



CURRICULUM VITAE



Prof. D. P. MISHRA
Professor & Head, Department of Mining Engineering
&
D. B. Aggarwal Chair Professor



DEPARTMENT OF MINING ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES)
DHANBAD – 826 004



Curriculum Vitae

- 1. Name** : Prof. Devi Prasad Mishra
- 2. Contact Address** : Department of Mining Engineering
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- 3. Nationality** : Indian

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Scopus Author ID: 36868876700

IRINS Faculty Profile ([IIT \(ISM\) Dhanbad \(irins.org\)](http://iit(ism)Dhanbad.irins.org/))

Google Scholar Profile ([Devi Prasad Mishra - Google Scholar](https://scholar.google.com/citations?user=DeviPrasadMishra))

4. Educational Qualification

| Degree | Year | University/Institution | % of Marks/Div. | Remarks |
|--------------------------------------|------|---|---|---|
| Ph.D. (Mining Engg.) | 2008 | Indian Institute of Technology, Kharagpur | NA | Suitability of fly ash and pond ash for stowing in underground coal mines |
| M. Tech. (Mine Planning & Design) | 2004 | Indian School of Mines, Dhanbad | 4.01 in a 5.00 point scale (1 st with Distinction) | First class with Distinction |
| B.E. (Mining Engg.) | 2001 | Orissa School of Mining Engineering, Keonjhar | 82.26% (1 st with Honours) | First class (Hons.), 1 st Rank |

5. Thesis Submitted

- Ph.D.:** Suitability of fly ash and pond ash for stowing in underground coal mines - an investigation. Supervisor: Prof. Samir Kumar Das.
- M. Tech.:** A study of energy consumption profile of main mine ventilation fans and development of a technique to reduce the energy requirement in such systems. Supervisor: Prof. D. C. Panigrahi.
- B.E.:** Feasibility report for a hypothetical mine by open cast method (0.65 MTY). Supervisor: Prof. L. N. Satpathy.



6. Area of Specialization

- Mine ventilation and sub-surface environment
- Mine fire and mine explosion
- Methane drainage/CBM
- Underground coal mining methods
- Stowing/backfilling with fly ash/pond ash

7. Academic and Research Interest

- Mine Ventilation and Sub-surface Environment
- Application of CFD in mine ventilation & environment
- Spontaneous combustion of coal, mine fire and mine explosion
- Mine dust, heat and humidity
- Methane drainage
- Coal Bed Methane (CBM)/Underground Coal Gasification (UCG)
- Radon emanation studies in mines
- Fly ash stowing/backfilling
- Characterization of fly ash/pond ash

8. Patents

| Title of the Patent | Name of the Patentee | Brief about the Invention | Filing Date | Publication Date |
|--|--|--|------------------|------------------|
| An Apparatus for Multiparameter Coal Spontaneous Combustion & Quasi-Steady State Assessment and Method Thereof | Tanmay Dasgupta, Devi Prasad Mishra, Aditya Pandey, Bibhatsu Kuiri | The apparatus is an all-inclusive device that proposes a new method to assess the spontaneous combustion susceptibility of coal based on coal oxidation kinetics for multiparameter coal spontaneous combustion and quasi-steady state assessment. | 26 February 2024 | 22 November 2024 |



9. Research Publications (Details are given in Annexure-I)

- **Journals**
 - International refereed Journals: 69
 - National refereed Journals: 12
- **Conference/seminar/symposium**
 - International Conference: 28
 - National Conference: 19

10. Books Authored

- **Mishra, D. P.**, 2011. "Utilization of Fly Ash in Mine Stowing: An investigation to assess the suitability of fly ash and pond ash for stowing in underground coal mines", LAP LAMBERT Academic Publishing AG & Co. KG, Germany (December 27, 2011), ISBN-10: 3846598046, ISBN-13: 978-3846598047, 172 Pages.

11. Academic Responsibilities

Teaching:

UG level courses taught

- Mine Ventilation (MEC16101, MNC206)
- Mine Ventilation Practical (MEC16201, MNC210)
- Mine Environmental Engineering (MEC17101)
- Mine Environmental Engineering Practical (MEC17201, MNC303)
- Mining Methods and Unit Operations (MER22132)
- Surface Mining (MEM18101)
- Mine System Engineering (MEC18101)

PG level courses taught

- Underground Mine Ventilation and Environmental Engineering (MEE52108)
- Ventilation and Environmental Engineering for Tunnels and Underground Space (MEC52163)
- Ventilation and Environmental Engineering for Tunnels and Underground Space Practical (MEC52263)
- Tunnel Engineering (MEE19101)

12. Administrative Responsibilities

i. At Institute Level

- Head, Department of Mining Engineering, IIT (ISM), Dhanbad since 18.11.2022
- Chairman, Animal Welfare Committee, IIT (ISM), Dhanbad since 24.09.2018
- Served as Chief Warden, Amber Hostel from 01.09.2018 till 30.06.2019 (9 months)
- Served as Warden, Amber Hostel from 01.06.2016 till 31.08.2018 (2 years 3 months)
- Faculty Advisor, SME IIT (ISM) Student Chapter
- Member of Senate, IIT (ISM), Dhanbad
- Successfully organised Industry-Institute-Interaction (III-2017) as Co-Convener.
- Successfully organised Industry-Institute-Interaction (III-2018) as Co-Convener.
- Contributed in the successful organization of Industry-Institute-Interaction (III) and Basant – 2019.



- Served as Department Faculty Coordinator for the CONCETTO 2019.
- Lead the team to visit different companies at Kolkata and Bhubaneswar during 16-19 August, 2017 on behalf of the Training & Placement Cell to discuss and invite the companies for conducting campus placement of IIT (ISM) Dhanbad students.
- Served as Member of a number of inquiry committees in hostel related matters.

ii. At Departmental Level

- Convener, Departmental Postgraduate Committee (DPGC)
- Departmental coordinator for I-STEM
- Laboratory-In-charge, Mine Ventilation Laboratory
- Laboratory-In-charge, Methane Drainage and CBM Laboratory
- Departmental coordinator for NBA and preparation of SAR for accreditation of Department of Mining Engineering
- Faculty Advisor, SME IIT (ISM) Dhanbad Student Chapter
- Faculty-in-Charge, Gas Testing Examination
- Member, Departmental Purchase Advisory Committee (DPAC)
- Chairperson, Departmental committee constituted for the reorganization of space for the Department of Mining Engineering
- Member of the team constituted for preparing the proposal for establishing an Overseas Campus of IIT(ISM) at Tanzania
- Coordinator of M.Tech Mining Engineering from 2018 to 2021
- Secretary, DAC (Departmental Advisory Committee): Served as Secretary, DAC for more than 10 years (from 2009 to 2020) Faculty In-charge, Gas Testing Examination of Mining Engineering students from 2010 to 2018.
- Faculty Advisor for III & IV Sem. B.Tech (Mining Engineering) and Dual Degree students
- Faculty Advisor for VII & VIII Sem. B.Tech (Mining Engineering) and Dual Degree students
- Faculty Advisor, VIII Semester B. Tech, Dual Degree & Afghan students
- Stock holding officer of Mine Ventilation Laboratory
- Stock verification officer of departmental laboratories

13. Teaching and Research Experience

| Position | Organization | Period | Responsibility |
|-----------------------------------|---|---|---|
| Professor | Department of Mining Engineering, IIT (ISM), Dhanbad | 12.07.2024 to till date Pay Level: 14A | Teaching and mentoring undergraduate and postgraduate students, carrying out research and industry sponsored projects |
| D. B. Aggarwal Chair Professor | Department of Mining Engineering, IIT (ISM), Dhanbad | 12.10.2023 to till date | -do- |
| Associate Professor | Department of Mining Engineering, IIT (ISM), Dhanbad | 19.06.2017 to 11.10.2023 (Academic grade pay: Rs. 9500.00) | -do- |



