

Curriculum Vitae

RIZWAN HASIM

Assistant Professor, Department of Mining Engineering
BIT Sindri, Dhanbad (Under Dept. of Higher, Technical Education &
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Nationality: Indian



Education

- Doctor of Philosophy, Mining Engineering
(Thesis Title: Numerical Simulation of Support Design Using Rock Bolt in Bord and Pillar Method)
IIT (BHU), Varanasi, December, 2020
- Master of Technology, Mining Engineering
IT (BHU), Varanasi, May, 2009
- Bachelor of Science in Engineering, Mining Engineering
BIT Sindri, Dhanbad, May, 2007

Area of Specialisation

- Rock Mechanics & Ground Control
- Mine Planning & Design
- Underground Coal Mining
- Numerical Simulation of Mining Structures
- Rock Instrumentation

Courses taught

(Theory)

- Applied Rock Mechanics
- Rock Mechanics
- Mine Planning & Design
- Underground Coal Mining Methods

(Practical)

- Rock Mechanics Lab
- Computer Application in Mining
- Mine Design Lab

Work Experience

(Research/Industrial/Academic Experience - Over 14 years)

- Assistant Professor, Mining Engineering Department, BIT Sindri, Dhanbad, since January 2018
- Research Scholar, IIT (BHU), Varanasi, June, 2014 to December, 2017
- Assistant Manager, Tata Consulting Engineers Limited, April, 2010 to November, 2013

Project Handled in Tata Consultancy Engineers Limited

- Preparation of Feasibility Report for Development of Arki Limestone Opencast Project, Solan.
- Assessment of Concurrent activity of Moira Madhujore U/G Coal blocks occurring below Aerotropolis Project, Durgapur, WB.
- Consulting Engineering Services for Preparation of Detailed Project Report for Moira - Madhujore U/G Coal Block of 2MTPA Capacity with Continues Miner Technology at Durgapur, WB.
- Preparation of 3D Modeling and Feasibility Report for Ardhagram U/G Coal Block of 1 MTPA Capacity with Continues Miner Technology Near Raniganj, WB.
- CES for Preparation of DPR including Geological Modeling for Mandla U/G Coal Block of 1.5 MTPA Capacity with Continues Miner Technology at Chhindwara, MP.
- CES for preparation of Mining Plan for Dongrital II opencast & underground coal block of 2.9 MTPA Capacity with combination of shovel-dumper, Continuous Miner & Power Support Long wall Technology.

Consultancy Projects

(Ongoing)

1. Scientific study as per regulation No. 106(2) of CMR 2017, for determination of method of working, ultimate pit slope, dump slope and monitoring of slope stability and designing deep hole drilling and blasting system under Reg. 196(3) of CMR -2017 at ABOCP Mine, Block II area, BCCL
2. Scientific study as per regulation No. 106(2) of CMR 2017 and as per the Guidelines mentioned in DGMS (Tech.) Circular No. 3 of 2020 for determination of method of working, ultimate pit slope, dump slope, and monitoring of slope stability for AKWM Colliery, Katras Area, BCCL.
3. Scientific study for ultimate pit slope, dump slope and monitoring of slope stability at Amalgamated Bhojwa (N/S) Colliery E.J. Area BCCL as per Reg. 106(2) of CMR 2017.
4. Design the support system and manner of extraction using Continuous miner and other allied machineries in 17 Bottom Seam of Bhagabandh unit of PB Project Colliery, BCCL.
5. Design of Incline Mouth/Portal of A&B Inclines at PB Project Complex, BCCL.
6. RMR study for four (4) different seams/ boreholes core for roof strata at Gopinathpur coal mine, Mugma Area, ECL.
7. Scientific study of the workings of existing Haul roads of every patch of all Areas, it's Life and suggest measure to ensure better and efficient plying vehicle for coal and OB transportation under BCCL.
8. Scientific Study on Risk of Inundation due to Waterlogged Quarry – Panel 21, Top Section, Kenda (R-VI) Seam
9. scientific study as per regulation No. 106(2) of CMR 2017, for determination of method of working, ultimate pit slope, dump slope and monitoring of slope stability of R-V, R-VI, R-VII seam of Quarry No. 02 of New Kenda OCP, Kenda Area, ECL.

