



1. **Name** : Dr Partho B. Choudhury
2. **Date of Birth** : 19th June 1973
3. **Current Position and Address** : Principal Scientist
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4. **Educational qualifications: (Graduation and above):**

Sl. No	Degree/Certificate	Year of Passing	University/Institute	Subjects
i.	B.E.	1994	Nagpur University	Mining Engineering
ii.	M.Tech	1998	Indian School of Mines, Dhanbad	Mine Planning & Design
iii.	Ph.D	2013	Indian Institute of Science, Bangalore	Geotechnical Engg.

5. **Work experience:**

14/09/1994 to 06/02/1995	Visting Lecturer	Undergraduate Engineering college (RKNEC)
13/11/1995 to 31/03/1996	Lecturer	Undergraduate Engineering college (RKNEC)
27/07/1998 to 31/05/2001	Project Fellow	CSIR-CIMFR, Nagpur Unit-1
01/06/2001 to 10/12/2001	CSIR-SRF	CSIR-CIMFR, Nagpur Unit-1
11/12/2001 till date	Scientist	CSIR-CIMFR, Nagpur Unit-1

6. **Area of specialization:** Rock Fragmentation and ground vibration analyst, Controlled blasting and productivity, Geotechnical Subsurface Investigation, Acoustic Emissions, Application software development & artificial intelligence

7. **Honours/Awards received:** IE(I) best paper award in 2007
ISRMTT Best paper award in 2009

8. **Fellowships/Scholarships:** NIL

9. **No. of Research Publications:**

- Papers in journals: 25
- In conference proceedings: 30
- Invited/key-note addresses: -
- List of best 05 publications:
 - i. "Intelligent prediction of ground vibration in coal formations using ANN", The Indian Mining Engg. J., 2012, 51(11), pp.12-15
 - ii. "Crown pillar stability assessment in an underground copper mine using acoustic emission", Intl. J Rock Mech. Min.Sci., 2004, 41(3), pp.399-400

- iii. "Development of rational models for tunnel blast prediction based on a parametric study", Geotech. Geol.Engg.,2004, 22, pp.477-496
- iv. "Near surface Vs profiling using MASW for rippability assessment of milliolithic limestone", ISRM Intl.Symp. Rock. Mech., Sinorock, HongKong, 2008, pp.75-80
- v. "Prediction of blast induced ground vibration and its associated frequency using comprehensive support vector machine model", Proc.36th Intl. Conf. ISEE, Orlando, USA, 2010, pp.31-39

10. **Number of Books authored/edited:** Editorial committee member of 9th International Mine Ventilation Congress, held on 10-13, Nov.2009 at Delhi

11. **(a) No. and details of Patents granted/applied for:**

- i. Patent No.251817, 09/04/2012, "A method for in-hole delay solid blasting"
- ii. Patent No.233361, 29/03/2009, "A novel device for bottom hole non-electric initiation of non-cap sensitive explosive column and a process thereof"
- iii. Patent No.195825, 21/04/2006, "A device for rescuing small children trapped in abandoned bore holes"
- iv. Application No.2650/DEL/2008A, 20/08/2010, International Classification: F24D1/00, "A device for sand stemming in horizontal blast holes in underground excavations"

(b) Technologies developed, Licensed and/or commercialized : Three application software(s)

12. **Foreign visits:** Two (Myanmar: to render R&D services, Poland: to attend Mining Congress)

13. **Details of Professional memberships:**

Member of International Society of Rock Mechanics
 Fellow member of Institution of Engineers (India)
 Life member of Indian Society of Rock Mechanics & Tunneling Technology

14. **Major contributions:** (*Max.150 words*)

- Successfully designed and implement exhaustive blast designs for rock excavation (~4.5 lakh cu.m) of complete Power House Package of Tapovan hydroelectric project
- Indigenously designed and implemented long hole raise blasting technique for clearance of choked surge shaft (~138m) thereby savings to the tune of ₹66.5 lakhs
- Developed first of its kind, one single blast vibration predictor model for three different rock types, using ANN and SVM, thereby eliminating the need for trial blasts to generate attenuation curves
- Created facility for multichannel analysis of surface waves to open new avenues for delineation of ore bodies, provide sub-surface geotechnical information. Implemented the R&D inputs to decipher subsurface joints at World Heritage site of Ajanta Caves.
- Principal Investigator of 1st DST funded project of erstwhile CMRI Regional Centre

15. **Technologies and Products/ Services**

- (i) Developed: Application software(s), viz. "CMRI_Visfot", "CMRI_ROCK", "Fragalyst"
- (ii) Licensed: --
- (iii) Commercialized: Fragalyst software (09 clientele)

16. **Designs and Prototype Developed:** NIL

17. Honours and awards won for technological contributions or sociological impact of R&D:

- (i) Citation received from Director, CSIR-CIMFR for R&D contribution related to "Raise blasting technique at Ghatghar hydro-electric power project"
- (ii) Appreciation for R&D work towards application of technology by M/s Hindustan Copper Limited, M/s RiTES, M/s R J Shaw & Co. Ltd., Mumbai, M/s Shree Cements, Rajasthan and M/s Patel Engineering, Mumbai

Partho Choudhury

(Partho B. Choudhury)

Signature