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|---------------------|---|---|---|
| Assistant Professor | Department of Mining Engineering, IIT (ISM), Dhanbad | 30.10.2013 to 18.06.2017 (Academic grade pay: Rs. 9000.00) | -do- |
| Assistant Professor | Department of Mining Engineering, IIT (ISM), Dhanbad | 30.10.2010 to 29.10.2013 (Academic grade pay: Rs. 8000.00) | -do- |
| Assistant Professor | Department of Mining Engineering, IIT (ISM), Dhanbad | 30.06.2008 to 29.10.2010 (Academic grade pay: Rs. 7000) | -do- |
| Research Scholar | Department of Mining Engineering, Indian Institute of Technology, Kharagpur | July, 2004 to June, 2008 | Carrying out Sponsored Research Project work, associated with lab. classes of final year undergraduate and postgraduate students in subjects like Rock Mechanics, Mine Environmental Engineering and Mine Surveying |
| Lecturer | Department of Mining Engineering, Kalinga Institute of Mining Engineering and Technology (KIMET), Angul, Odisha | December, 2001 to July, 2002 | Teaching |

14. Technical Training Experience

| Name of the Mine | Name of the Company | Duration |
|--|-------------------------------|----------|
| Sukinda Chromite Mines (Opencast Metal) | Tata Steel Ltd. | 4 months |
| Joda East Iron Ore Mine (Opencast Metal) | Tata Steel Ltd. | 3 months |
| Kiriburu Iron Ore Mine (Opencast Metal) | Steel Authority of India Ltd. | 1 month |
| Talcher Colliery (Underground Coal) | Mahanadi Coalfields Ltd. | 3 months |
| Nandira colliery (Underground Coal) | Mahanadi Coalfields Ltd. | 1 month |

15. Sponsored Research Projects

Ongoing Research Projects (03)

| Sl. No. | Title of the Project | Sponsoring Agency | PI/ Co-PI | Year of Sanction | Duration | Sanctioned amount (Rs. In lakhs) |
|---------|---|-------------------|----------------|------------------|----------|----------------------------------|
| 1. | Development of guideline for prevention and mitigation of explosion hazard by risk assessment and determination of explosibility of Indian coal | Coal India Ltd. | Project Leader | 2016 | 5 years | 1617.07 |



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|----|---|---------------------------|-------|------|---------|--------|
| | incorporating risk based mine emergency evacuation and re-entry protocol | | | | | |
| 2. | Methane drainage prior to mining | DST | PI | 2018 | 5 years | 300.12 |
| 3. | Experimental and numerical investigation of coal spontaneous combustion kinetics and mine fire using newly developed SHT method concerning Indian coalfields. | TEXMin, IIT (ISM) Dhanbad | Co-PI | 2022 | 2 years | 14.52 |

Completed (03)

| Sl. No. | Title of the Project | Sponsoring Agency | PI/ Co-PI | Year of Sanction | Duration | Sanctioned amount (Rs. In lakhs) |
|---------|---|-------------------|-----------|------------------|----------|----------------------------------|
| 1. | Conservation of Energy in Main Mine Ventilation Fans | (PCRA), New Delhi | Co-PI | 2008 | 3 years | 34.51 |
| 2. | Geological and Technological Controls for Underground Coal Gasification | CSIR, New Delhi | Co-PI | 2013 | 5 years | 91.60 |
| 3. | An investigation into the effects of intrinsic properties of Indian coals on spontaneous combustion process and coal mine fires | SERB, DST | PI | 2017 | 2 years | 21.45 |

16. Guidance of PhD Students**PhDs Awarded (15 nos.)**

| Sl. No. | Name of the Scholar | Registration No. | Title of the thesis | Year of Ph.D. Award | Role |
|---------|--------------------------|------------------|---|---------------------|----------|
| 1. | Mr. Patitapaban Sahu | 2011DR0028 | Studies on radon emanation and development of a mathematical model for prediction of air quantity to minimize radiation levels in underground uranium mines | 2015 | Co-Guide |
| 2. | Mr. Pradeep Kumar | 2012DR0092 | Computational simulations of methane layering and dispersion of methane in underground coal mines | 2016 | Guide |
| 3. | Mr. Lalatendu Muduli | 2015DR0077 | Design of wireless sensor network based monitoring system for underground coal mines (Inter-disciplinary research) | 2019 | Co-Guide |
| 4. | Mr. Avaneesh Vaishwar | 2014DR0232 | Dynamics of Near Earth Asteroids (Inter-disciplinary research) | 2020 | Co-Guide |
| 5. | Mr. Santosh Kumar Behera | 16DP000089 | Geomechanical and microstructural investigations of lead-zinc mill tailings | 2021 | Guide |



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|-----|--------------------------|------------|---|------|--------------|
| | | | based paste backfill for underground metalliferous mines | | |
| 6. | Mr. Paluchamy B. | 17DR000656 | Experimental and numerical investigations on generation, dispersion and control of airborne dust in mechanized underground metalliferous mining operations | 2022 | Guide (Sole) |
| 7. | Mr. Siddhartha Roy | 16DP000020 | Assessment of heat stress conditions and development of prediction models for heat stress and productivity of continuous miner operator in underground coal mines | 2022 | Guide |
| 8. | Mr. Kunal Das | 16DP000021 | Assessment of ventilation requirement for underground coal mines adopting mass production technology in India | 2023 | Guide |
| 9. | Mr. Umakanta Behera | 17DP000312 | Study of settling characteristics of fly ash, flow behaviour of fly ash slurries, and water drainage from fly ash for hydraulic stowing in underground coal mines | 2023 | Guide (Sole) |
| 10. | Mr. Aashish Sahu | 17DR000392 | An Investigation into the Explosibility of Indian Coal Dusts and Development of Methodology for Preventing Explosion Hazards in Underground Coal Mine | 2023 | Guide (Sole) |
| 11. | Mr. Binay Prakash Pandey | 2015DR1109 | A new approach of eco-friendly iron ore mining in Karnataka-with special reference to surrounding environment & socio-economic conditions | 2023 | Guide (Sole) |
| 12. | Mr. Mayank Ahuja | 16DP000054 | Reservoir characterization and modelling for assessing the CBM potentiality of coal seams from Jharia coalfield | 2024 | Guide |
| 13. | Mr. Sunny Rao | 2016DR1118 | Computational simulations of gob gas dynamics, prevention and suppression of gas explosion in longwall panel of underground coal mine | 2024 | Guide |
| 14. | Mr. Debashish Mishra | 17DP000220 | Critical studies on the problem of spontaneous heating and its mitigation in deep underground coal mines of Jharia coalfield | 2025 | Guide |
| 15. | Mr. Uma Shankar Shukla | 16DP000111 | Application of machine learning techniques and computational modelling for predicting spontaneous heating of coal and its control in longwall mine panel | 2025 | Guide (Sole) |

PhDs Ongoing (11 nos.)

| Sl. No. | Name of the Scholar | Admn. No. | Status | Title of the Research Work |
|---------|---------------------|-----------|-----------|--|
| 1. | Tanmay Dasgupta | 18DP0006 | Part Time | Experimental and Numerical Investigations of Coal Spontaneous Combustion Kinetics and Mine Fire |
| 2. | Kapil Kumar | 18DP0007 | Part Time | Experimental investigations and modelling studies of ignition sensitivity of coal dust and coal dust inertant mixtures |