10. Scientific Study for reviewing the present blasting practice in Nirsha OC mine and to recommend the aggregate maximum charge per delay and per round to be used in blasting to control blast induced ground vibration for safety of the permanent buildings or structures of permanent nature situated within danger zone i.e. within 500m from place of blasting under Reg. 196(3) of CMR -2017.
11. scientific study as per regulation No. 106(2) of CMR 2017, for determination of method of working, ultimate pit slope, dump slope and monitoring of slope stability North Dhadhu (Eastern Part) Coal block located in Latehar distt. Jharkhand.
12. Investigating the stability of one Ultimate Pit Slope and one External OB Dump of Amalgamated NT-ST JG Colliery, Lodna Area, BCCL as per regulation 106 (2) of CMR – 2017.
13. Scientific study as per regulation No. 106(2) of CMR 2017 and as per the Guidelines mentioned in DGMS (Tech.) Circular No. 3 of 2020 for determination of method of working, ultimate pit slope, dump slope, and monitoring of slope stability for Pachwara South OCP, M/S Neyveyli Uttar Pradesh Power Limited.
14. Scientific study for depillaring with stowing at Jambad (R-VIII Top) Top seam in Panel JT 21 below pond (depth of cover 100.51 m) at Porascole East Colliery of Kajora Area, ECL.
15. Scientific study of blast-induced ground vibration at the II Seam, underground section of Salanpur Colliery.
16. scientific study regarding method of working, ultimate pit slope, dump slope and monitoring of slope stability as per regulation 106 of CMR, 2017 for the Pakri Barwadih North-West Coal Mining Project.

(Completed)

1. Scientific study to provide technical consultation for calculation of volume of 12 different stone leases situated in Jharkhand.
2. Scientific Study for maximum charge per delay and per round to be used in blasting to control blast induced ground vibration for safety of the permanent buildings or structures of permanent nature situated within danger zone i.e. within 500m from place of blasting under Reg. 196(3) of CMR -2017 at Bhanora Opencast Project (Charanpur), ECL.
3. Testing of core samples and submitting physico – mechanical properties (PMP) of the core samples of Urma Paharitola Coal Block, Aurobindo Reality and Infrastructure Private Ltd.
4. Scientific Study in designing deep hole drilling and blasting system at 4A Patch specially in relation to the residential buildings in 12 No. Basti at Bhowra (S) Colliery, East Jharia Area, BCCL under Reg. 196(3) of CMR -2017.
5. Scientific study for strata control and monitoring plan (SCAMP) to prepare, formulate and implement at Jogidih colliery, Govindpur area, BCCL as per reg 123 of CMR - 2017.
6. Scientific study for strata control and monitoring plan (SCAMP) for I and III seam to prepare, formulate and implement at New Akashkinaree Colliery, BCCL.
7. Scientific study for strata control and monitoring plan (SCAMP) for depillaring district (33 l panel N-34) of Nega seam (R-VIII) at pit no. 8 of Nimcha, ECL.
8. Scientific study as per regulation no. 106(2) of CMR 2017, for determination of method of working, ultimate pit slope, dump slope and monitoring of slope of Gopinathpur Coliery, GCPL.
9. Testing of core samples and submitting physico – mechanical properties (PMP) of the core samples of Gopinathpur coal mine.
10. Scientific study to find maximum charge per delay per round of blast for departmental patch and Tetulmari patch, AKWMC (Amalgamated Keshalpur West Mudidih).
11. Scientific study to find maximum charge per delay per round of blast for Bansdeopur Colliery, Sijua area, BCCL as per reg: 196(3), CMR – 2017.

