Dynamic Software", The Indian Mining & Engineering Journal. pp.27-34, May 2007.				
3	Naik, H.K., Mishra, M.K., Rao, K.U.M., Dey, D. "Evaluation of the Role of a cationic Surfactant on the flow characteristics of fly ash slurry". International Journal of Hazardous Materials. vol.169, pp.1134-1140, April 2009. <a href="https://doi.org/10.1016/j.jhazmat.2009.03.016">10.1016/j.jhazmat.2009.03.016</a>	First Author	2009	International	Scopus
4	H.K.Naik, M.K.Mishra, U.M.RaoKaranam. "The effect of Drag-Reducing Additives on the Rheological Properties of Fly ash water suspensions at varying temperature environment", International, peer-reviewed on-line Journal of Coal Combustion and Gasification Products. vol.1, pp.25-31, April 2009. <a href="https://doi.org/10.4177/CCGP-D-09-00005.1">10.4177/CCGP-D-09-00005.1</a>	First Author	2009	International	Scopus
5	H.K.Naik, M.K.Mishra, U.M.RaoKaranam. "Influence of Chemical Reagents on Rheological Properties of Fly-ash water slurry at varying temperature environment". International, peer-reviewed on-line Journal of Coal Combustion and Gasification Products. vol.3, pp.83-93, April 2011. <a href="https://doi.org/10.4177/CCGP-D-11-00015.1">10.4177/CCGP-D-11-00015.1</a>	First Author	2011	International	Scopus
6	H.K.Naik, S.B.Sahu. "Economic Evaluation of UDM (Universal Drill Machine) Deployment in Underground Board and Pillar Coal Mine". Mining Engineers Journal. vol.13, no.3, pp.10-16, July 2011. <a href="https://doi.org/10.1016/j.meng.2011.07.001">ISSN 0975-3001</a>	First Author	2011	National	Other
7	H.K.Naik, M.K.Mishra, U.M.RaoKaranam. "Parametric Evaluation of some Indian fly ashes for filling underground coal mine voids". International, peer-reviewed on-line Journal of Coal Combustion and Gasification Products. vol.4, pp.28-36, Jul 2012. <a href="https://doi.org/10.4177/CCGP-D-12-00002.1">10.4177/CCGP-D-12-00002.1</a>	First Author	2012	International	Scopus
8	H.K.Naik&I.C.Pradhan. "Techno Economic Evaluation of iron Ore Pellet Manufacturing Processes in India and justification for new units in Odisha". The Indian Mining and Engineering Journal, vol.23-35, no.10, pp.23-35, Jul 2012. <a href="https://doi.org/10.1016/j.meng.2012.07.001">ISSN 0019-5944</a>	First Author	2012	National	Other
9	Naik, H.K., Dutta, S. "Application of surface miner in Indian Coal mines". Journal of Mines Metals and Fuels. vol.60, no.11-12, pp.300-309, Jul 2012. <a href="https://doi.org/10.1016/j.mmf.2012.07.001">Not applicable</a>	First Author	2012	National	Scopus
10	H.K.Naik, S.B.Rout. "Performance evaluation of cross country belt conveyor (CCBC) system in Lanjiberna Lime stone and dolomite mines of OCL India Limited, Odisha". The Indian Mining & Engineering Journal. vol.13, no.9, pp.10-17, Jul 2012. <a href="https://doi.org/10.1016/j.meng.2012.07.001">ISSN 0975-3001</a>	First Author	2012	National	Other
11	H.K.Naik, M.K.Mishra, U.M.RaoKaranam. "Fly Ash: An alternative Material for filling mine voids". MineTech Publications, A unit of Indian Mining and Engineering Journal, pp.76-83, Jul	First Author	2013	National	Other

	2013. <a href="#">Not applicable</a>				
12	H.K.Naik, C. Pradhan. "Noise Survey and Noise Modelling of opencast coal mining machineries-A case study in Indian coal mines". The Indian Mining and Engineering Journal, pp.295-300,Jul 2014. <a href="#">Not applicable</a>	First Author	2014	National	Other
13	Sahu, A.M., Naik, H.K. "PLC Technology of a Side-Casting Dragline in an Open cast Mine". Mining Engineers Journal. vol.16, no.12, pp.30-34,Jul 2015. <a href="#">Not applicable</a>	Principal Supervisor	2015	National	Other
14	Sahu, A.M., Naik, H.K. "Drive Technology of an over-casting Dragline in an opencast Mine". The Indian Mining & Engineering Journal. vol.54, no.2, pp.11-20,Jul 2015. <a href="#">Not applicable</a>	Principal Supervisor	2015	National	Other
15	H.K.Naik. "An overview of Coal Ash Utilization Scenario of Thermal Power Plants". GeoMineTech The Indian Mineral Industry Journal. vol.4, no.2/Q2, pp.87-93,Jul 2016. <a href="#">Not applicable</a>	First Author	2016	National	Other
16	Naik, H.K. and Mishra, M.K. "Characterization of Indian Fly ashes for Mine Stowing Purposes". International Journal of Applied Science & Environmental Engineering. vol.1, no.1, pp.389-399,Jul 2018. <a href="#">Not applicable</a>	First Author	2018	International	Other
17	G. Praful Kumar and Dr.H.K.Naik. "Critical Review of Performance of Some Electrical Parameters of a Mining Shovel". The Indian Mineral Industry Journal, May 2019.	Principal Supervisor	2019	National	Other
18	S.K.Panda and Dr.H.K.Naik. "Dump Slope Stability Analysis by Numerical Modelling". The Indian Mineral Industry Journal. May 2019.	Principal Supervisor	2019	National	Other
19	S.K.Panda and Dr.H.K.Naik. "Dump Slope Stability Analysis by Numerical Modelling". The Indian Mineral Industry Journal, May 2019.	Principal Supervisor	2019	National	Other