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|----|-----------------------------|----------|-----------|---|
| 3. | Kumar Sagar | 19DR0075 | Full Time | Topic to be finalised |
| 4. | Om Shiv Shankar | 19DR0103 | Part Time | Effects of Particle Size, Surface Area and Porosity on Spontaneous Combustion Susceptibility of Coal |
| 5. | Suraj Kumar Verma | 19DR0186 | Part Time | Techno-economic feasibility of methane drainage from underground coal mines in India |
| 6. | Inumula Sainived | 20DR0053 | Part Time | Assessment of methane drainage potential of less- and moderately-gassy coal seams in India |
| 7. | Amit Kumar Pandey | 23DP0016 | Part Time | Study of CBM potential of complex coal deposits of India |
| 8. | Kumar Rajnikant | 23DP0025 | Part Time | Topic to be finalised |
| 9. | Rajeev Ranjan Kumar | 23DP0081 | Part Time | Study of environmental impacts on stability of overlying strata in underground coal mines |
| 10 | Raj Narayan Yadava | 23DR0130 | Full Time | Monitoring and assessment of environmental impacts of coal mining in Jharia coalfield using UAV and satellite imagery |
| 11 | Subhranshu Sekhar Mahananda | 24DP0046 | Part Time | Generation and control of dust in large size limestone quarry |

17. Guidance of M. Tech. Students

No. of M.Tech students guided: 21

| Sl. No. | Year | Name of the Student | Adm. No. | Discipline | Project Title |
|---------|------|---------------------------|------------|--|---|
| 1. | 2011 | Mr. Md. Jawed Ansaree | 2009MT0086 | M. Tech (Underground Space Technology) | Design of ventilation system of a hydel power station |
| 2. | 2012 | Mr. Pradeep Kumar | 2010MT0195 | M. Tech (Underground Space Technology) | A study of ventilation system of a long tunnel |
| 3. | 2013 | Mr. Satyendra Kumar Rajak | 2011MT0226 | M. Tech (Underground Space Technology) | Prediction of pressure losses in various tunnel configurations |
| 4. | 2013 | Mr. Nachiket V Bhagade | 2008JE0421 | B. Tech (Mining Engineering) with M. Tech (Mining Engineering)-Dual Degree | Design of dams for preventing inundation in underground coal mines |
| 5. | 2014 | Ms. Sunita Mishra | 2012MT0167 | M. Tech (Tunnelling and Underground) | Designing of ventilation system of underground metro railway system |



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|-----|------|------------------------|------------|--|---|
| | | | | Space Technology) | |
| 6. | 2017 | Mr. Aashish Sahu | 15MT000559 | M. Tech (Mining Engineering) | A study of dust generation and its dispersion in continuous miner development heading in underground coal mines |
| 7. | 2017 | Mr. Mukesh Kumar Patel | 15MT000207 | M. Tech (Tunneling and Underground Space Technology) | CFD simulations to study the efficacy of auxiliary ventilation systems used in underground mine development headings |
| 8. | 2018 | Mr. Amit Kumar Mankar | 16MT001210 | M. Tech (Mining Engineering) | A study of spontaneous combustion of coal in underground mines |
| 9. | 2018 | Mr. Iylaboina Jayanth | 16MT001058 | M. Tech (Mining Engineering) | An investigation into radioactivity of fly ash and assessment of impact of fly ash stowing in underground coal mine environment |
| 10. | 2018 | Mr. Ashish Singh | 16MT001261 | M. Tech (Tunneling and Underground Space Technology) | An investigation into the losses and efficiency of main mine ventilation fans |
| 11. | 2018 | Mr. Anuranjeet Ranjan | 16MT001017 | M. Tech (Tunneling and Underground Space Technology) | Design of illumination system for traffic tunnels |
| 12. | 2018 | Mr. Pratik Ranjan | 15MT000601 | M. Tech (Tunneling and Underground Space Technology) | Study of ventilation system and environmental condition of tunnel under construction |
| 13. | 2018 | Mr. Adarsh Kumar | 2013JE0797 | B. Tech (Mining Engineering) with M. Tech (Mining Engineering)-Dual Degree | An investigation into efficacy of auxiliary ventilation systems used in underground mines |
| 14. | 2018 | Mr. Rajesh Kumar | 2013JE0785 | B. Tech (Mining Engineering) with M. Tech (Mining Engineering)-Dual Degree | Modelling of methane emission in highly gassy underground coal mines using CFD software |
| 15. | 2019 | Samir Kumar | 17MT001872 | M. Tech (Mining | Study of the ventilation |



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|-----|------|--------------------------|------------|--|--|
| | | Ojha | | Engineering) | efficiency in working faces of board and pillar underground coal mines |
| 16. | 2019 | Tino G Kottukapalli | 17MT002244 | M. Tech (Mining Engineering) | An investigation into the methods for breaking methane layering in underground coal mines |
| 17. | 2020 | Manesh Ekka | 18MT0349 | M. Tech (Mining Engineering) | Environmental and socio-economic impacts of iron ore mining activity around Rama Mine, Karnataka, India |
| 18. | 2020 | Rinku Kumar | 18MT0270 | M. Tech (Mining Engineering) | Study of the genesis and propagation of underground coal fires (UCF) in Jharia coalfield, India. |
| 19. | 2021 | Ankit Gupta | 19MT0057 | M. Tech (Tunneling and Underground Space Technology) | Performance analysis of main mine ventilation fans and development of methodology for improving their efficiency |
| 20. | 2022 | Ramatenki Sanjay Kumar | 20MT0319 | M. Tech (Mining Engineering) | Evaluation of spontaneous combustion susceptibility of coal and its prevention by adding chemical inhibitors |
| 21. | 2023 | Prashant Kumar Prajapati | 21MT0287 | M. Tech (Mining Engineering) | Optimization of continuous miner performance |

18. Industrial Consultancy Projects

A. List of Ongoing Projects

| Sl. No. | Project No. | Title of the project | Funding Agency | Role (CI/Co-CI) |
|---------|---------------------|---|-------------------------------------|-----------------|
| 1. | CONS/7401/2024-2025 | Technical Audit of the Block-E OCP (15MTY) of BCCL | BCCL, Dhanbad | CI |
| 2. | CONS/7354/2024-2025 | Scientific Assessment of Old and Dangerous Workings of BCCL Mines (Phase-1) | BCCL, Dhanbad | CI |
| 3. | CONS/7328/2024-2025 | Ventilation Simulation Study for SMC Underground Project of M/s IMFA Ltd. | Indian Metals and Ferro Alloys Ltd. | CI |



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|----|---------------------|---|--------------------------|-------|
| 4. | TEST/7105/2023-2024 | Calibration of D-6 Methanometer of Badjna Colliery under Mugma Area ECL | ECL, Mugma Area | CI |
| 5. | CONS/7083/2023-2024 | Scientific study for Determination of Degree of Gassiness of R-VIIB Seam of Nakrakonda-Kumardihi B Colliery under Bankola Area ECL | ECL Bankala Area. | CI |
| 6. | CONS/7054/2022-2023 | Vetting of Valuation reports, Market research, Estimation of minimum recovery rate and determining the suitability of auction criteria of tailing dumps of an erstwhile Public sector Gold Mining Company | SBI Capital Markets Ltd. | Co-CI |

