

| | | |
|---------------------------|--|---|
| Name | Dr. Dheeraj Kumar |  |
| Date of Birth | 22nd January 1977 | |
| Correspondence | Department of Mining Engineering Indian School of Mines Dhanbad, Jharkhand - 826004 Phone No: + 91 + 326 + 2235486 Fax: + 91 + 326 + 2296628 Email: dheeraj@dkuamr.org dheeraj76@gmail.com web: www.ismdhanbad.ac.in | |
| Mobile | +91 9431711199 | |
| Website | http://www.dkuamr.org | |
| Marital Status | Married | |
| Present Employment | Presently working as Associate professor, Dept. of Mining Engineering, ISM Dhanbad, India | |
| Research Area | Application of FEM, Drilling and Blasting, Rock Excavation Engineering, Surveying, Geomatics and IT Application in different mining domains | |
| Administrative | Member (Academic Council), Member (Departmental Research Committee), Faculty-in-charge (Mining Engineering Society), Dept. Member (ISM Website committee, Library Committee) etc. | |

Academic

| DEGREE | PASSING YEAR | % OF MARKS/ DIV. | REMARKS |
|---------------------------|--------------|--------------------------|--|
| Ph. D. I.I.T Kharagpur | 2003 | "A" grade in course work | Programming languages Theory & Practice, Society Science and Technology, Computer Applications, Finite Element Analysis, RDBMS with Oracle and FoxPro |
| M.Tech I.S.M Dhanbad | 1999 | 4.31/5.00 (86%) 1st | Advance Mathematics, subject related to Design and planning of an Excavation system, Explosive Engineering, Geomechanics, Fragmentation Mechanics and Tunnel Engineering |
| B.E | 1997 | 79.0% 1st | Rank in the University – 5 th |
| 12th (I.Sc) | 1993 | 77.4% 1st | Physics, Chem., Math, English, etc |

Experience: 10 years

More than 9 years' experience of system administration and teaching & research at organizations viz. Indian Institute of Production Management, Kansbahal; KIIT Bhubaneswar and IIT Kharagpur

Awards / honors

- ❖ Selected as "Meritorious Scholar" for involving into academic activity at IIT Kharagpur, in consecutive three years i.e. during 2000–2001, 2001–2002 and 2002–2003

- ❖ Recipient of the “CSIR Foreign travel Grant” for sponsoring me to present key note paper in the international conference at SHENYANG, P. R. China
- ❖ Recipient of the “Hindustan Zinc Limited Award” by the Institution of Engineers (INDIA) for the best technical research paper

Paper publication

Annexure – I

Consultancy Projects

Annexure – II

Executive Development Programme

Annexure – II

R&D Projects

Annexure – III

Organizing Seminar/Symposium/ Workshop

- Convener of the All India Conference on “Maintenance & Reliability, Organized by IIPM in coordination with L & T, Indian Oil Corporation Ltd. and NHPC during 28–29 Nov. 2003 at The Oberai hotel, New Delhi
- Co- Convener of the National Management Convention on “Future Organization: Strategizing Business”, Organized by IBAT, KIIT Deemed University during 06–07 Feb. 2005 at IBAT, Bhubaneswar
- Co- Convener of the National Conference on “Underground Metal Mining: Status and Prospects”, Organized by Dept. of Mining engineering, ISM Dhanbad, during 13–14 Feb. 2006 at ISM, Dhanbad
- Co- Convener of the Indian Conference on “Mine Surveying”, organized by Dept. of Mining Engineering, ISM Dhanbad, during 07–08 Sept. 2006 at ISM, Dhanbad
- Organizing Secretary of the International mine ventilation congress held in the year 2009 at ISM Dhanbad.
- Organizing Committee members of more than 12 other conferences organized at ISM

Publications: Total 41

Journals

International refereed Journals: 3

National refereed Journals: 4

Conference/seminar/symposium

International Conference (abroad): 7

International Conference (India): 6
National Conference (India): 17
Books (Edited): 4