#### Papers Presented in National/International Conferences:

#	Authors, Title, Conference, Volume,Issue,Pages, Month Year,DOI	Role	Conference Year	Conference Type	Indexed by
1	H.K.Naik. "Impact of Mining on Quality of Surface and ground Water". National Seminar on "Environmental Management for Sustainable Development in Indian Context". PP.17-21,Jan 2006,	First Author	2006	National	Other
2	H.K.Naik. "Fly Ash: Its material Characteristics, Environmental Implications and utilization Strategies in India-A review". 3rd Annual Workshop on "Fly ash and its Application". PP.34-37,Jan 2006,	First Author	2006	National	Other
3	H.K.Naik. "Environmental Impact of Mining activities in Indian Subcontinent-A review". National Seminar on "Natural and Anthropogenic Disasters in Indian Sub-Continent - Forecasting and Mitigation Plans". PP.53,Mar 2006,	First Author	2006	National	Other
4	H.K.Naik. "Possible areas of large volume	First Author	2006	National	Other

	utilization of thermal power wastes in Mines-An Overview". All India Seminar on "Minerals and Metallurgical Industries Wastes and By-Products". pp.22-32,Mar 2006				
5	H.K.Naik. "Fly ash: a resource material for large volume utilization in Mines-a review". National Seminar on "Mining Technology and Environmental Issues", pp.81-87,Apr 2006	First Author	2006	National	Other
6	H.K.Naik. "The Origin and multifarious utilization of coal ash- an overview". Workshop on "Modern Management on Mine Production, Safety and Environment", pp.123-129,Jan 2006	First Author	2006	National	Other
7	H.K.Naik. "Application of Global Positioning System in Mining". Indian Conference on "Mine Surveying (ICMS-2006)". PP.119-128,Sep 2006,	First Author	2006	National	Other
8	H.K.Naik. "Coal Combustion By-Products utilization and management-The current Scenario". All India Seminar on "Catalysing Vision 2020: Challenges of Indian Chemical Engineers". PP.146-153,Jan 2007,	First Author	2007	National	Other
9	H.K.Naik. "Environmental Impact of power plant coal combustion by-products". National Seminar on "Industrial Waste management". PP.38-43,Jan 2007,	First Author	2007	National	Other
10	H.K.Naik. "Environmental impact of fly ash and its utilization trends in India – a review of current practices". National Conference on "Technology for Sustainable Utilization of Natural Resources. PP.39,Feb 2007,	First Author	2007	National	Other
11	H.K.Naik. "Environmental and Ecological Concerns of Thermal Power Plants vis-à-vis non-conventional energy sources-A review". National Conference on "Technological Advances and Emerging Societal Implications. PP.266-277,Mar 2007,	First Author	2007	National	Other
12	H.K.Naik, M.K.Mishra, M.P.Das and V.Sahu. "Large volume coal combustion by-product (CCB) utilization in mine void filling: a preliminary laboratory study". Indian Mining Congress on "Emerging Trends in Mineral Industry". PP.257-264.,Jul 2007,	First Author	2007	National	Other
13	H.K. Naik, M.K. Mishra, M.P.Das and V.Sahu. "Flow characteristics study of fly ash slurry for underground mine void filling by Fluent-a Computational Fluid Dynamics Software". National seminar on Mining Technology-Present and Future. PP.27-34,Sep 2007,	First Author	2007	National	Other
14	H.K. Naik, M.K.Mishra and B.Behera. "Laboratory Investigation and	First Author	2007	International	Other