B. List of Completed Projects

| Sl. No. | Project No. | Title of the project | Funding Agency | Role (CI/Co-CI) |
|---------|---------------------|---|---|-----------------|
| 1. | TEST/7312/2024-2025 | Measurement of Flow Rate and Dust Concentration of PDS against GDS | ANP Engineering Company, New Delhi | CI |
| 2. | TEST/7191/2023-2024 | Testing of Physical and Chemical Parameters of Empi-Compound 2X | Malhar Industries, Nagpur | CI |
| 3. | CONS/7146/2023-2024 | Scientific Study for Determination of In-Situ Density and Bulk Density of Coal at Dulanga Coal Mining Project of NTPC Limited | NTPC | CI |
| 4. | TEST/7167/2023-2024 | Testing of Physical Properties of KV-Lite Sprink-O-Fix | K V Fire Chemicals Indi Pvt Ltd Nashik | CI |
| 5. | CONS/7082/2023-2024 | Determination of Degree of Gassiness of Seams R# VIII B1 # VII and R# VII A of Tilaboni UG Mine Bankola Area ECL at Tilaboni Project | JMS Mining Services Pvt. Ltd. | CI |
| 6. | TEST/7056/2022-2023 | Testing of Physical Properties of Dust Suppressant KVLITE SPRINK-O-FIX | K V Fire Chemicals India Pvt Ltd Nashik | CI |
| 7. | CONS/7028/2022-2023 | Determination of Degree of Gassiness of S. P. Top coal seam at 27/28 No. Incline of Hariajam Colliery of M/S ECL | M/s ECL, Hariajam Colliery | CI |
| 8. | TEST/6094/2021-2022 | Calibration of Mine Environmental Monitoring Apparatus of MRS Ramgarh, CCL | CCL, Ramgarh | CI |
| 9. | TEST/6093/2021-2022 | Calibration of anemometer in respect of Tummalapalle Mine, UCIL | UCIL, Tummalapalle Mine | CI |
| 10. | TEST/6089/2021-2022 | Characterization of dust suppressant chemical for use in coal mines | M/S Sudha Industries, Kolkata | CI |
| 11. | TEST/6088/2021-2022 | Calibration of anemometer in respect of Kedla Underground Project, CCL | Kedla U/G Project, CCL | CI |
| 12. | CONS/5082/2019-2020 | Field investigations, modelling and simulation studies for designing the ventilation system of Sindesar khurd (SK) Mine, Hindustan Zinc Mine, | Hindustan Zinc Ltd. Udaipur | Co-CI |



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|-----|---------------------|---|--------------------------------------|--------|
| | | Rajasthan (5th year period: last year of the project) | | |
| 13. | CONS/4062/2018-2019 | Field investigations, modelling and simulation studies for designing the ventilation systems of UCIL mines (Part III-3rd year work), UCIL-Jaduguda | UCIL | Member |
| 14. | CONS/4049/2018-2019 | A study of ventilation system of coal mines of Jharia Division for ascertaining the degree of gassiness of Digwadih and 6 & 7 Pits Collieries, Tata Steel Ltd. | Tata Steel Ltd. | Member |
| 15. | CONS/4001/2018-2019 | Modelling of ventilation system for establishing connection with the new shaft for ventilation of XV/XVI Seam workings in Moonidih Colliery, BCCL being operated by INDU-SCL-CGME Consortium | Indu SCCL CGME Consortium | Member |
| 16. | TEST/3893/2018-2019 | Analysis and interpretation of mine air samples of Sijua Colliery, Tata Steel Limited for assessing the status with respect to spontaneous combustion/fire and explosibility of atmosphere by using the ASSESS FIRE software developed at IIT (ISM) Dhanabd | Tata Steel Ltd. | Member |
| 17. | TEST/3887/2018-2019 | A study of performance and Behavior Self Contained Self Rescuers (SCSRs) by full bench tests as per IS15803:2008 and dopted by DGMS for the Samples Manufactured by Roshimzaschita Corporation Russia and Submitted by Swati Safesecure Equipments (P) Ltd. Mumbai. | Swati Safesecure Equipments (P) Ltd. | Member |
| 18. | TEST/3886/2018-2019 | A study of performance and behavior self contained Self Rescuers (SCSRs) by full bench tests as per IS 15803:2008 and adopted by DGMS for the samples manufactured by M/s Closed JSC OZONE GSPO, Russia and submitted by SRB International Pvt. Ltd., Noida. | SRB International Pvt. Ltd. Noida | Member |
| 19. | TEST/3885/2018-2019 | A study into the functional ability of Self Contained Self Rescuers (SCSRs) of Eastern Coalfields Limited as per IS 15803:2008 and also DGMS guidelines being sponsored by Intech Safety Pvt. Ltd., Kolkata (as per the direction of ECL) | Intech Safety Pvt. Ltd. | Co-CI |
| 20. | CONS/3851/2018-2019 | Field investigations, modelling and designing the ventilation system of Kenda Top and Bottom Seams of Kunustoria Colliery, Kunustoria Area, Eastern Coalfields Ltd. | ECL | Member |
| 21. | CONS/3825/2018-2019 | Field Investigations Modelling and Simulation Studies for designing the ventilation systems of Rampura Agucha UG Mine, Hindustan Zinc Ltd. (hase I-1st year period) | Hindustan Zinc, Ltd. | Member |
| 22. | CONS/3523/2017-2018 | Scientific Study regarding the Surface fire in the leasehold Area of Old Murlidih Colliery WJA, BCCL | BCCL | Member |
| 23. | CONS/3464/2016-2017 | Determination of some Physical and Chemical Properties of quick setting Cement Capsule of | Sijua Area BCCL | Member |



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|-----|---------------------|--|--|--------|
| | | Sijua Area, BCCL. | | |
| 24. | CONS/3326/2016-2017 | Evaluation of performance and behavior of fire retardant sealant brand name | P. V. T. Inshield Bituminous Pvt. Ltd. | Co-CI |
| 25. | CONS/3323/2016-2017 | Evaluation of performance and behavior of fire retardant sealant brand name | Calcutta Mining Sealants Pvt. Ltd. | Member |
| 26. | CONS/3268/2016-2017 | Field investigations Modelling and design of Ventilation system for Mochia, Balaria Baroj and Zawarmala Mines (Zawar Group of Mines) Hindustan Zinc Ltd. and association of Indian School of Mines for 3rd years to Implement the recommended Ventilation System for Increasing the Production of the Mines. | Hindustan Zinc, Ltd. | Member |
| 27. | CONS/3163/2015-2016 | Determination of Some Physical and Chemical Properties of quick setting cement capsule of Durgapur Youth Technology, Durgapur | Durgapur Youth Technology | Co-CI |
| 28. | CONS/3094/2015-2016 | Determination of some physical and Chemical Properties of quick setting Cement Capsules of Katras Area, BCCL | BCCL | Co-CI |
| 29. | CONS/3004/2016-2017 | Evaluation of performance and Behavior of SCSRs of KB10-12 Pits Colliery, BCCL | BCCL | Member |
| 30. | CONS/2738/2014-2015 | Determination of some Physical and Chemical Proper | NTPC, Ltd. | Co-CI |
| 31. | CONS/2696/2014-2015 | Function ability test of Self Rescuers of Tipong Colliery, NECL | NECL | Member |
| 32. | CONS/2658/2014-2015 | Determination of Some Physical and Chemical Properties of quick Setting Cement Capsule of Moonidih Project, BCCL | PB Project Colliery, BCCL | Member |
| 33. | CONS/2368/2013-2014 | Join Development Activities Between ISM and BASF IIndia Limited, Mombai for introduction of Chemical technology in Ventilation /water/gas seepage/fire isolation in mines. | Amalgamated Angrapathra Colliery, BCCL | Co-CI |
| 34. | CONS/1627/2011-2012 | Determination of Some Physical and Chemical Properties of quick Setting Cement Capsules of Phularitand Colliery CONS/1627/2011-12 | CIMFR, Dhanbad | Co-CI |
| 35. | CONS/1032/2010-11 | Field investigations, modeling and simulation studies for designing of ventilation system of UCIL Mines | UCIL | Co-CI |
| 36. | CONS/1366/2011-12 | Evaluation of performance and behaviour of quick setting cement capsule with respect to its chemical properties of Pathakhara Area, WCL | Pathakhara Area, WCL | Co-CI |
| 37. | CONS/1391/2011-12 | Evaluation of performance and behaviour of quick setting cement capsule with respect to its chemical and some physical parameters of Damoda Colliery, BCCL | Damoda Colliery, BCCL | Co-CI |
| 38. | CONS/1399/2011-12 | Determination of some physical and chemical properties of quick setting cement capsule of Basantimata Colliery, BCCL | Basantimata Colliery, BCCL | Co-CI |
| 39. | CONS/1407/2011-12 | Determination of some physical and chemical | The Mineral | Co-CI |



