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1. Name: **Dr. CHANDRANI PRASAD VERMA**



2. Date of Birth: **04-01-1977**

3. Current Position and Address: **Sr. Scientist**  
 (with E-mail & Phone no.) **CIMFR Regional Centre, Unit-I,**  
**3<sup>rd</sup> Floor, MECL Building,**  
**Seminary Hills, Nagpur – 440006**  
**Maharashtra**  
**[chandranidp@gmail.com](mailto:chandranidp@gmail.com)**  
**09422477144**

4. Educational qualifications: (Graduation and above)

Sl. No.	Degree/ Certificate	Year of Passing	University/ Institute	Subjects
i	<b>M. Tech</b>	<b>2006</b>	<b>VNIT, Nagpur</b>	<b>“Investigations on Hard Roof Caving and its Impact on Depillaring”</b>
ii	<b>Ph. D</b>	<b>Dec. 2015</b>	<b>VNIT, Nagpur</b>	<b>“Web Pillar Design in Highwall Mining”</b>

5. Work experience

Designation	Institution/Company	Duration		Nature of Work
		From	To	
<b>Sr. Scientist</b>	<b>Central Institute of Mining &amp; Fuel Research, Regional centre, Unit-I, Nagpur</b>	July 2009	Till date	R & D: Stope design – Design of stope dimensions, cap rock stability analysis, design of decline, etc., Stability Analysis of Ajanta Caves, Stability analysis of tailing dam, Estimation of RMR and support design for coal as well as metal mine, Stability analysis and prediction of surface movement during tunneling, Web pillar design in Highwall Mining. Strata behaviour study
<b>Scientist</b>	<b>Central Institute of Mining &amp; Fuel Research, Dhanbad &amp; partly in Unit-I, Nagpur</b>	July 2004	July 2009	
<b>CSIR-JRF</b>	Central Mining Research Institute, Dhanbad	Nov. 2003	July 2004	R & D related to Hard roof management – prediction of induced caving height, strata

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Fellow	Central Mining Research Institute, Dhanbad	Oct. 2001	Nov. 2003	behaviour through instrumentation and monitoring, stability analysis through numerical modeling, Co-convened National Seminar
Lecturer (Ad hoc)	Shri Ramdeobaba Kamla Nehru Engineering College, Nagpur	July 2001	Sept. 2001	Teaching: taught Advanced Mining, Mine surveying, Mine planning, Mine Environment – II & III and Introduction to Mining. Rock mechanics Practical of B.E final year students
Lecturer (Ad hoc)	Shri Ramdeobaba Kamla Nehru Engineering College, Nagpur	July 2000	March 2001	

6. Area of specialization: **Rock Mechanics and Numerical Modeling**

7. Honors/Awards received:

Honored by D.D Sahyadri team “**HIRKANI AWARD 2006**” on 15<sup>th</sup> Dec 2006 for becoming “**First lady Mining Engineer of the Country**” at Mumbai

8. Fellowships/Scholarships:

**Junior Research Fellowship of CSIR [CSIR-JRF]** from 3rd Nov. 2003 to 12th July 2004 on the basis of **91.51 percentile score and 26<sup>th</sup> All India Rank in GATE 2003.**

9. No. of Research Publications:

- Papers in journals: **11**
- In conference proceedings: **18**
- Invited/key-note addresses: **09 (Invited lectures)**
- List of best 05 publications:

1. **Chandrani P Verma**, John Loui P, Thote N. R., P. Pal Roy, S Karekal, Empirical Approaches for Design of Web Pillar in Highwall Mining – Review and Analysis, Geotech. & Geol. Eng. (2014), vol. 32(2), pp 587 – 599, DOI 10.1007/s10706-013-9713-8
2. **Chandrani P Verma**, John Loui P, Thote N. R., Highwall Mining Technology –A Review of the Current Status and Design Methods, CIM Journal, Vol.5(4), 2014, pp. 227 – 236
3. John Loui P, **Chandrani P Verma** & P. Pal Roy, Highwall Mining in India – Part 1: Design Methodology and Review of Performance, Journal of Mines, Metals and Fuels, IMME 2014 No., Sept – Oct. 2014, India, pp. 245 – 253
4. **Prasad C. D** & John L. P., “ Design of Cut & Fill Stope Parametrs at Balaghat Mine”, Proceedings of 6<sup>th</sup> Asian Rock Mechanics Symposium, 25 – 27 October 2010, New Delhi, India, pp. 247
5. **Prasad, C. D.**, Rao, K. R., Kumar, N & Ghosh A. K., Numerical Simulation of Bord & Pillar Workings In Churcha West Mine, SECL to Study The Caving Behaviour of Its

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Massive Sandstone Roof, Journal of Mines Metals and Fuels, vol. 53, Nos. 7&8, July-Aug 2005, pp 116-121

10. Number of Books authored/edited:

1. **Co-Editor** of Proceedings of National Seminar on Emerging Trends in Mineral Industry on 1-2 Oct.2007, at VNIT, Nagpur

11. (a) No. of Patents granted/applied for: --NA---  
(b) Technologies developed, Licensed and/or commercialized:

12. Foreign visits: ---NA---

13. Details of Professional memberships:

1. Life member of ISRMTT (Indian society for Rock Mechanics and Tunnelling Technology), Membership no- 1576.
2. Member of Institution of Engineers, Nagpur chapter, India, Membership no- M-146977-5
3. Life Member of The Committee of the International Society for Rock mechanics (INDIA)
4. Life Member of The Mining Engineer's Association of India (MEAI) LM-2978/NAG
5. Life Member of The Mining, Geological & Metallurgical Institute of India (MGMI) LM-9099
6. Life Member of the Indian Mining & Engineering Journal, Membership No. IMEJRF663

14. Major contributions: (Max. 150 words)

Application of numerical simulation techniques to mine design for improved productivity and safety

- a) Stope design, support design and design of surface crown during transition phase from opencast to underground mining and feasibility study to suggest suitable methods for different ore bodies of various manganese and chromite mine has helped the management to recover the ore with greater safety.
- b) Generation of huge database of instrumentation and its continuous analysis during depillaring in various panels of Churcha West Mine, SECL along with numerical modelling of the workings that has helped in better understanding of the strata behaviour and in refining induced caving design by determining optimum induced caving height. Mine management has recovered more than 10, 00,000 tonnes of coal safely under hard, massive, difficult-caving roof in this mine which was virtually closed after severe overriding in 1999.
- c) Design guidelines have been framed for application of highwall mining in India. Detailed laboratory investigations along with numerical modeling studies and analysis of empirical approaches make it possible to understand web pillar design concepts and to visualise the failure pattern of long pillars. Accordingly, effective width ( $W_{eff.}$ ) =  $2w$  in CIMFR pillar design equation is validated for web pillar strength estimation.

15. Technologies and Products/ Services

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(i) Developed: Highwall Mining design methodology

(ii) Licensed:

(iii) Commercialized:

16. Designs and Prototype Developed: **Plane Strain Loading Apparatus designed** to simulate web pillar loading and to validate the findings of effective width concept in CIMFR pillar design equation. Findings are encouraging and a large scale study is proposed in near future.

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

Signature