	Characterization of Some Coal Combustion By-products for their Effective Utilization". International Conference on "Managing the Social and Environmental Consequences of Coal Mining in India. PP.763-770,Nov 2007,				
15	H.K. Naik, M.K.Mishra, P. Nayak and V. Srikrishnan. "Strength Development of Fly Ash by Lime and Gypsum Addition for its Effective Utilization-a Laboratory Investigation". Indian Chemical Engineering Congress. PP.402,Dec 2007,	First Author	2007	National	Other
16	BanitaBehera, M.K.Mishra, H.K.Naik. "Critical Review of Fly Ash Utilization in Mines". Conference on "Emerging Trends in Mining and Allied Industries". PP.277-283,Feb 2008,	Other	2008	National	Other
17	Naik, H.K., Mishra, M.K., and Rao, K.U.M. "Rheological characteristics of fly ash slurry at varying temperature environment with and without an additive". World of Coal Ash Conference (WOCA-2009) held at Lexington, KY, USA <a href="http://www.flyash.info/">http://www.flyash.info/</a> May 2009	First Author	2009	International	Scopus
18	H.K.Naik. "An overview of Modern Mining Techniques vis-a-vis Environmental Management Practices adopted at Asia's Largest Bauxite Mine in India-a case study". National Conference on "Advances in Environmental Engineering". PP.326-333,Nov 2009,	First Author	2009	National	Other
19	H.K.Naik. "Status of Mining Activities in Odisha and its Impact on Environment". National Seminar on "Building Brand Odisha: Industry Initiative, Media Intervention. PP.36-46,Dec 2009,	First Author	2009	National	Other
20	H.K.Naik. "Disaster Management and planning to meet emergency with particular reference to mines". 23rd Annual Conference of Orissa Chemical Society & National Seminar on Recent Trends in Chemical Science and Technology. PP.169-175,Dec 2009,	First Author	2009	National	Other
21	H.K.Naik. "A critical Review of Rehabilitation and Resettlement policy of Coal Mining Industry in India". Souvenir on Displacement & Rehabilitation: Solution for the future. PP.35,Nov 2010,	First Author	2010	National	Other
22	Naik, H.K., Mishra, M.K., and Rao, K.U.M. "Evaluation of Flow Characteristics of Fly Ash Slurry at 40% Solid Concentration with and without an Additive". World of Coal Ash Conference, WOCA-2011, held in Denver, CO, USA. <a href="http://www.flyash.info/">http://www.flyash.info/</a> May 2011	First Author	2011	International	Scopus
23	H.K.Naik. "Rain Water Harvesting-A Practical Approach by some non-Mining and Mining areas". Conference on	First Author	2011	National	Other

	"Technological Challenges and Management Issues for Sustainability of Mining Industries. PP.371-384, Aug 2011,				
24	H.K.Naik. "Evaluation of Some Indian Fly ashes for Filling Underground Coal Mine Voids". National Conference on "Fly Ash", Theme: Conservation of Environment and Bulk utilization. PP.IV.6.1-IV.6.17, Dec 2011,	First Author	2011	National	Other
25	Atma Ram Sahu and H. K Naik. "Drive Technology of a Dragline in Opencast mines". All India Seminar on "Mining-Recent Advances, Challenges and Scenario Beyond 2015. PP.35, Nov 2014,	Principal Supervisor	2014	National	Other
26	H.K.Kaik. "Placer Mining Methods: Present Status and Future Prospects". National Seminar on "Challenges in Mining & Mineral Industries. PP.151-162, Sep 2015,	First Author	2015	National	Other
27	H.K.Naik and Pritish Das. "Optimization studies of a surface mine and grade monitoring using SURPAC". International Conference on "Opencast Mining Technology and Sustainability". PP.131-137, Dec 2018,	First Author	2018	International	Other
28	H.K.Naik and Dinesh Pappu. "Study and analysis of Fly Ash for stowing in underground coal mine voids". Third ISEES International Conference on "Sustainable Energy and Environmental Challenges" III-SEEC. PP.512-514, Dec 2018,	First Author	2018	International	Other
29	H.K.Naik and Rahul Kumar. "Optimization and Determination of Blast Design Parameters for an Opencast Mine". National Seminar on "Rock Blasting Techniques-Challenges and Opportunities (RBT-2018). PP.1-16, Nov 2018,	First Author	2018	National	Other
30	V.K.Pisipati, Suryajyoti Nanda and H.K.Naik. "Prediction of Fragment Size using Multiple Linear Regression Model". National Seminar on "Rock Blasting Techniques-Challenges and Opportunities (RBT-2018). PP.83-91, Nov 2018,	Other	2018	National	Other
31	Naik, H.K. and Patnaik, N.K. "Computer -aided Planning for a Dragline Pit". 4th National Seminar on SURFACE MINING. No.4, December 1992,	First Author	1992	National	Other
32	Naik, H.K., Mishra, M.K., and Rao, K.U.M. "Fly Ash-An Alternative Material for Filling Mining Voids". Workshop on Clean Mining Technologies-Extraction, Beneficiation & use. May 2013,	First Author	2013	National	Other
33	Naik, H.K., Pradhan, I.C. "Techno Economic Evaluation of Iron Ore Pellet Manufacturing Processes in India and Justifications for New Units in Odisha". Golden Jubilee Workshop on Mining	First Author	2012	National	Other