| | | | | |
|-----|-------------------|---|---------------------------------------|--------|
| | | properties of quick setting cement capsule of the Mineral and Chemical Corporation, Dhanbad | and Chemical Corporation, Dhanbad | |
| 40. | CONS/1408/2011-12 | Determination of some physical and chemical properties of quick setting cement capsule of Katras Area, BCCL | Katras Area, BCCL | Co-CI |
| 41. | CONS/1412/2011-12 | Determination of some physical and chemical properties of quick setting cement capsule of Hi-Tech Enterprises, Dhanbad | Hi-Tech Enterprises, Dhanbad | Co-CI |
| 42. | CONS/1419/2011-12 | Determination of some physical and chemical properties of quick setting cement capsule of Universal Mining Industries, Bilaspur | Universal Mining Industries, Bilaspur | Co-CI |
| 43. | CONS/1433/2011-12 | Determination of some physical and chemical properties of quick setting cement capsule of Pawan Enterprises, Dhanbad | Pawan Enterprises, Dhanbad | Co-CI |
| 44. | CONS/1466/2011-12 | Determination of some physical and chemical properties of quick setting cement capsule of Khottadih Colliery, ECL | Khottadih Colliery, ECL | Co-CI |
| 45. | CONS/1491/2011-12 | Determination of some physical and chemical properties of quick setting cement capsule of Suman Enterprises, Dhanbad | Suman Enterprises, Dhanbad | Co-CI |
| 46. | CONS/1493/2011-12 | Determination of some physical and chemical properties of quick setting cement capsule of Dobari Colliery, BCCL | Dobari Colliery, BCCL | Co-CI |
| 47. | CONS/1495/2011-12 | Determination of some physical and chemical properties of quick setting cement capsule of Dobari Colliery, BCCL | Dobari Colliery, BCCL | Co-CI |
| 48. | CONS/1499/2011-12 | Evaluation of performance and behaviour of gas detectors of Orient Mines, MCL | Orient 1 & 2 Mines, MCL | Co-CI |
| 49. | CONS/1500/2011-12 | Determination of some physical properties of quick setting cement capsule of Hi-Tech Enterprises, Dhansar, Dhanbad | Hi-Tech Enterprises, Dhansar, Dhanbad | Co-CI |
| 50. | CONS/1831/2012-13 | A study into delineation of fire in 11 and 12 seams at New Akashkinaree Colliery in North Side of DC Railway Line Govindpur Area BCCL | BCCL, Dhanbad | Member |
| 51. | CONS/2628/2014-15 | A study of fire in the leasehold of Karo-IOCP, B&K Area CCL and recommending the methodology for dealing the same | CCL | Co-CI |
| 52. | CONS/2648/2014-15 | A Study of fire on Dhanbad - Chandrapura Railway Line at Sendra Bansjora Colliery of Sijua Area, BCCL and Suggestion of Precautionary Measures thereof | BCCL | Co-CI |
| 53. | CONS/2368/2014-15 | Join Development Activities Between ISM and BASF India Ltd. Mumbai for Introduction of Chemical Technology in Ventilation/Water/Gas Seepage/Fire Isolation in Mines | BASF India Ltd. | Member |
| 54. | CONS/2603/2014-15 | Scientific Study for delineation of fire at Gaslitand mine for Safety of Adra Gomho South Eastern Railway Line, BCCL | BCCL | Co-CI |



19. Short-term Courses /EDPs Conducted

| Title of the Course | Duration | Funding Agency | No. of Participants | Role (Coordinator/ Co-Coordinator) |
|---|--------------------------------------|----------------------------------|---------------------|------------------------------------|
| Mine Ventilation and other aspects of Underground Metal Mining | One week (06.9.2010 to 11.9.2010) | Odisha Mining Corporation Ltd. | 13 | Co-Coordinator |
| Ventilation and Safety in Underground Coal Mines – Management & Technology | Two weeks (25.01.2016 to 05.02.2016) | South Eastern Coalfields Limited | 24 | Coordinator |
| Mines Training Programme" for the Executives of Apollo Tyres Ltd. | Three days (23-25 September, 2019) | Apollo Tyres Ltd. | 16 | Coordinator |
| Safety in Mines - Management & Technology (EDP/3650/2017-2018) | One week | - | - | Member |
| Mine Management, Legislation and General Safety (EDP/3348/2016-2017) | One week | ECL Salanpur Area | - | Member |
| Executive Development Program on "Mining Technology" for Caterpillar Executives | 25-30 November 2024 | Caterpillar | 13 | Coordinator |

20. Awards/Honours/Achievements/Recognitions

- **Figured among world's top 2% scientists in a global list** compiled by Stanford University in the years 2021, 2023, and 2024.
- Received highest citations among the faculty members of the Department (**Total Google Scholar citation: 2294, h- Index: 25, i- Index: 43**, as of 04.02.2025).
- Inducted as **Expert Member in the R&D Board of CIL** by the Board of Directors of Coal India Limited.
- Nominated as **Member for Board of Mining Examination** under the Metalliferous Mines Regulation, 1961 by the Ministry of Labour & Employment, Govt. of India.
- Appointed as **Chairman of the Technical Sub-committee of Standing Scientific Research Committee (SSRC) by Ministry of Coal** for the period November, 2022 to October, 2023.
- Received a letter of appreciation from the Director, IIT (ISM) **for excellent teaching feedback for MND401-Advanced Mine Ventilation in 2022-23 Monsoon Semester with a General Impression about Teacher (GIAT) score of 9.30.**
- Appointed as a **Member of the expert committee constituted by the Ministry of Labour and Employment, Govt. of India for framing the draft Rules under the Section 23 & 24 of the Occupational Safety Health and Working Conditions (OSH&WC) Code-2020 for workplace relating to mines.**
- Nominated as **member of BIS for 'Methods and Equipments for Underground Coal Gasification and Coal Bed Methane Sectional Committee, MED 37'.**



