

Bio-data

1. Name: Dr. AWANINDRA PRATAP SINGH

2. Date of Birth: 07/05/1975

3. Current Position and Address (Include Email ID and Contact Number):

Principal Scientist, R. No. 23, Underground Mining Methods Section, Mining Methods and Geomechanics Research Group, CSIR-CIMFR, Barwa Road Campus, Dhanbad - 826001, Email: apsingh@cimfr.nic.in, Mob: 9431124272

4. Educational qualifications: (Graduation and above)

Sl. No.	Degree	Year of Passing	University/Institute	Subject
1	B.E.	1999	Govt. Engg. College, Bilaspur (C.G.)	Mining
2	M. Tech.	2001	IIT BHU, Varanasi	Rock Mechanics
3	Ph.D	2020	IIT (ISM), Dhanbad	Environmental Science & Engineering

5. Work experience:

Designation	Institute/company	From	To	Nature of Work
Scientist B	CMRI, Dhanbad	10.12.2001	10.12.2004	R&D in Mining Areas
Scientist C	CMRI, Dhanbad	11.12.2004	10.12.2008	--do--
Senior Scientist	CSIR-CIMFR, Dhanbad	11.12.2008	10.12.2012	--do--
Principal Scientist	CSIR-CIMFR, Dhanbad	11.12.2012	Continued.	--do--

6. Work Area(s)/ Specialization:

Underground Mining Methods

7. Major contributions: (Max. 100 words):

Aspects of Rock mechanics & Mining engineering, Caving & Rib mechanics, Ground control, strata evaluation and management including their impact-assessments on methods of mining and requisite modifications. Design of pillars and arrays of pillars for different mining methods including chain-pillars/barrier pillars design for sectionalisation or other purposes. Design of feasible mining methods, supports especially during underground coal extraction and then validation and also on-site implementations of, various coal mining methods with deployment of continuous miners and accessories. R&D back-up for safe coal production and enhanced recovery of coal, especially below important sub-surface and surface properties without any adverse subsidence-related impacts on them. Stability analysis of an underground mining excavation with the help of empirical and numerical modelling approaches. Also organized DST sponsored 14 days Advanced training Program entitled "Mathematical Modeling of Ground water in Mining area" w.e.f. 10-23 March 2005. Worked for prestigious River Linking project entitled "Geological investigation for Chunar - Sone Barrage Link Canal project (U. P. Portion)". Had been nominated from CMRI for CSIR Diamond Jubilee Technology Award 2005. Worked in CSIR funded Network Project under 10th five year plan for "Development of comprehensive technology for disaster prevention and management for Jharia coal field". Worked for Border Road Organization (BRO) for Hydrological and geophysical study for Nine Mile and Lantakhola landslide area, Sikkim. Worked for prestigious River Linking project entitled "Geological investigation for Chunar -Sone Barrage Link Canal project (U.

P. Portion)". Working in Ministry of Coal funded GAP project entitled "Design and stability of pillars/arrays of pillars for different mining methods in coal mine workings", field study part is continued. Attended and presented technical paper in World Mining Congress (2013) held at Montreal Canada during 11-15 August 2013. Paper entitled "Delineation of offending galleries in barriers of underground coal mines" has been selected under Young Scientist Award programme of 94th Indian Science Congress 2006-2007 and was presented in Science Congress.

- **Papers in Journals: 9**
- **In conference proceedings: 18**
- **Invited lectures delivered: 2**
- **List of best 05 publications**

- 1). Variations in Hydro-Chemical Properties and Source Insights of Coalbed Methane Produced Water of Raniganj Coalfield, Doi: 10.1016/j.jngse.2018.01.020. **IF: 4.965**
- 2). Rib stability: A way forward for safe coal extraction in India, IJMST, Elsevier10.1016/j.ijmst.2017.06.007. **IF: 4.084**
- 3). Coalbed methane-produced water quality and its management options in Raniganj Basin, West Bengal, India, Int. Jr. of Applied Water Science, Doi: 10.1007/s13201-015-0326-7, **IF: 3.874.**
- 4). Disaster management in Nandira watershed, District Angul (Orissa) India using temporal Remote Sensing and GIS, Int. Jr. of Environment assessment and monitoring, doi: 10.1007/s10661-005-1678-5, Springer, **IF: 2.513**
- 5). Validation of RMR-based support design using roof bolts by numerical modeling for underground coal mine of Monnet Ispat, Raigarh, India - a case study, Arab J Geosci <https://doi.org/10.1007/s12517-011-0313-8>, **IF: 1.827**

- **Books/Chapters authored/edited: Book 1, Chapter 1**

9. List of 5 Major Contract R&D Projects:

(1) Sedimentation appraisal around barrage in Bokaro river basin under intensive coal mining and processing units", funded by MoWR, (2) Geo-morphological cum Sedimentological Appraisal of Changme Khangpu Glacier, North District (Sikkim Himalaya)", funded by DST, (3) To Find a Methodology of Safe Liquidation in Thick Seams of Raniganj Coalfields: Design, Development & Show-casing Demonstrative Trials at Khottadih Colliery, ECL" funded by CIL R&D Board, (4) Design and stability of pillars/arrays of pillars for different mining methods in coal mine workings", funded by MOC

10. (a) **Name of Patents/Copyrights applied /granted/commercialized: Nil**

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

11. Honors/Awards/Recognitions/Fellowships/Scholarships/Professional Memberships received: 3 in nos.

12. Societal Contributions

R&D in underground mining methods has reduced the cost of production of coal and thus reduced the cost of power – thus the society is direct beneficiary. Others R&D's mentioned above can be also termed as societal contributions due to the researches done.