	Technology. May 2012,				
34	Naik, H.K., Pradhan, C. "Noise Survey and Noise Modelling of Opencast Coal Mining Machineries- A case study in Indiancoal mines". Seminar on Sustainable Development in Mineral & Earth Resources, SDMinER 2014 New Delhi. PP.295-300,Jun 2014,	First Author	2014	National	Other
35	Naik, H.K., Patnaik, N.K. "Application of Autocad for Design and Planning of Dragline Mines". Indian Conference on Computer Applications in Mineral Industry. PP.81-91,Jan 1993,	First Author	1993	National	Other
36	Naik, H.K., Mishra, M.K. "Characterization of Indian Fly ashes for Mine Stowing Purposes". 8th Joint International Conference on "Applied Science and Environmental Technology". no.8, PP.27-36,Jun 2018, <a href="https://doi.org/10.15224/978-1-63248-155-9-33">10.15224/978-1-63248-155-9-33</a>	First Author	2018	International	Other
37	GantiPraful Kumar and Dr. H.K.Naik. "REVIEW OF ELECTRICAL PARAMETERS AND PERFORMANCE EVALUATION OF ROPE SHOVELS IN OPENCAST MINES". National conference on "Recent Advances in Mining Technology RAMT 2019". PP.51,May 2019,	Principal Supervisor	2019	National	Other
38	SURYAJYOTI NANDA, DR. H.K. NAIK. "A REVIEW OF IMAGE ANALYSIS TECHNIQUES USED FOR MEASURING BLAST FRAGMENTATION". National conference on "Recent Advances in Mining Technology RAMT 2019". PP.15,May 2019,	Principal Supervisor	2019	National	Other

#### Details of Ph.D. Students (Submitted and Awarded):

#	Name of the Student	Thesis Title	University/Institute	Status	Degree Awarded/Thesis Submission Date	Role	Total No. of Supervisor
1	Shweta B. Thomas	Ground Penetrating Radar	NIT Rourkela	Awarded	25 Dec 2018	Co-supervisor	2
2	Adabala Kumar Sanjay	Pre-concentration and separation of heavy minerals from beach sand by fluidization technique	NIT Rourkela	Ongoing	05 Jan 2016	Supervisor	2
3	GANTI PRAFUL KUMAR	Energy Conservation in Mineral Industry	NIT Rourkela	Ongoing	25 Jul 2018	Supervisor	1

#### PG Thesis Guided:

#	Title of the Project	Name of	University/Institute	Date of	Status
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		Supervisor(s)		Award/Submission	
1	FLOW CHARACTERISTICS STUDY OF FLY ASH SLURRY IN HYDRAULIC PIPELINES USING COMPUTATIONAL FLUID DYNAMICS	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2014	Completed
2	PERFORMANCE STUDY & EVALUATION OF ELECTRICAL PARAMETER OF DRAGLINE IN OPEN CAST MINE	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2015	Completed
3	Performance Assessment of Surface Miner in Indian Coal Mines	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2015	Completed
4	PERFORMANCE EVALUATION OF SURFACE MINING EQUIPMENTS WITH PARTICULAR REFERENCE TO SHOVEL-DUMPER MINING	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2016	Completed
5	Analysis of Different Slope Features and To Develop Stable Slope Models for Opencast Mine using FLAC slope	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2016	Completed
6	SLOPE STABILITY ANALYSIS OF OPEN CAST MINES USING FLAC 3D	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2017	Completed
7	Optimization of a Surface Mine and Grade Monitoring using SURPAC	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2017	Completed
8	Performance Analysis of Heavy Earth Moving Machineries (HEMM) in Opencast Mines	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2018	Completed
9	Review of Electrical Parameters and Performance Evaluation of Shovels in Opencast Mines	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2018	Completed
10	Optimization and Determination of Blast Design Parameters for an Opencast Mine	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2018	Completed
11	EVALUATION OF BLASTING PARAMETERS IN OPENCAST MINES-A	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2019	Completed

	CASE STUDY OF COAL MINES				
12	A COMPARATIVE ROCK FRAGMENT ANALYSIS USING WIPFRAG AND MACHINE VISION APPROACH	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2019	Completed
13	ANALYSIS OF ACCIDENT STATISTICS IN INDIAN MINES	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2019	Completed