- Appointed as **Editorial Board Member of the Journal of Sustainable Mining** (ISSN 2300-3960).
- Member of Senate, IIT (ISM), Dhanbad from 10.10.2020 till 13.01.2022.
- Nominated as Mining Expert for the Forestry Research Advisory Committee in the Department of Forest, Environment & Climate Change, Govt. of Jharkhand.
- Named among top 10 reviewers from IIT(ISM) Dhanbad and stood at 6th position as per the list of Publons and helped Indian Institute of Technology (Indian School of Mines), Dhanbad climb the institutional leaderboard by achieving 18th rank in India with 449 reviews on Publons.
- Conferred **Canara Bank Research Publication Award** for the two consecutive years 2017 & 2018 by IIT (ISM), Dhanbad.
- Chaired a Technical Session in the 1st International Conference on Energy and Environment (ICEE 2018) held during September 28-29, 2018, at the Dept. of Petroleum and Mining Engineering, Shahjalal University of Science & Technology, Sylhet, Bangladesh.
- Chaired a Technical Session on 'Underground Fire Control' during the 11th International Mine Ventilation Congress (11th IMVC) held in Xi'an, China during 14-20 September, 2018.
- Conferred **MEAI- Smt. Bala Tandon Memorial Award** for the year 2017-18 by Mining Engineers' Association of India (MEAI) in its 45th Annual General Meeting held in Jaipur on 30th June 2018.
- **Advisory Committee member** in the 1st International Conference on Energy and Environment (ICEE 2018) to be held during September 28-29, 2018 at the Dept. of Petroleum and Mining Engineering, Shahjalal University of Science & Technology, Bangladesh.
- Nominated as a **Member of the Selection Committee** of AcSIR for Ph.D (Engineering) under AcSIR at CSIR-CIMFR, Dhanbad for the year 2018.
- Invited as reviewer for reviewing a research proposal for the **National Research, Development and Innovation Office, Hungary**.
- Member of the delegation from IIT (ISM) visited Australia in 2016 for signing MoU with University of Newcastle and establishing research collaboration with other universities and research organizations such as University of Queensland, University of New South Wales, University of Wollongong and SIMTARS.
- Awarded **Hindustan Zinc Limited Prize** in the year 2016 by the **Institution of Engineers (India)** at the 31st Indian Engineering Congress for the technical paper entitled "**Evaluation of Some Parameters in Relation to Hydraulic Stowing of Pond Ash in Underground Coal Mines: A Prototype Study**" published in the Journal of The Institution of Engineers (India): Series D, Vol. 96, Issue 1, April 2015.
- Nominated as a member of the Subject Expert Group/ BOS for framing the syllabus of B. Tech (Mining Engineering) for Biju Patnaik University of Technology (BPUT), Odisha.
- Conferred **Canara Bank Research Publication Award-2015** for Department of Mining Engineering on the occasion of 90th Foundation Day of Indian School of Mines, Dhanbad.
- Nominated as Member of the Program Committee, 4th Annual International Conference on Geological and Earth Sciences (GEOS - 2015) to be held in Singapore during 5-6 October, 2015.
- Conferred **Sukumar Rakshit Award for the year 2013-14** by The Mining, Geological and Metallurgical Institute of India (MGMI).
- Nominated as Member of the Oral Examination Board of AcSIR, CSIR-CIMFR by Examination Committee of Senate, AcSIR, New Delhi for adjudication of M. Tech. Thesis of the batch of IMP-Mine Safety Engg. Programme, 2012-2014.



- Nominated as Member of the Program Committee, 3rd Annual International Conference on Geological and Earth Sciences (GEOS - 2014) held in Singapore during 22-23 September, 2014.
- Conferred **1st State Bank of India Best Researcher Award** for the year 2011-12 for maximum research generation for the institute in the financial year 2011-12 during the 35th Annual Convocation of ISM held on 23 February, 2013.
- Nominated as **Associated Editor** of GSTF Journal on Geology and Earth Sciences (JGES), Global Science and Technology Forum (GSTF), Singapore.
- Nominated as member of the GEOS 2013 Programme Committee of the 2nd Annual International Conference on Geological and Earth Sciences (GEOS 2013) held at Phuket, Thailand during 28-29 October, 2013
- Chaired the first Technical Session of Day 2 of the Annual International Conference on Geological and Earth Sciences (GEOS 2012) held in Singapore during 3-4 December, 2012.
- Nominated as an expert member of ISM Team for execution of the prestigious "Mines and Minerals Development Project" for the Hydrocarbon Unit of Govt. of Bangladesh.
- Member of both the Organizing and Editorial Committees of the Ninth International Mine Ventilation Congress (9th IMVC).
- The **Dr. Rajendra Prasad Memorial Prize** by **Institution of Engineers (India)** for the technical paper entitled "**Consolidation Characteristics of Stowed Pond Ash and Pond Ash-lime Mixture**" published in the Mining Engineering Journal of Institution of Engineers (India), Vol. 89, Aug. 2008.
- **Institute Bronze Medal** by **The Mining, Geological and Metallurgical Institute (MGMI)** in 2008 for the technical paper "**Compaction and consolidation behaviour of fly ash and pond ash for stowing in underground mines**".
- Awarded Senior Research Fellowship from TIFAC, DST, New Delhi during July, 2004 to June, 2008 for carrying out Ph.D. at IIT Kharagpur.
- Awarded **1st class with Distinction** in M. Tech. at ISM, Dhanbad.
- Awarded **1st class with Honours** in B.E. at O.S.M.E, Keonjhar.
- Secured 1st position in batch in Bachelor's Degree.
- Secured 1st position in batch in High School Certificate Examination.
- Secured 2nd rank in Orissa JEE-1998 (Lateral Entry) in Mining Engineering.
- Secured 51 rank in GATE-2002 in Mining Engineering.
- Recipient of UGC scholarship in M. Tech. at ISM Dhanbad.
- Recipient of NRTS and National Merit Scholarships.
- 1st prize winner in song, essay, debate competitions and awarded Literary Champion in B.E. at O.S.M.E., Keonjhar.

21. Important Meetings Attended

- Attended the Australia-India Business Exchange (AIBX)-2020 meet held at New Delhi and Kolkata on 24th & 26th February, 2020 and signed MoU with AuSIMM, Australia on behalf of IIT (ISM), Dhanbad.
- Attended a meeting at DGMS, Dhanbad as ISM representative for revision of standards of lighting in coal mines.
- Represented ISM in the meeting of **16th Meeting of National Dust Prevention Committee**



organized by Coal India Ltd. held at Kolkata on 16th January, 2015.

- Attended the 3rd Meeting of Research Advisory Council of National Institute of Miners' Health, Nagpur on 23rd April 2014.
- Served as a member of the sub-committee constituted by DGMS, Dhanbad **to review and recommend revisions on some of the standards of resin capsule.**
- Attended the meeting of "**Research Advisory Council (RAC) and Committee to Chart Future Direction (CCFD) for NIMH**" held at National Institute of Miners' Health (NIMH), Nagpur on 24th January, 2012 as a nominated member from ISM.
- Selected as one of the experts by the expert body of Gujarat Industries Power Company Limited (GIPCL) and Oil and Natural Gas Corporation (ONGC) for studying the first ever on-site field trial of underground coal gasification (UCG) in India at Vastan Lignite Mine of GIPCL.
- Represented ISM in the meeting of **13TH Meeting of National Dust Prevention Committee** organized by Coal India Ltd. held at CCL Headquarter, Ranchi, 29th March, 2010.
- Attended a meeting called by DC, Dhanbad on 8th August, 2013 in relation to the **problems of Bagdigi Colliery, Lodna Area arisen after the occurrence of explosion.**
- Represented ISM in the meeting of **15TH Meeting of National Dust Prevention Committee** organized by Coal India Ltd. held at Kolkata on 18th December, 2013.
- Attended the **3rd Meeting of Research Advisory Council of National Institute of Miners' Health, Nagpur** on 23rd April 2014 as a nominated member from ISM.