Short Term Courses Attended

- QIP Short term course on Geostatistics and its Application, April, 2000
- Short term course in Information Technology in Mining, March 2001
- 2nd Short term course in Information Technology in Mining, September, 2001
- Short term course on Mines safety and Legislation, June, 2002
- Short term course on GIS, GPS and Remote Sensing application, December, 2002
- Short term course in Mine closure and management, Feb, 2002
- Application of virtual reality in mineral industry, Sponsored by AICTE, from 31st Jan 04 – 5th Feb 05 at Indian Institute of technology Kharagpur

Place: ISM

Date: 19 June 2010

(Dheeraj Kumar)

List of Papers published/accepted in various conference/seminar and journals (till 2010)

JOURNALS

1. **Kumar, D & Das, S. K.** An Experimental Study of the Parameters influencing Ultimate Bearing Strength of Weak Floor Strata, *Geotechnical and geological journal*, 2005, Volume 23, Issue 1.
2. **Kumar, D. Das. S. K.** Floor Bearing Characteristics of Jointed and Layered Rock Foundation, *Electronic Journal of Geotechnical Engineering*, EJGE, www.ejge.com, Vol. 9 - 2004
3. **Kumar, D. Behera, P.K. & Singh, U. K.** Shotcreting in Rock Excavation and its Adhesion Strength, *Electronic Journal of Geotechnical Engineering*, EJGE, www.ejge.com, Vol. 7 - 2002
4. **Kumar, D & Das, S. K.** Bearing Strength Analysis of Weak Floor Jointed and Layered Rock mass by Physical Simulation, *Mining Engineers Journal (A publication of MEAI)*, Vol. 3. No.8, March 2002: 18-26.
5. **Kumar, D & Das, S. K.** Estimation of Weak Floor Strata Properties and Their Influence on Floor Bearing Strength through Physical Modeling Technique, *Journal of The Institution of Engineers (India)*, Vol. 82, Feb. 2002: 48-51.
6. **Kumar, D & Das, S. K.** Investigation into Floor Bearing Strength of Indian Coal Measure Strata by Physical Modeling, *Mintech*, Vol. 22, No. 5&6, Sep – Dec. 2001: 27-42.
7. **Mukhopadhyay. S. K. & Kumar D. K.** Why Longwall in India has not succeeded as in an Other Developing Country like China, *Journal of The Institution of Engineers (India)*, Vol 84, Feb 2004: 43 – 55.

Conferences/Seminar/Symposia/workshop

8. **Kumar, D & Das, S. K.** Bearing Strength of Jointed and Layered Rock Foundation: - A physical simulation approach, 12th Pan-American Conference on Soil Mechanics and Geotechnical Engineering and the 39th U.S. Rock Mechanics Symposium, Soil and Rock America 2003, June 22-25, 2003, MIT, USA.
9. **Kumar, D. Behera, P.K. & Singh, U. K.** Shotcreting in underground excavation and influence of various parameters on its adhesion strength, ITA World Tunneling Congress 2003, Amsterdam, (Re) Clamming the Underground Space, The Netherlands, 12th -17th April, 2003.
10. **Kumar, D & Das, S. K.** Experimental Investigation into Floor Bearing Strength of Weak Floor Jointed Rock Mass, Second International Conference on New Development in Rock Mechanics and Rock Engineering October 10 to 12, 2002, Shenyang, P. R. China.
11. **Kumar, D & Das, S. K.** Experimental Investigations Into Floor Bearing Strength of Jointed and Layered Rock mass, The 5th International Conference on Analysis of Discontinuous Deformation 7-11 October 2002, Wuhan, P.R.China, Ben-Gurion University of the Negev Beer Sheva, Israel.
12. **Kumar D & Das, S. K.,** Bearing Strength of Model Scale Footing on Simulated Underground Weak Floor Strata, MEET 2002, International Conference organized by MGMI, Calcutta 26-28 Sep, 2002
13. **Kumar, D & Das, S.K.** Prediction of Bearing Strength of Weak Floor Strata with regards to Plate Size Effects, International Conference "Modern Management of Mine Producing, Geology and Environmental Protection" - SGEM 2002, 9 -13 June, 2002. BULGARIA, Varna city.
14. **Kumar, D & Das, S. K.** Experimental Investigation into Bearing Strength of Weak Floor Strata in Underground Mines, *National Symposium on Sustainable Mining Technology: Present and Future, SMINETECH- 2002*, Dept. of Mining Engineering Anna Univ., 14-15 March, 2002.
15. **Kumar, D & Das, S. K.** Bearing Strength Analysis of Weak Floor Jointed and Layered Rockmass, *National Conference on Strata Control in Coal Mines, NCSCCM – 2001*, The Singareni Collieries Co. Ltd. 25 –26 November, 2001:52-62
16. **Kumar, D. Behera, P.K. & Singh, U. K.** Shotcreting in Rock Excavation and its Adhesion Strength, *National Seminar on Problem & Prospect of Bord and Pillar Mining in the New Millennium, PPBP-2001*, 23 –24, Nov. 2001, Department of Mining & Geology, Bengal Engineering College, Howrah: 69-75.