**UG Thesis Guided:**

#	Title of the Project	Name of Supervisor(s)	University/Institute	Date of Award/Submission	Status
1	Application of Dragline in Surface Mining	Prof. N.K.Patnaik&Prof.H.K.Naik	National Institute of Technology, Rourkela	20 May 1991	Completed
2	Computer aided design of opencast benches	Prof. H.K.Naik and Prof.P.sharma	National Institute of Technology, Rourkela	23 May 1994	Completed
3	Flow Characteristics of Fly ash	Prof. M.K.Mishra&Prof.H.K.Naik	National Institute of Technology, Rourkela	21 May 2007	Completed
4	Strength Development of Fly ash Based Composite Material	Prof. M.K.Mishra&Prof.H.K.Naik	National Institute of Technology, Rourkela	31 May 2007	Completed
5	Evaluation of Strength Properties of Fly ash composite materials	Prof. M.K.Mishra&Prof.H.K.Naik	National Institute of Technology, Rourkela	26 May 2008	Completed
6	Strength Characterization of Flyash Composite material	Prof. H.K.Naik and Prof.M.K.Mishra	National Institute of Technology, Rourkela	25 May 2009	Completed
7	Characterization of Fly ash for their effective management and utilization	Prof. H.K.Naik	National Institute of Technology, Rourkela	24 May 2010	Completed
8	Characterization of Coal Combustion By-Products (CCBs) for their effective management and utilization	Prof. H.K.Naik	National Institute of Technology, Rourkela	24 May 2010	Completed
9	A review of seabed and placer mining deposits in India	Prof. H.K.Naik	National Institute of Technology, Rourkela	23 May 2011	Completed
10	Strength Characteristic study of Fly ash Composite Material	Prof. H.K.Naik	National Institute of Technology, Rourkela	23 May 2011	Completed
11	Application of ripper-Dozer combination in	Prof. H.K.Naik	National Institute of Technology, Rourkela	21 May 2012	Completed

	surface Mines: Its applicability and performance study				
12	Application of Surface Miner in Indian coal Mines	Prof. H.K.Naik	National Institute of Technology, Rourkela	21 May 2012	Completed
13	Performance appraisal of Dragline Mining in India	Prof. H.K.Naik	National Institute of Technology, Rourkela	28 May 2012	Completed
14	Noise Survey and Noise modelling of Opencast machineries in Mines	Prof. H.K.Naik	National Institute of Technology, Rourkela	26 May 2014	Completed
15	dragline Performance study in Indian Coal Mines	Prof. H.K.Naik	National Institute of Technology, Rourkela	26 May 2014	Completed
16	Strength Development of Flyash based Composite materials	Prof. M.K.Mishra&Prof.H.K.Naik	National Institute of Technology, Rourkela	26 May 2014	Completed
17	Ore body modelling and comparison of different reserve estimation techniques	Prof. H.K.Naik	National Institute of Technology, Rourkela	30 May 2014	Completed
18	Slope stability analysis using Numerical Modelling	Prof. H.K.Naik	National Institute of Technology, Rourkela	25 May 2015	Completed
19	Analysis of the slope stability of the overburden dumps mixed with fly ash and various stabilization techniques for slope stability	Prof. H.K.Naik	National Institute of Technology, Rourkela	25 May 2015	Completed
20	Characterization of fly ash for their effective Management	Prof. H.K.Naik	National Institute of Technology, Rourkela	25 May 2015	Completed
21	Overburden Dump Slope Stability Analysis: A Case Study of Chromite Mine	Prof. H.K.Naik	National Institute of Technology, Rourkela	23 May 2016	Completed
22	Overburden Dump Slope Stability Analysis: A Case Study of Chromite Mine	Prof. H.K.Naik	National Institute of Technology, Rourkela	23 May 2016	Completed
23	Performance Evaluation of a Coal Handling Plant: A Case Study	Prof. H.K.Naik	National Institute of Technology, Rourkela	23 May 2016	Completed
24	Performance Evaluation of a Coal Handling Plant: A	Prof. H.K.Naik	National Institute of Technology, Rourkela	23 May 2016	Completed

	Case Study				
25	DESIGN OF A STRATA MANAGEMENT CYCLE WITH TRIGGER ACTION RESPONSE PLAN (TARP) FOR UNDERGROUND COAL MINES	Prof. H.K.Naik	National Institute of Technology, Rourkela	23 May 2017	Completed
26	MEASURES FOR IMPROVING SAFETY IN OPENCAST MINES WITH FOCUS ON MINE TRUCKS	Prof. H.K.Naik	National Institute of Technology, Rourkela	23 May 2017	Completed
27	ENVIRONMENTAL IMPACT OF MINING ON LAND USE PATTERN OF TALCHER COAL FIELD AREA OF MCL	Prof. H.K.Naik	National Institute of Technology, Rourkela	23 May 2017	Completed
28	SLOPE STABILITY ANALYSIS IN OPEN CAST MINES USING NUMERICAL MODELLING	Prof. H.K.Naik	National Institute of Technology, Rourkela	23 May 2017	Completed
29	DEVELOPMENT OF COMPUTER ORIENTED ALGORITHM FOR OPENCAST MINE DISPATCH SYSTEM	Prof. H.K.Naik	National Institute of Technology, Rourkela	23 May 2017	Completed
30	Influence of Design Parameters on Blast Induced Ground Vibration by Numerical Simulation	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2018	Completed
31	Slope Stability Analysis of Overburden Dump Mixed with Fly ash Using Numerical Modelling	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2018	Completed
32	Investigation of Overburden Dump Characterization for Back Filling	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2018	Completed
33	Evaluation of Fly Ash as an Alternative Material for Stowing Underground Voids of Coal Mines	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2018	Completed
34	Optimization of	Prof. H.K.Naik	National Institute	31 May 2018	Completed