12. Scientific study for Extraction of pillar of panel I at 7 & 8 incline, Dhori (k) Colliery, Central Coalfields Limited.
13. Analysis of slope stability of New Godhur Kusunda Colliery (NGKC), Kusunda Area, BCCL, as per reg: 106(2), CMR – 2017
14. Scientific study to find maximum charge per delay and per round of blast, Bastacolla OCP-1, Bastacolla Area, BCCL, as per reg: 196(3), CMR – 2017.
15. To study the load bearing capacity of floor of seam III at Muraidih Colliery for safe movement of shield hauler for transportation of 40 te Longwall Panel.
16. Scientific study to find maximum charge per delay per round of blast of Chakandra Barari stone mine, block no: 24, Sheikhpura area.
17. Analysis of slope stability for Ghutway section of damoda colliery, Barora Area, BCCL, as per reg: 106(2), CMR – 2017.
18. Scientific study to find maximum charge per delay per round of blast, Amalgamated Block IV Govindpur OCP, Govindpur area, BCCL as per reg: 196(3), CMR, 2017.
19. Analysis of slope stability of Gopinathpur Opencast Project, Mugma Area, ECL, as per reg: 106(2), CMR – 2017.
20. Scientific study on slope stability and blast design of Tetariakhar OCP, Rajhara Area, CCL, as per reg: 106(2), 196, CMR – 2017.
21. Scientific study to find maximum charge per delay per round of blast, KDH OCP, NK Area, CCL as per reg: 196(3), CMR – 2017.
22. Scientific study to find maximum charge per delay per round of blast, Tetulmuri hired OCP patch of Mudidih Colliery, Sijua Area, BCCL as per reg: 196, CMR – 2017.
23. Scientific study to find maximum charge per delay per round of blast, Dakra OCP, NK Area, CCL as per reg: 196(3), CMR – 2017.
24. Scientific study for slope study of Kankanee Colliery, Sijua area, BCCL as per regulation 106 (2) of CMR – 2017.
25. Scientific study for slope study of Tetulmari OCP, Sijua Area, BCCL as per regulation 106 (2) of CMR – 2017.
26. Scientific study for extraction of coal by highwall mining method at Kumardhubi, Khoodia, Hariajam and Bajdna colliery.
27. Scientific study to find maximum charge per delay per round of blast for Kankanee Colliery, Sijua area, BCCL as per reg: 196(3), CMR – 2017.
28. Analysis of slope stability of Bajdna colliery, Mugma area, ECL, as per reg: 106(2), CMR – 2017.
29. Analysis of slope stability and blast design of Tasra OCP, SAIL collieries division, as per reg: 106(2), 196, CMR – 2017.
30. Scientific study to find maximum charge per delay per round of blast for East Basuria colliery, Kusunda area, BCCL as per reg: 196(3), CMR – 2017.
31. Scientific study to find maximum charge per delay per round of blast of barari stone mine, block no: 25, Sheikhpura area.
32. Scientific study to determine composite volume of blasted material per meter of drill hole of Bastacolla Colliery, Bastacolla area BCCL.
33. Scientific study to find maximum charge per delay per round of blast for Chapapur colliery, Mugma area, ECL as per reg: 196(3), CMR – 2017.
34. Scientific study to find maximum charge per delay per round of blast for Kanta Pahari Patch, AKWMC (Amalgamated Keshalpur West Mudidih Colliery), Katras, BCCL.
35. Scientific study for slope study of left out OC patch, Barwabera OC patch of Phularitand section, AMP colliery, Barora area, BCCL.
36. Scientific study for slope study of Gopalichuk colliery, PB area, BCCL as per regulation 106 (2) of CMR – 2017.
37. Scientific Study regarding deep hole trial controlled blasting at Amalgamated Block-IV Govindpur Colliery,(Departmental Patch, Panel 'A'), Govindpur Area, BCCL, Dhanbad, Jharkhand as per regulation 196 (3) of CMR 2017.

Honours & Awards

- Winner of Young Engineer Innovation Award in 2012 in Tata Group
- NBA appreciation certificate for being a core committee member of BIT, 2021 (Successfully got accreditation of five Branches at BIT out of Five)
- Charge of Head of Department, Mining Engineering BIT Sindi during the expert visit for NBA accreditation process (Successfully got accreditation in 2019).

Peer - Reviewed Journal Articles

- **Rizwan Hasim, Ashok Jaiswal, B.K Shrivastva**, "Estimation of rock load height during development operation in bord and pillar coal mine using numerical simulation method", Modelling, Measurement and Control C, Vol. 79, No. 2, June, 2018.
- **Rizwan Hasim, Ashok Jaiswal, B.K Shrivastva**, "Support Design during Depillaring Operation in Bord and Pillar Panel Using Numerical Simulation Method", Modelling, Measurement and Control C, Vol. 78; No. 3; January, 2018.
- **Rizwan Hasim, Ashok Jaiswal, B.K Shrivastva**, "Analysis of Laminated roof with roof bolt using Numerical Simulation Method", The India Mining & Engineering Journal, Vol. No. 56, 10, 2017.
- Dr. Manas Kumar Mallick, **Dr. Rizwan Hasim**, Prof. (Dr.) Gyanindra Kumar Pradhan, An Approach to Uplift the Blasting Performance Through the Integration of Drone Surveying and Real-Time Measurement