17. **Kumar, D & Das, S. K.** Evaluation of Floor Bearing Strength of Indian Coal Measure Strata by Physical Modeling, *National Seminar on Rock Excavation Techniques, RockEx 2001*, 21-22 September 2001, The Indian Mining and Engineering Journal: 28-39.
18. **Kumar, D & Das, S. K.** Non-Linear FEM Analyses of Bearing Strength of Footings in Weak Floor Jointed and Layered Rock Mass, *TAMSEM- Conference on Technology and Management for Sustainable Exploitation of Minerals and Natural resources*, 5-7 February, 2004, Kharagpur, India
19. **Kumar, D & Das, S. K.** Experimental and FEM Analysis of Bearing Characteristics of Weak Floor Jointed and Layered Rock Mass, *AGTE- 2005, All India Conference on Advances in Geotechnical Engineering*, 22-23 January, 2005, NIT Rourkela, India
20. **Kumar, D & Das, S. K.** Non-Linear FEM analysis of Floor Bearing Characteristics of Weak Rock Foundation, *ICTACEM 2005, International Conference on theoretical, Applied, Computational and Experimental Mechanics*, IIT Kharagpur
21. **Suresh. R. & Kumar, D.** Lossless Data Compression using the BWT (Burrows-Wheeler transform) *ICET – 2004, International Conference on Emerging Technology*, 22-24 December 2004, KIIT Deemed University, Bhubaneswar.
22. **Kumar, D. Jena, V. Sahu, S. Behera S.,** ERP in mining Sector: A case study, *International symposium on Advances in Mining Technology and Management, AIMM – 2005*, Nov. 30 – Dec. 2 , 2005, IIT Kharagpur
23. **Bahuguna, P. P. Kumar, D. and Kumar, S.** State –of –the –art Survey Instruments and their Applications in Coal Mines, *Workshop on Advanced Surveying for Coal Mining*, Jan. 7 – Jan. 8 , 2006, DGMS, Dhanbad.
24. **Kumar, D. Jha, S. and Somani, N.,** Computerized Maintenance Management Systems (CMMS) for mining industries, *All India Conference on Advances in Computer and Information Technology (ACIT - 2006)*, Organized by Institution of Engineers India Ltd., March 11 –12, 2006,
25. **P. P. Bahuguna, Kumar, D. and Kumar, S.** Modern Survey Instruments and their use in Mine Surveying, *Indian Conference on Mine Surveying (ICMS - 2006)*, Organized by Department of Mining Engineering, ISM Dhanbad., September 8 –9, 2006,
26. **P. P. Bahuguna, Kumar, D. and Kumar, S.** Information Technology Enabled Volumetric Analysis of Earthworks In an Opencast Mine , *Indian Conference on Mine Surveying (ICMS - 2006)*, Organized by Department of Mining Engineering, ISM Dhanbad., September 8 –9, 2006,
27. **P. P. Bahuguna, & Kumar, D.** Application of Geographical Information System (GIS) for Opencast Coalmines, *Indian Conference on Mine Surveying (ICMS - 2006)*, Organized by Department of Mining Engineering, ISM Dhanbad., September 8 –9, 2006,
28. **Mahto V. & Kumar D.** Emerging Drilling Techniques For Underground Coal Gasification Process Wells: An Overview, *National Conference on Underground Coal Mining (UCM – 2006)*, Organized by Department of Mining Engineering, ISM Dhanbad., September 8 –9, 2006,
29. **Nath. R, Kumar P., & Kumar D.** Size Of Pillars – A Critical Study of Indian Coal Mines Regulations, *National Conference on Underground Coal Mining (UCM – 2006)*, Organized by Department of Mining Engineering, ISM Dhanbad., September 8 –9, 2006,
30. **Kumar, D. & Das S. K. ,** Stability Analysis of Spread-Footing Foundations on Weak Rock Using Non-Linear Fem Modelling, *4th Asian Rock mechanics Symposium, ISRM international Symposium 2006 (ARMS - 2006)*, Organized ISRM Singapore., November 8 –9, 2006
31. **Kumar, D.,** Emerging Trends in Information Technology Enabled Tools for Mining Industries, *Emerging Trends in Mining & Allied Industries*”, organized by Dept. of Mining, NIT Rourkela, November 30 – December 2, 2007.
32. **Kumar, D. & Bahuguna, P. P.,** Application of Information Technology Enabled Tools for Mine Safety & Disaster Management, *19th National Convention of Mining Engineers & National Seminar on Disaster in Mines*, Organized by Institution of Engineers (I) & Dept. of Mining Engineering, ISMU Dhanbad, March 10 – 11, 2008.
33. **Kumar, D.,** Investigation into Floor Bearing Strength of Indian Coal Measure Strata by Finite Element Modeling, *6th international Symposium on Ground support in Mining & Civil Engineering*, organized by SAIM & SARINE, 30 March – 03 April 2008, Cape Town, South Africa
34. **Kumar, S. Bahuguna, P. P. Kumar, D. Sarkar, B. C.,** Recent applications of GIS & GPS in Mining and allied Fields, *National Seminar on Environmental Issue on Geotechnics & Mineral Industry*, Organized by Dept. of Geology, BIT Sindri, April 4 - 5, 2008.