22. Short Term Courses/Workshops/Training Programmes Attended

- Attended the **Sensitization Workshop for Faculty Members for framing a training module as per Safety & Health Management System Audit Guidelines circulated by MoC for developing Safety-Auditors** organized by Coal India Ltd. at IICM Ranchi on 15.04.2024.
- Attended one-day workshop at Jhanjra Project, ECL on "**Modification in the Regulation for Ventilation Requirement in Mass Production Panels (MPP) in Underground Coal Mines in India**" jointly organised by CMPDI and ECL management on 06.05.2023
- Attended the certificate training course on **VentSim Premium software** organized in Department of Mining Engineering during 4-6 February, 2020. The training was imparted by Mr. Craig Stewart from Howden Ventsim Australia, the developer of Ventsim.
- Attended the Workshops during 11th International Mine Ventilation Congress (11th IMVC) held in Xi'an, China during 14-20 September, 2018 on topics ventilation planning, coal seam degasification and CBM, mine safety, dust control, diesel particulate matter, mine firefighting.
- Attended the **Indian Mining Legislation Workshop** organized by SIMTARS, Australia at Australian High Commission, New Delhi on 03.11.2017.
- Attended the One Day Workshop on "**Challenges and opportunities for development of UCG in India**" at Scope Convention Centre, Scope Complex, Lodhi Road, New Delhi on 23.03.2017.
- Attended the workshop on "**Development of CBM/CMM in India: An opportunity area**", Organised by CMPDIL Ranchi, India in association with USEPA during November 17-18, 2008.
- Attended the International Workshop on "**Methane Drainage from Underground Mines, Mine Gas Control, and Longwall Ventilation Practices in the World**", held at New Delhi on 10.11.2009 during Ninth International Mine Ventilation Congress, Organised by Indian School of Mines, Dhanbad.
- Undergone basic training on **Computational Fluid Dynamics (CFD)** at INNOVENT Engineering



Solutions Pvt. Ltd., Bangalore from 7-11 June, 2010.

- Represented ISM in the workshop on “**Fire Fighting Systems & Arrangements in Mines**” organized by Directorate General of Mines Safety, Dhanbad on 17.08.2011.
- Attended a workshop on “**Standards of Resin Capsule**” on 28th May, 2013 at DGMS, Dhanbad as a nominated member from ISM.
- Attended one-day workshop on **Self Advancing Goaf Edge Support System (SAGES)** held at Indian School of Mines, Dhanbad on 25th April, 2014.
- Attended two days workshops on topics “**Safety, health and ventilation cost benefit optimization with simulation and control**” and “**Mine refrigeration and cooling distribution**” held at Sun City, South Africa during 2-3 August, 2014.
- Participated in the **Certificate Course on Anglo Coal Explosion and Fire Awareness** at Kloppersbos Test Facility, CSIR, South Africa on 4 August, 2014.

23. Foreign Assignments Accomplished

- Visited **Australia** for attending the **12th International Mine Ventilation Congress (12th IMVC)** held in Sydney during 12-16 August 2024.
- Visited **Bangladesh** for attending the 1st International Conference on Energy and Environment (ICEE 2018) held during 28-29 September, 2018, at the Dept. of Petroleum and Mining Engineering, Shahjalal University of Science & Technology, Sylhet as Invited Speaker.
- Visited **China** for attending the **11th International Mine Ventilation Congress (11th IMVC)** held in Xi'an, China during 14-20 September, 2018.
- Visited **Australia** during 27 August to 09 September, 2016 for signing MoU with University of Newcastle and establishing research collaboration with different research organizations and universities like SIMTARS, University of Queensland, University of New South Wales and University of Wollongong.
- Visited **South Africa** during 1-10 August, 2014 to attend the **10th International Mine Ventilation Congress (10th IMVC)** held at Sun City, South Africa during 2-8 August, 2014.
- Visited **Singapore** during 2-5 December, 2012 to attend the **Annual International Conference on Geological and Earth Sciences (GEOS 2012)** held during 3-4 December, 2012.
- Visited **Bangladesh** during 04-06 September, 2012 as an expert member of ISM Team for execution of the prestigious “**Mines and Minerals Development Project**” for the Hydrocarbon Unit of Govt. of Bangladesh.
- Visited **Bangladesh** during 06-16 January, 2012 as an expert member of ISM Team for execution of the prestigious “**Mines and Minerals Development Project**” for the Hydrocarbon Unit of Govt. of Bangladesh.

24. Membership of Professional Bodies

- i. Society for Mining, Metallurgy & Exploration (SME), USA (Membership ID: 04196827)
- ii. Fellow Member, Mining Engineers' Association of India (Membership No. 111/DNB)
- iii. Life Member, Mining Engineers' Association of India (Membership No. 5166/DHN)
- iv. Life Member, The Mining, Geological & Metallurgical Institute of India (MGMI) (Membership No. LM-10128, 2012)
- v. Member, Society of Geoscientists & Allied Technologies (SGAT) (Membership No. 625)



- vi. Associate Member of Global Science and Technology Forum (GSTF), Singapore (Membership No. GSTF 2012/00110)

25. Seminar/Symposium/ Workshop Organized

- Chairman and Convener of the International Conference on "Mine Ventilation and Environment for Green Mining (MVEGM-2024), organized at Puri, Odisha during 20-22 December, 2024.
- Organizing Secretary of the Ninth International Mine Ventilation Congress (9th IMVC) organized by Indian School of Mines, Dhanbad at New Delhi, India during 10-13 November, 2009.
- Member of the Organizing Committee of the National Seminar on Mining Industry: Challenges & Opportunities (MICO'13) organised at Indian School of Mines, Dhanbad during 28-29 September, 2013.
- Co-Convener of Industry-Institute Interaction (III)-2017 organized at IIT (ISM) on 04.02.2017.
- Co-Convener of Industry-Institute Interaction (III)-2018 organized at IIT (ISM) on 03.02.2018.
- Coordinator of the sub-committee for Stage Preparation, Light, Sound & Pandal for organization of Industry-Institute Interaction (III) and Basant-2019 organized at IIT (ISM), Dhanbad.
- Member of the Technical Advisory Committee of the national conference on "Recent Advances in Mining Technology" (RAMT-2019) held on 23rd and 24th of May, 2019 at Acharya Institute of Technology, Bengaluru.
- Chairman, Organizing Committee of International Conference on "Safe, Smart and Sustainable Mining (3SM)" held during 16-18 December, 2023 at Goa.

26. Reviewer of the Journals

1. Annals of Nuclear Energy, Elsevier
2. Nuclear Engineering and Technology, Elsevier
3. Applied Radiation and Isotopes, Elsevier
4. Journal of Hazardous Materials, Elsevier
5. Arabian Journal of Geosciences, Springer
6. Environmental Engineering and Management Journal
7. GSTF Journal on Geology and Earth Sciences (JGES)
8. International Journal of Physical Sciences
9. Journal of Environmental Radioactivity, Elsevier
10. Journal of Geology and Mining Research (JGMR)
11. Journal of Radioanalytical and Nuclear Chemistry, Springer
12. Journal of Sustainable Mining, Elsevier
13. Particulate Science and Technology, Taylor & Francis
14. Geotechnical and Geological Engineering, Springer
15. Powder Technology, Elsevier
16. Journal Advances in Civil Engineering, Hindawi
17. International Journal of Mechanical Sciences, Elsevier
18. Process Safety and Environmental Protection, Elsevier
19. International Journal of Minerals, Metallurgy and Materials, Springer
20. Journal of Chemistry, Hindawi



Curriculum Vitae

21. Fuel Processing Technology, Elsevier
22. Scientific Reports, Springer
23. Chemosphere, Elsevier
24. Safety Science, Elsevier
25. International Journal of Mining Science and Technology, Elsevier
26. International Journal of Mining and Mineral Engineering (IJMME), Inderscience Publishers
27. Fuel, Elsevier
28. Advanced Powder Technology, Elsevier
29. Mining, Metallurgy & Exploration, Springer
30. International Journal of Coal Science & Technology, Springer
31. Journal of Central South University, Springer

Last updated: 08.02.2025

D. P. Mishra



ANNEXURE-I

Research Publications of Prof. D. P. Mishra

Research Publications in International and National Journals

2025

1. Dasgupta, T., **Mishra, D.P.**, Pandey, A. (2025). Investigation of thermal stability, heat transfer dynamics, low-temperature oxidation kinetics and gas evolution profiles of coal: An innovative approach. *Fuel* 381, 133354. <https://doi.org/10.1016/j.fuel.2024.133354> (IF: 6.7, Q1).
2. Roy, S., **Mishra, D.P.**, Agrawal, H., Bhattacharjee, R.M. (2025). Development of productivity model of continuous miner operators working in hazardous underground mine environmental conditions. *Measurement* 239, 115516, Elsevier. <https://doi.org/10.1016/j.measurement.2024.115516> (IF: 5.2, Q1).
3. Mishra, D., **Mishra, D.P.**, Mohalik, N.K., Ray, S.K. and Pandey, J. K. (2025). Effect of depth and particle size on spontaneous combustion of coal in deep underground mines of Jharia coalfield. *Journal of Sustainable Mining* 24(1), 117-129. <https://doi.org/10.46873/2300-3960.1443> (IF: 0.7, Q4).