Conference Proceedings

- **Rizwan Hasim, Rohan Singh Munda, Birendra Tudu, Prakash Kumar Mahato**, "Ultimate Pit Design in Open Cast Workings : A Numerical Simulation Approach", CSEMM 2022, NIT Rourkella.
- **M.K Mallick, Rizwan Hasim**, "Mine Planning and Design: A step wise approach to build better strategy for Mining Project", Recent Practices and Advancement in Mineral Industry (RPAMI), February 2020.
- **R. Singh, B. Kumar, R. Hasim, M. K. Mallick, T. Dasgupta and U. K. Dey**, Optimization of Coal Recovery using Different Cutting Pattern of Pillar in Continuous Miner (CM) Panel by Numerical Simulation Method, National Conference on Advances in Mining (AIM-2020), January 2020.
- **M.K Mallick, Rizwan Hasim**, "Use of different Optimization Techniques in Mine Planning for better utilization of Resources", National Conference on Advances in Mining (AIM-2020), January 2020.
- **Matta Mani Shankar, R. Hasim**, "An efficient electrical power supply system for mines, National Conference on Control and Automation in Electrical Engineering", CAEE - 2018 Proceeding AITAM, Tekkali, AP
- **Rizwan Hasim, Ashok Jaiswal, B.K Shrivastva, Satyabdi Jena**, "Numerical simulation of roof bolt system during depillaring operation in bord and pillar panel", International Conference on Recent Advances in Rock Engineering (RARE 2016), ISBN: 978-94-6252-260-2, NIRM, Bangalore, 2016.

Symposium/Workshop/Seminar Attended

- AICTE Incorporating Universal Human Values in Education (An AICTE Initiative), 19-23, July, 2021, Organised by AICTE.
- Faculty Development Programmed for Student Induction at Central University of Jharkhand, Ranchi, 20-22, January, 2020, Organised by AICTE.
- FDP on "Natural Language Processing", 06 – 10, January, 2020, Ministry of Electronics and Information Technology (MeitY), Government of India.
- Workshop on NBA & NAAC Accreditation Process, 18-22, June, 2019, Engineering Staff College of India, Gangtok.

- Advance Padagody and Digital Tool for TEQIP faculty members, 10-14 June, 2019, IIT Kharagpur.
- Workshop on Skill Excellence in Mining Sector, April 12,2018, Jharkhand Skill Development Mission Society (JSDMS)
- FDP on Outcome Based Learning, March 16-17, 2018, B.I.T. Sindri
- Induction Workshop (FDP), Feb 06-10, 2018, IIT Madras.

Administrative Services

- Coordinator, National Board of Accreditation, Mining Engineering Department, BIT Sindri.
- Member, Core Committee, National Board of Accreditation, BIT Sindri.
- Coordinator, Seminar/ Workshop, Mining Engineering Department, BIT Sindri.
- Coordinator TEQIP, Mining Engineering Department, BIT Sindri.
- UG Course Coordinator, Mining Engineering Department, BIT Sindri..
- Member, Departmental Purchase Committee.
- Mentor/ Counselor, Mining Engineering Students.
- Member Secretary, NAAC, BIT Sindri.
- Prof. In charge, SME Chapter BIT Sindri.
- Member, Inspection of mines for Star Rating of coal & lignite mines, Ministry of coal, GoI.
- Coordinator, Mining Engg. Department, Central Instrumentation Facility, BIT Sindri.
- Professor In charge, Rock Mechanics Lab & Mine System Lab.
- Member, Preparation of Course structure and detail syllabus of Mining Engineering, Jharkhand University of Technology as per NEP-2020.

Book Publication

Co- Author of Book: Principles of Mining Machinery and Systems, ISBN No. 978-81-989494-6-2, Khwaab Publication.

Proficiency in Software

- FLAC – 3D
- MINEX
- VENTSIM
- AUTO CAD
- SPSS

References

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Date: 16.09.2025

Place: BIT Sindri

(Rizwan Hasim)