	Blasting Parameters in Opencast Mines		of Technology, Rourkela		
35	NUMERICAL SIMULATION OF PULL-OUT TEST TO DESIGN SUPPORT FOR MECHANISED DEPILLARING	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2019	Completed
36	STUDY AND APPLICATION OF NEW DIGITAL MEASUREMENT TECHNIQUES IN MINING	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2019	Completed
37	DUMP SLOPE STABILITY ANALYSIS BY NUMERICAL MODELLING	Prof. H.K.Naik	National Institute of Technology, Rourkela	31 May 2019	Completed

**Fellow of professional Bodies:**

#	Fellows	Year of Award	Membership Number
1	Fellow of Institution of Engineers (India)	2008	F-113360-4

**Seminars/Conferences/Short-Term Courses/Workshop Organized:**

#	Type	Title of the Program	Sponsoring Agency/ Self-financed	From Date	To Date	Your Role
1	Conference	National Seminar on Environmental Issues and Waste Management in Mining and Allied Industries	Mahanadi Coalfields Limited, National Institute of rock Mechanics, M/s. M.G.Mohanty, Mines Owner, Navaratan Commercial Institute, M/s. S.N.Mohanty Mines Owner	23 Feb 2001	24 Feb 2001	Chairman
2	Conference	Conference on Emerging Trends in Mining and Allied Industries	Coal India Limited, Jindal Steel and Power Ltd., Vedanta Alumina, Ministry of Environment and Forests	02 Feb 2008	03 Feb 2008	Secretary
3	Conference	All India Seminar on Slope Stability Issues in Opencast Mining and Civil Engineering	In collaboration with The Indian Mining & Engineering Journal (IM & EJ), TEQIP-II, The Institution of Engineers (India)	25 Jul 2015	26 Jul 2015	Secretary

**Professional Training Received/Short-Term Courses Attended:**

#	Training Year	Nature of Training	Duration	Organization where training was provided
1	1987	ISTE Summer School on "Mineral Resource Appraisal and Development"	25.05.1987 to 05.06.1987	Indian Institute of Technology,

				Kharagpur
2	1988	ISTE sponsored short-term course on "Rock Drilling"	02.05.1988 to 14.05.1988	Indian Institute of Technology (ISM University), Dhanbad
3	1991	Summer School on "Mining and Processing of Dimensional Stone"	05.08.1991 to 11.08.1991	University of Jodhpur, Faculty of Engineering, Jodhpur
4	1991	ISTE Summer school on Energy .0Management	17.06.1991 to 30.06.1991	IIT BHU Institute of Technology, Banaras, India
5	1991	QIP Short-Term Course on "Rock Mechanics and Ground Control Instrumentation for safe Mining Operation"	23.12.1991 to 28.12.1991	Indian Institute of Technology, Kharagpur
6	1993	Training Programme on "Manpower Information System"	19.07.1993 to 23.07.1993	Institute of Applied Manpower Research, New Delhi
7	1996	ISTE Winter School on "Environmental Chemistry"	01.03.1996 to 14.03.1996	Regional Engineering College, Rourkela
8	2006	Training in Research Laboratories	16.07.2006 to 27.07.2006	Southern Illinois University, Carbondale, USA
9	2007	Continuing Education Programme on "Ash Dyke Management and its design"	08.02.2007 to 12.02.2007	National Institute of Technology, Rourkela
10	2007	Continuing Education Programme on "MATLAB, SIMULINK and LABVIEW for Engineering Applications"	19.02.2007 to 23.02.2007	National Institute of Technology, Rourkela
11	2007	Short course on "Processing of low grade and Complex ores and minerals"	19.12.2007 to 21.12.2007	Institute of Advance Technology and Environmental Studies, Bhubaneswar
12	2008	Short course on "Transportation and storage of fly ash (Pneumatic Conveying, High concentration slurry disposal and silo design)"	03.12.2008 to 05.12.2008	Indian Institute of Technology, Delhi
13	2008	Short term course on "Advanced Ceramics Processing and Characterization"	01.07.2008 to 04.07.2008	National Institute of Technology, Rourkela