35. **V.M.S.R.Murthy** and Dheeraj Kumar (2008), Optimum blast fragmentation – An aid for enhancing crusher output in quarrying, **National Seminar on Crushing, Screening and Conveying(CS&C-2008)**, 11-12 September, Org. by ISM University, Dhanbad, pp 107-123.
36. Singh, U. K. and **Kumar, D.** A Strain Rosette Block for Measurement of In-situ Stress in Concrete Lining. In International Symposium on “*Rock Mechanics and Geo-Environment in Mining and Allied Industries*” (RGMA-09) in February 12-14, 2009; BHU, Varanasi.
37. Murthy, V.M.S.R. **Kumar, D.** Jain, P. and Dash A. K. Development of a Cuttability Index of Surface Miner for Performance Prediction in different Geomining Condition. In International Symposium on “*Rock Mechanics and Geo-Environment in Mining and Allied Industries*” (RGMA-09) in February 12-14, 2009; BHU, Varanasi.
38. **Bahuguna, P. P. and Kumar, D.**, Application of Surveying Linear Features using GPS, 13th Annual International Conference and Exhibition on Geospatial Information Technology and Applications, Map India – 2010, Organized by GIS Development, Noida, 19 - 21 January, Epicentre, Apparel House, Gurgaon, India,

39. Annexure - II
Constancy Projects and Executive Development Programmes

Consultancy projects initiated during the year (April, 2005 – March, 2006)

| S.No. | Title of the Project & Consultancy Number | Client |
|--------------|---|----------------------------|
| 1. | Field investigation, modeling & simulation study for improving ventilation system (Cons/0083/06) | UCIL |
| 2. | Modelling & simulation studies for designing the ventilation system of Parbatpur coal block (Cons/0091/06) | Electro Steel Casting Ltd, |
| 3. | Ground vibration and air over pressure monitoring during under water blasting at VSKP Port Turst (Cons/0096/06) | DDG & Constn Ltd, VSKP |

