

## Brief Bio-data

1. **Name:** Banti Kumar Dhar

2. **Current Position and Address:** Technical Assistant

Geo Mechanics & Numerical Simulation Section  
CSIR-Central Institute of Mining and Fuel Research  
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3. **Educational qualifications: (Graduation and above)**

| Sl. No. | Degree                         | Year of Passing | University/Institute                      | Subject     |
|---------|--------------------------------|-----------------|---|-------------|
| (i)     | Bachelor of Engineering (AMIE) | 2022            | The Institution of Engineers, India (IEI) | Civil Engg. |
| (ii)    | Diploma in Engineering         | 2014            | Government Polytechnic Ranchi             | Civil Engg. |

4. **Work experience:**

| Designation         | Institute/company | From       | To        | Nature of Work         |
|---------------------|-------------------|------------|-----------|------------------------|
| Technical Assistant | CSIR-CIMFR        | 13/08/2019 | Till Date | Research & Development |

5. **Work Area(s)/ Specialization:**

Geomechanics & Numerical Simulation – Underground coal extraction and support design.  
Rock Mechanics & Rock Excavation - Open cast and underground, Controlled Blasting, Vibration monitoring, Mitigation of flyrock, Optimisation of blast design, Bench blasting, Pre-split blasting, Fragmentation analysis, Non-destructive testing of rocks, etc.

6. **Major contributions:** (Max. 100 words)

- Successfully executed the scientific field work and data collection work for impact of TBM induced vibrations on mudflats and changes in the characteristics of mudflats at the tunnel alignment of National High Speed Rail Corporation Limited, Mumbai (Bullet Train).
- Monitoring of controlled blasting, flyrock and blast induced ground vibration for excavations of underground sections at Mumbai metro and Bangalore metro rail corporation limited.
- Investigation and data collection & monitoring of controlled blast design for construction of access twin tunnel of Nagpur- Mumbai super communication expressway, Samruddhi Mahamarg, Igatpuri, Nashik, Maharashtra. It is the longest and widest road tunnel of Maharashtra.

7. **No. of Research Publications:**

- Papers in Journals: 02
- In conference proceedings: 02
- Invited lectures delivered: Nil

- List of best 05 publications:

- (i) *Electronic Delay Initiation System: A game changer to enhance blasting safety and productivity in opencast mines.*  
Ramulu M, **Dhar B K**, Rahman A and Choudhury P B, National Seminar on “Recent Practices and Advancement in Mineral Industry (RPAMI)”, (2020), pp. 407- 419.
  - (ii) *Blasting for Urban Construction- A case study from Bengaluru Metro Project.*  
**B. K. Dhar\***, A. Rahman, M. Ramulu, S. Rukhaiyar, P. B. Choudhury and P. K. Singh.  
The Indian Mining & Engineering Journal, Vol.61, No.02, February 2022, pp. 05-11
  - (iii) *Isolated Deck Charging for the controlled blast- A case study from stone quarry.*  
A. Rahman\*, **B. K. Dhar**, M. Ramulu, S. Rukhaiyar, P. B. Choudhury and P. K. Singh.  
The Indian Mining & Engineering Journal, Vol. 61, No. 05-06 May-June 2022, pp. 20-27,
  - (iv) *Design of Pit Slope of an Opencast Baryte Mine in India – A Case study*  
S. Rukhaiyar, N. Singh, B.K. Dhar & J. C. Jhanwar  
4th Int. Conf. on Advanced Technology in Exploration & Exploitation of Minerals
- Books/Chapters authored/edited: Nil

#### 8. List of 5 Major Contract R&D Projects:

- (i) Studies on design and construction of underground sections including three underground stations at SCP, SHC, SCG and associated work at Mumbai metro rail project, UGC-1, phase-III, Maharashtra.
- (ii) Studies on controlled of blasting pattern, execution & monitoring of blasting activities at barrage and underground tunnel work of Rammam hydel power project, Darjeeling, W.B.
- (iii) Scientific study on controlled blast design and monitoring for construction of access controlled Nagpur- Mumbai super communication expressway, Samruddhi Mahamarg, Maharashtra.
- (iv) Scientific study for controlled blast design and blast vibration monitoring at L&T work sites of Bangalore metro rail project phase 2, pckg RT-02, Karnataka.
- (v) Scientific study on vibration monitoring and design of safe charge pattern at Parackal granite stone quarry Ernakulam, Kerala.

#### 9. (a) Name of Patents/Copyrights applied /granted/commercialized:

- (i) *A lightweight blast mat for muffling blast holes and controlling flyrock in near field blasting. (IPR/CIMFR/NA (04)/04(04)/22 Dated – 21.04.2022)*

Team Members: Dr. More Ramulu, Dr. Partho B. Choudhury, Dr. Saurav Rukhaiyar,  
Mr. Banti Kr. Dhar & Mr. Abdur Rahman

#### (b) Technologies/Products /knowhow/Services developed: Nil

#### 10. Honors/Awards/Recognitions/Fellowships/Scholarships/Professional Memberships received:

- (i) The Institution of Engineers, India (IEI) - AM3086596

#### 11. Societal Contributions: Technical supports rendered in projects of National importance such as: Mumbai- Ahmedabad Bullet train project, Mumbai & Bangalore Metro projects, Mumbai-Nagpur Samruddhi Mahamarg project, & Mining, Railways and Hydroelectric Projects.