14	2009	Professional Development Programme short course on the Science of ash utilization	04.05.2009 to 07.05.2009	University of Kentucky, Lexington, USA
15	2009	Short term course on "Materials Technology: Advanced Processes and Characterizations"	07.12.2009 to 11.12.2009	National Institute of Technology, Rourkela
16	2010	Short Term Course on Spontaneous Heating Liability of Coals	27.10.2010 to 30.10.2010	National Institute of Technology, Rourkela
17	2010	Short Term Course on Geo-Environmental Issues and waste Management in Mining Industries	23.08.2010 to 26.08.2010	National Institute of Technology, Rourkela

**Seminar/ Conference/ Workshop Attended:**

#	Title of the Program	Organized by	From Date	To Date
1	Seminar on Water Resources day	Water and Land Management Institute, Orissa	22 Mar 1992	22 Mar 1992
2	1st National Seminar on Environmental Policy Issues in Mineral Industry	The Mining Geological and Metallurgical Institute of India	11 Jun 1993	12 Jun 1993
3	UK-INDIA-REC-PROJECT Workshop on "Open and Distance Learning"	Regional Engineering College, Rourkela	28 Jul 1997	01 Aug 1997
4	Workshop on "Industry Institute Partnership Programme (IIPP)" sponsored by all India Council for Technical Education	Regional Engineering College, Rourkela	03 Apr 1998	04 Apr 1998
5	One day Seminar on Mining Problems and Challenges in Western Orissa	Mining Engineers Association of India, Rourkela Chapter & The Mining, Geological and Metallurgical Institute of India, Orissa Branch	07 Nov 1998	07 Nov 1998
6	National Seminar on Environmental Issues and Waste Management in Mining and Allied Industries	Department of Mining Engineering, Regional Engineering College, Rourkela	23 Feb 2001	24 Feb 2001
7	All India Seminar in Chemical and Allied Industries: A Vision 2020	Department of Chemical Engineering, National Institute of Technology, Rourkela	01 Oct 2005	02 Oct 2005
8	National Level Seminar on "Environmental Management for sustainable development in the Indian Context"	National Institute of Technology, Rourkela	08 Jan 2006	08 Jan 2006
9	3rd Annual Workshop on Flyash and its application and 8th Annual Convention of ISTE-Orissa Section	Jagannath Institute for Technology and management, Parlakhemundi, Gajapati District, Odisha	28 Jan 2006	28 Jan 2006
10	National seminar on "Natural and Anthropogenic Disasters in Indian Subcontinent- Forecasting and Mitigation Plans"	PG Dept. of Earth Sciences, Sambalpur University	03 Mar 2006	04 Mar 2006

11	All India Seminar on "Minerals and metallurgical Industries wastes and By-products"	Orissa State Centre, The Institution of Engineers (India), Bhubaneswar	20 Mar 2006	21 Mar 2006
12	National Environment Awareness Campaign on Solid Waste Management	Youth Movement Federation of India sponsored by Ministry of Forest & Environment, Government of India & Centre for Environmental Studies, Bhubaneswar	09 Apr 2006	09 Apr 2006
13	National Seminar on "Mining Technology and Environmental Issues"	Department of Mines and Geology, Government of Rajasthan and Mining Engineers Association of India (Udaipur Chapter)	29 Apr 2006	30 Apr 2006
14	Indian Conference on "Mine Surveying"	Indian Institute of Technology (ISM University), Dhanbad	08 Sep 2006	09 Sep 2006
15	National Seminar on "Underground Coal Mining"	Indian Institute of Technology (ISM University), Dhanbad	09 Nov 2006	10 Nov 2006
16	All India seminar on Catalysing Vision 2020: Challenges of Indian Chemical Engineers"	National Institute of Technology, Rourkela	06 Jan 2007	07 Jan 2007
17	National Seminar on "Industrial Waste Management"	National Institute of Technology, Rourkela	13 Jan 2007	13 Jan 2007
18	National Conference on Technology for Sustainable Utilization of Natural Resources TechSUNR 2007	JITM School of Biotechnology, Jagannath Institute for Technology & Management Parlakhemundi, Orissa Sponsored by Council for Scientific and Industrial research (CSIR), New Delhi	24 Feb 2007	25 Feb 2007
19	National Conference on "Technological Advances and emerging Societal Implications"	National Institute of Technology, Rourkela	24 Mar 2007	25 Mar 2007
20	Indian Mining Congress on Emerging Trends in Mineral Industry	Mining Engineer's Association of India, National Headquarters & Rajasthan Chapter	13 Jul 2007	15 Jul 2007
21	1st International Conference on "managing the Social and Environmental Consequences of Coal Mining in India"	Indian Institute of Technology (ISM University), Dhanbad in association with University of New South Wales and Australian National University held at New Delhi	19 Nov 2007	21 Nov 2007
22	Indian Chemical Engineering Congress	Indian Institute of Chemical Engineers, Kolkata	27 Dec 2007	30 Dec 2007
23	Conference on Emerging Trends in Mining and Allied Industries	National Institute of Technology, Rourkela	02 Feb 2008	03 Feb 2008
24	Indo-Korean Joint International Symposium on "GeoScience and Technology: Utilization of Geospace as a solution for energy and environment"	Indian Institute of Technology, Kharagpur	12 Feb 2008	14 Feb 2008
25	Conference on "Open Access to Science Publications:	Council of Scientific & Industrial Research, PUSA, New Delhi-	24 Mar 2009	24 Mar 2009