Consultancy projects initiated during the year (April, 2006 – March, 2007)

| S.No. | Title of the Project & Consultancy Number | Client |
|--------------|--|-------------------------|
| 4. | Ground vibration and air over pressure study at Ostapal Chromite mines during deep hole blasting & suggestions to control (Cons/0124/06) | FACOR, Bhadrak |
| 5. | Final RL measurement of Murulidih OCP (Patch II) of WJ Area, BCCL (Cons/0125/06) | BCCL |
| 6. | Study of ventilation network of the existing mines and establishing an integrated ventilation network for designing the ventilation system of Addriyala shaft project (Cons/0129/06) | SCCL |
| 7. | Study of ventilation network of the existing mines and establishing an integrated ventilation network for designing the ventilation system of Jallaram shaft project (Cons/0130/06) | SCCL |
| 8. | Study of ventilation network of the existing mines and establishing an integrated ventilation network for designing the ventilation system of Peddampetta shaft project (Cons/0131/06) | SCCL |
| 9. | Study of ventilation network of the existing mines and establishing an integrated ventilation network for designing the ventilation system of Shantikhani L/W project (Cons/0132/06) | SCCL |
| 10. | Final RL survey in East Side Quarry of specified area as marked on the Plan at Chasnala Colliery (Cons/0134/06) | IISCO |
| 11. | Ground vibration and air over-pressure study during channel deepening under phase II, VPT (Cons/0201/06) | DD&C Ltd, Visakhapatnam |

Consultancy projects initiated during the year (April, 2007 – March, 2008)

| S. No. | Title of the Project & Consultancy Number | Client |
|---------------|--|--|
| 12. | Blast vibration and air over pressure monitoring and control during the deepening of inner harbour channel, Port of Visakhapatnam, Project no.: Cons /0236/2007, July, Sponsored by Vizag Seaport Private Limited, Phase II, Department of Mining Engineering, Indian School of Mines University, Dhanbad. | Vizag Seaport Pvt Ltd |
| 13. | A Study into the influence of rock and rock mass properties on the performance of surface miner, .Project no.: Cons/0237/2007, October, Sponsored by L&T, Phase I, Department of Mining Engineering and Applied Geology, Indian School Of Mines University, Dhanbad. | L&T Kansbahal |
| 14. | Intermediate RL measurement in Chandore patch (Hired HEMM) of AKWM, OCP, Katras Area. CONS/0268/2007 | BCCL |
| 15. | Superimposing National Grid on Old Mine plans by connecting them to National Grid system for Tasra Opencast Project of IISCO Steel plant, Chasnala. CONS/0280/2007 | IISCO |
| 16. | Blast vibration & air overpressure monitoring during underwater blasting for deepening the inner harbour channel, Visakhapatnam Port. CONS/0321/2007 | Vizag Seaport Pvt Ltd |
| 17. | Surface surveying & contouring job for Sitanala Coal Block, SAIL-IISCO Steen Plant, Chasnala Colliery. CONS/0328/2007 | IISCO |
| 18. | Design of underwater drilling and blasting methodology for channel deepening based on Ground vibration and air overpressure monitoring at intake channel, Jamnagar. CONS/0426/2007 | Dharti Dredging and Infrastructure Ltd |
| 19. | Fixing GPS Coordinates for identified locations at Gomia. CONS/0435/2007 | Orica Mining Services, IEL Ltd, Gomia |

Consultancy projects initiated during the year (April, 2008 – March, 2009)

| S. No. | Title of the Project & Consultancy Number | Client |
|---------------|--|---------------|
|---------------|--|---------------|