2024

4. Azam, S., Liu, S., Bhattacharyya, S., **Mishra, D.P.** (2024). Prevalence of Nano-sized coal mine dust in North and Central Appalachian coal mines – Insights from SEM-EDS Imaging. *Journal of Hazardous Materials* 476, 135226, Elsevier. <https://doi.org/10.1016/j.jhazmat.2024.135226> (IF: 12.2, Q1).
5. Yadav, A.K., Mishra, S., DP **Mishra, D.P.** (2024). A detailed review study on utilization of mine and industrial wastes for backfill strengthening. *Arabian Journal of Geosciences* 17 (4), 121, Springer. <https://doi.org/10.1007/s12517-024-11917-4> (SCIE).
6. Paluchamy, B., **Mishra, D.P.** (2024). Characterization and Health Risk Assessment of Airborne Dust Generated in a Highly Mechanized Underground Metalliferous Mine. *Journal of The Institution of Engineers (India): Series D*, 1-10, Springer. <https://doi.org/10.1007/s40033-024-00656-1> (Scopus).
7. Paluchamy, B., **Mishra, D.P.** (2024). Measurement and analysis of airborne dust generation and dispersion from low-profile dump truck haulage in underground metalliferous mines. *Measurement* 35(2), 114252, Elsevier. <https://doi.org/10.1016/j.appt.2024.104343> (IF: 5.6, Q1).
8. Sahu, A., **Mishra, D.P.** (2024). Prevention and suppression of coal dust explosion in underground coal mines: Role of rock dust type, particle size, proportion, concentration, and thermal properties. *Advanced Powder Technology* 35 (2), 104343, Elsevier. <https://doi.org/10.1016/j.appt.2024.104343> (IF: 5.2, Q1).

**2023**

9. Behera, S.K., Singh, P., **Mishra, D.P.**, Mishra, K., Kumar, A., Mandal, S.K., Mandal, P.K., Mishra, A.K. (2023). Required strength design of cemented backfill for underground metalliferous mine. *International Journal of Mining, Reclamation and Environment* 37 (10), 927-952, Taylor & Francis. <https://doi.org/10.1080/17480930.2023.2242159> (IF: 2.4, Q2).
10. **Mishra, D.P.**, Verma, S.K., Bhattacharjee, R.M., Upadhyay, R., P Sahu, P. (2023). Geological and microstructural characterisation of coal seams for methane drainage from underground coal mines. *Bulletin of Engineering Geology and the Environment* 82 (9), 341, Springer. <https://doi.org/10.1007/s10064-023-03352-8> (IF: 4.2, Q1).
11. Ahuja, M., Mondal, D., **Mishra, D.P.**, Ghosh, S., Kumar, M. (2023). Assessment of financial and environmental impacts of pre-mining methane drainage in Indian scenario: A case study using Jharia coal seams. *Innovation and Green Development* 2 (3), 100065, Elsevier. <https://doi.org/10.1016/j.igd.2023.100065> (Scopus).
12. Ahuja, M., **Mishra, D.P.**, Mohanty, D., Agrawal, H., Roy, S. (2023). Development of Empirical and Artificial Neural Network Model for the Prediction of Sorption Time to Assess the Potential of CO₂ Sequestration in Coal. *ACS Omega* 8 (34), 31480-31492. <https://doi.org/10.1021/acsomega.3c04412> (IF: 4.1, Q2).
13. Behera, S.K., **Mishra, D.P.**, (2023). Singh, P. et al. Tensile strength of cemented paste backfill for lead–zinc mill tailings: lab and in situ scenarios. *Arabian Journal of Geosciences* 16(8):451, Springer. <https://doi.org/10.1007/s12517-023-11536-5>.
14. Das, K., **Mishra, D.P.** & Bhattacharjee, R.M. (2023). Ventilation Air Requirement for Mass-Production Panels (MPPs) in Indian Coal Mines: A Critical Appraisal. *J. Inst. Eng. India Ser. D* 104, 359–371, Springer. <https://doi.org/10.1007/s40033-022-00371-9> (Scopus).
15. Rao, S., **Mishra, D.P.**, Mishra, A. (2023). Methane migration and explosive fringe localization in retreating longwall panel under varied ventilation scenarios: a numerical simulation approach. *Environmental Science and Pollution Research* 30 (25), 66705-66729, Springer (IF: 5.8, Q1).
16. Shukla, U.S., **Mishra, D.P.**, Mishra, A. (2023). Prediction of spontaneous combustion susceptibility of coal seams based on coal intrinsic properties using various machine learning tools. *Environmental Science and Pollution Research* 30 (26), 69564-69579, Springer. <https://doi.org/10.1007/s11356-023-27248-y> (IF: 5.8, Q1).
17. Roy, S., **Mishra, D.P.**, Agrawal, H., Bhattacharjee, R.M. (2023). WBGT prediction and improvement in hot underground coal mines using field investigations and VentSim models. *Mining, Metallurgy & Exploration* 40 (3), 985-1005, Springer. <https://doi.org/10.1007/s42461-023-00770-w> (IF: 1.9, Q2).



18. Sahu, J.N., Kapelyushin, Y., **Mishra, D.P.**, Ghosh, P., Sahoo, B.K., Trofimov, E., Meikap, B.C. (2023). Utilization of ferrous slags as coagulants, filters, adsorbents, neutralizers/stabilizers, catalysts, additives, and bed materials for water and wastewater treatment: A review. *Chemosphere* 325, 138201 Elsevier. <https://doi.org/10.1016/j.chemosphere.2023.138201>. **(IF: 8.8, Q1)**.
19. Sahu, A., **Mishra, D.P.** (2023). Effects of intrinsic properties, particle size, bulk density, and specific gravity on thermal properties of coal dusts. *Environmental Science and Pollution Research*, Springer. DOI: <https://doi.org/10.1007/s11356-022-25035-9> **(IF: 5.8, Q1)**.
20. Pandey, B.P., **Mishra, D.P.** (2023). Developing an Alternate Mineral Transportation System by Evaluating Risk of Truck Accidents in the Mining Industry—A Critical Fuzzy DEMATEL Approach. *Sustainability* 2023, 15(8), 6409; <https://doi.org/10.3390/su15086409> **(IF: 3.9, Q2)**.
21. Sahu, A., **Mishra, D.P.** (2023). Coal mine explosions in India: Management failure, safety lapses and mitigative measures. *The Extractive Industries and Society*, Vol. 14, June 2023, 101233, Elsevier. <https://doi.org/10.1016/j.exis.2023.101233>. **(IF: 3.1, Q3)**.
22. Paluchamy, B., **Mishra, D.P.** (2023). Airborne dust pollution due to mechanised scaling in underground metalliferous mine cross-cut drive under buoyancy-driven airflow. *Mining Technology*, 132:1, 30-40, Taylor & Francis. 10.1080/25726668.2022.2159301 **(ESCI)**.

2022

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