	Policy Perspective, Opportunities and Challenges”	110012		
26	Workshop on "Onsite Safety Management and Improvement"	Youth Movement Federation of India	10 Jul 2009	10 Jul 2009
27	National Conference on "Advances in Environmental Engineering"	National Institute of Technology, Rourkela	14 Nov 2009	15 Nov 2009
28	National Seminar on Building Brand Odisha: Industry Initiative, Media Intervention	Roukela Press Club, A-1, Sector-3, Rourkela-769002	19 Dec 2009	20 Dec 2009
29	23rd Annual Conference of Orissa Chemical Society & National Seminar on Recent Trends in Chemical Science & Technology	Department of Chemistry, National Institute of Technology, Rourkela	19 Dec 2009	20 Dec 2009
30	National Seminar on "Fly ash an Opportunity for Mining Sector"	Centre for fly ash research & management (C-FARM) in association with Coal Preparation Society of India (CPSI) New Delhi	26 Aug 2010	27 Aug 2010
31	National seminar on "Quality Initiatives in Professional Education-Role of Stake holders"	Asian Workers development Institute, Rourkela	11 Feb 2011	11 Feb 2011
32	Seminar on "Safety, Health and Environment" National Environment Awareness Campaign	Youth Movement Federation of India in Collaboration with Ministry of Environment and Forests, Government of India	04 Mar 2011	05 Mar 2011
33	All India seminar on "Mining-Recent Advances, Challenges and Scenario Beyond 2015"	Institution of Engineers (India) Rourkela Local centre	08 Nov 2014	09 Nov 2014
34	National Seminar on Challenges in Mining & Mineral Industries	Department of Mining Engineering & Department of Mineral Engineering, Government College of Engineering, Keonjhar in Association with Indian Institute of Mineral Engineers-Keonjhar Chapter, Odisha	26 Sep 2015	26 Sep 2015
35	Workshop on "Prevention of Sexual harassment and Gender Sensitization at Workplace"	National Institute of Technology, Rourkela	26 Oct 2016	26 Oct 2016
36	Joint International Conference on Applied Science and Environmental Technology-ASET, held in Paris, France	Institute of Research Engineers and Doctors	23 Jun 2018	24 Jun 2018
37	National Seminar on Rock Blasting Techniques- Challenges and Opportunities	CSIR-Central Institute of Mining and Fuel Research, Dhanbad	23 Nov 2018	24 Nov 2018
38	International Conference on Opencast Mining Technology & Sustainability	Northern Coalfields Limited, Singrauli, MP	14 Dec 2018	15 Dec 2018

39	Third ISEES International Conference on Sustainable Energy and Environmental Challenges (III-SEEC)	Indian Institute of Technology, Roorkee and NIT Uttarakhand	18 Dec 2018	21 Dec 2018
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#### Sponsored Project Details:

#	Project Title	Sponsoring Agency Name	Starting Month-Year	Ending Month-Year	Amount (INR)	Status	Your Role	Total Number of Investigator(s)
1	MODROBAS	AICTE	1-1995	7-2001	1000000	Completed	PI	4
2	Modernization of Labs	MHRD Grant	3-1998	7-2001	850000	Completed	PI	4
3	3700-Modernization of Mine surveying Labs	MHRD	1-1999	7-2001	500000	Completed	PI	1
4	Fund for Infrastructure in Science and Technology (FIST) Level I	DST	12-2002	12-2007	2000000	Completed	Co-PI	3
5	Evaluation of Flow and in-Place Strength Characteristics of Fly Ash Composite Materials	DST	3-2009	3-2011	1000000	Completed	PI	2
6	Fly ash management	CSIR	2-2010	5-2013	1300000	Completed	Co-PI	3

#### Consultancy Project Details:

#	Project Title	Sponsoring Agency Name	Starting Month-Year	Ending Month-Year	Amount (INR)	Status	Your Role	Total Number of Investigator(s)
1	Verification of Iron Ore stock at Kurmitar, Gandhamardhan and Daitary iron ore mines	Odisha Mining Corporation, Bhubaneswar	3-2018	6-2018	2727570.00	Completed	Co-PI	2
2	Analytical advice for physic-mechanical analysis of boreholes	Central Mine Planning and Design Institute, Bhubaneswar/Ranchi	3-2018	6-2018	1262010.00	Completed	Co-PI	2