| | | |
|-----|---|---|
| 20. | 1. Scientific study for fixing blasting parameters for the OC Patch at Bhowra(N) Colliery, Project No.: Cons/0633/08-09, October, Sponsored by BCCL, Department of Mining Engineering, ISM University, Dhanbad. | Bharat Coking Coal Ltd. |
| 21. | Blast vibration and air over pressure monitoring and control during the deepening of inner harbour channel, Port of Visakhapatnam, Project no.: Cons /0321/2007, October, Sponsored by Vizag Seaport Private Limited, Department of Mining Engineering, Indian School of Mines University, Dhanbad | Vizag Seaport Private Limited |
| 22. | Scientific study for fixing blasting parameters using SME for the Kankanee OCP, Sijua Area, Project No.: Cons/0664/08-09, December, Sponsored by BCCL, Department of Mining Engineering, ISM University, Dhanbad. | Bharat Coking Coal Ltd. |
| 23. | Design of bench blasts for controlling ground vibration, air overpressure and fly rock during deephole blasting in Gopinathpur Colliery, Mugma Area, Project No.: Cons/0695/08-09, January, Sponsored by ECL, Department of Mining Engineering, ISM University, Dhanbad. | Eastern Coalfields Ltd. |
| 24. | Blast vibration and air overpressure monitoring during underwater drilling and blasting for deepening and widening of stilling basin and intake channel, RIL, Sikka, Jamnagar, Project No.: Cons/0719/08-09, January, Sponsored by DDIL, Department of Mining Engineering, ISM University, Dhanbad | Dharti Dredging and Infrastructure Ltd. |
| 25. | Checking old Mine Plans of ISP - SAIL Collieries regarding maintenance as per statue, Chasnalla, Project No.: Cons/0722/08-09, September, Sponsored by ISP, SAIL, Department of Mining Engineering, ISM University, Dhanbad | IISCO, SAIL |
| 26. | Check survey to locate the position of underground workings with respect to the position of river on the surface at Millipura Underground coal Mines of MIEL (Monet Ispat and Energy Ltd,), Project No.: Cons/0713/08-09, November, Monet Ispat and Energy Ltd, Department of Mining Engineering, ISM University, Dhanbad | Monet Ispat and Energy Ltd |

Consultancy projects initiated during the year (April, 2009 – March, 2010)

| S. No. | Title of the Project & Consultancy Number | Client |
|---------------|---|----------------------------|
| 27. | Scientific study for fixing controlled blasting parameters at Khoodia Colliery, Mugma Area, | Eastern Coalfields Ltd. |
| 28. | Design of underwater drilling and controlled blasting methodology for deepening of entrance channel and turning circle of port of Visakhapatnam | Vizag Port Trust |
| 29. | Scientific study for fixing blasting parameters for the OC Patch at Nichitpur Colliery, Sizua Area | Bharat Coking Coal Ltd. |
| 30. | Blast vibration and air overpressure monitoring during underwater blasting for deepening near LPG Jetty, Port of Visakhapatnam | Dharti Dredging India Ltd. |
| 31. | | |

Executive development programme offered (2006-07)

| S. No. | Course Number and period | Programme | Coordinator | No. of participants |
|---------------|---|--|---------------------------------------|----------------------------|
| 1. | Cons/0223/2007 12 Feb – 24 Mar'07 | Advances in Mine Surveying Technology | Dr P.P.Bahuguna Dr Dheeraj Kumar | 12 |
| 2. | Cons/0235/2007 5-17 March, 2007 & 26 March – 6 April, 2007 | Orientation course on Surface Coal Mining for NTPC Executives Trainees | Prof Phalguni Sen Dr Dheeraj Kumar | 27 |

Executive development programme offered (2007-08)

| S. No | Course Number and period | Programme | Coordinator(s) | No. of participants |
|--------------|---|---|--|----------------------------|
| 3. | CONS/0319/2007 (9-7-07 to 13-10-07) | Course for Mining Supervisors of Tata Steel | Prof Phalguni Sen Dr V K Saxena Dr Dheeraj Kumar | 12 |
| 4. | CONS/0326/2007 (27-8-07 to 01-09-07) | EDP on Mining for Non-Mining Executives of | Shri P K Behera Prof U K Singh | 13 |

| S. No | Course Number and period | Programme | Coordinator(s) | No. of participants |
|-------|--------------------------------------|--|-------------------------------------|---------------------|
| | | Atlas Copco | | |
| 5. | CONS/0351/2007 17-9-07 to 29-9-07 | Two weeks course on "Modern Surveying Instruments for Oil India Ltd (OIL)" | Dr P P Bahuguna Dr Dheeraj Kumar | 20 |

Executive development programme offered (2008-09)

| S. No | Course Number and period | Programme | Coordinator(s) | No. of participants |
|-------|---|--|--|---------------------|
| 6. | CONS/0591/2008 (18-08-08 to 13-09-08) | 4 weeks refresher's course in Surveying | Dr. P.P. Bahuguna Dr Dheeraj Kumar | 12 |
| 7. | CONS/0653/2008 (20-10-08 to 29-11-08) | 6 weeks course on Advances in Mine Surveying | Dr. P.P. Bahuguna Dr Dheeraj Kumar | 17 |
| 8. | CONS/567/2008-09 Executives of Infosys | Mining Fundamentals for Infosys | Dr. V. M. S. R. Murthy Dr.A.S.Venkatesh Shri P. K. Behera Dr Dheeraj Kumar | 20 |
| 9. | CONS/634/2008-09 | Ore Mineralogy and Mining for Institute for Mining, Mineralogy and Metallurgy, BCSIR, Bangladesh | Dr. V. M. S. R. Murthy Dr. A.S.Venkatesh Shri P. K. Behera Dr Dheeraj Kumar | 6 |
| 10. | CONS/736/2008-09 27.01.09-31.01.09 | Blasting and tunneling technologies for NHPC | Dr. V. M. S. R. Murthy Dr Dheeraj Kumar | 20 |

Executive development programme offered (2009-10)

| | | | | |
|-----|---------------------------------------|--|--|----|
| 11. | CONS/825/2008-09 22.06.09-26.06.09 | Blasting and tunneling technologies for NHPC | Dr. V. M. S. R. Murthy Dr Dheeraj Kumar | 15 |
|-----|---------------------------------------|--|--|----|

| | | | | |
|-----|---|---|---|----|
| 12. | CONS/0928/09-10 23.11.09 - 02.07.10 | 6 weeks course on Advances in Mine Surveying | Dr. P.P.Bahuguna Dr Dheeraj Kumar | 20 |
| 13. | CONS/0950/09-10 07- 09 December 2009 | Surveying Software, Survey Engineering Environment (Quantity Estimation) | Dr. Dheeraj Kumar Dr. P. P. Bahuguna | 15 |

R&D Projects

- 1. Project Title:** *Development of a computer based Mine Information System (MIS) to provide upto date database for an opencast mine*

Project value: Rs.16.00 lakhs

Sponsoring agency: MHRD, Govt. of India

Project Coordinator: Dr. P. P. Bahuguna and Dr. Dheeraj Kumar

Objective: The proposal involves the development of a system based on GIS (Called Mine information System). All survey data will be incorporated in the base map and other information pertaining to Geology, mine benches, haulage roads, sumps, mine faces, reduced level, positions of various machinery etc. will be integrated in M/S. on base-map in different layers. A system would be evolved. To categorize such information, which may be required for the safe execution of the mine.

Status: Completed

- 2. Project Title:** *Development of a setup for stress measurement in concrete tunnel lining dam walls and pillars*

Project value: Rs.15.22 Lakhs

Sponsoring agency: Ministry of Water Resources, R & D Division, New Delhi

Project Coordinator: Prof. U. K. Singh and Dr. Dheeraj Kumar

Objective: Development of a strain gauge based device for mounting on wall for measurement of absolute stress in concrete tunnel lining, dam and pillars

Status: Completed

- 3. Project title:** *Prediction of the Stability of Spread Footing Foundation on Weak Floor Jointed and Layered Rock Mass Using Multi Model Finite Element Analysis and Artificial Neural Network Technique*

Objective: Stability analyses of jointed rock foundations by Finite Element Modeling (FEM) using the multiple yield models.

Project value: Rs. 22.88 lakhs

Sponsoring Agency: SERC, Dept. of Science & Technology, GOI

Coordinators: Dr. Dheeraj Kumar & Prof. U. K. Singh

Status: On-going

Findings: The project was started in January, 2008. Major equipments have been procured. Literature review, recruitment of project staff etc. are in the progress.