

Brief Bio-data

1. Name: Preity

2. Date of Birth: 18/02/1996

3. Current Position and Address (Include Email ID and Contact Number): Technical officer, preitymishra@cimfr.nic.in, 8210117123

4. Educational qualifications: (Graduation and above)

Sl. No.	Degree	Year of Passing	University/Institute	Subject
1	B.Tech	2017	Banasthali University	Electronics and Instrumentation

5. Work experience:

Designation	Institute/company	From	To	Nature of Work
Application Development associate	Accenture	28-07-2017	25-12-2018	Software engineering

6. Work Area(s)/ Specialization:

Embedded systems, sensors and transducers, data acquisition circuits, process control, Industrial automation

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

- Involved in development, calibration and inhouse testing of soil nutrient measurement system for Nitrogen, Potassium, Ammonium, chloride and calcium; ground movement monitoring system; gas monitoring system through data acquisition, and calibration of gas sensors for Methane, Oxygen, Hydrogen Sulphide, and Carbon Monoxide;strata monitoring system, temperature, humidity, and air velocity monitoring system;wireless voice communication system;miners tracking system;antenna testing and solar based multipurpose system.
- Involved in design and calculation of Intrinsically safe circuits for different modules of Digital mine system.
- Involved in drafting of patent and hardware/firmware manuals for digital mines using Internet of Things, solar based multipurpose system, and dust collector system.

8. No. of Research Publications:

- Papers in Journals: 2
1. Mishra, Preity & Chaulya, Swades & Banerjee, Gautam. (2021). **A proposed data acquisition system and algorithm for signal processing of moving-coil geophone's output**. SN Applied Sciences. 3. 10.1007/s42452-021-04330-z.

2. Chaulya, S.K., Prasad, G.M., Mitra, S., Mishra, P., and Nadeem, M. (2021) **“Development of a digital mine for safe and efficient mining”**, BCREC Engineering & Science Transaction, 2(1): 1-21.

- In conference proceedings: Nil
- Invited lectures delivered: Nil
- List of best 05 publications:
- Books/Chapters authored/edited: Nil

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

- 1) Setting up of Information and facilitation Centre for Empowering Living of Schedule Caste in Jharkhand State sponsored by MeitY (Ministry of Electronics & Information Technology).
- 2) Development of digital mine using internet of things sponsored by MeitY (Ministry of Electronics & Information Technology).
- 3) Design and Development of an online wireless data acquisition system and software for ground control monitoring sponsored by CSIR-CIMFR (Central Institute of Mining and Fuel Researchj).
- 4) Setting up of Safety Testing Lab for electronics and IT Products sponsored by MeitY (Ministry of Electronics & Information Technology).

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

A. Patents

- 1) Chaulya, S.K., Prasad, G.M., Mandal, S.K., Banerjee, G., Singh, P.K., Chowdhury, A. Preity, Naresh Kumar, Virendra Kumar, Singh, J.K., Chandan Kumar, Pandit, D., Mitra, M., Mishra, S.S., Khusbhu Kumari, Mishra Richa, M., Kunal Saurabh, Dey, P., Md. Nadeem, Saw, G. (2020) **“Digital mine using Internet of Things”**, 0002NF2020, dated 07.01.2020, Application No: 2020110292344, dated 10 July 2020.
- 2) Chaulya, S.K., Roy, S.K., Prasad, G.M., Mandal, S.K., Banerjee, G., Singh, P.K., Dey, S., Virendra Kumar, Preity, Mishra, R., Rajak, K.K. (2020) **“Retractable bed cover and dust collector for transport vehicles”**, 0184NF2020; dated 11.11.2020.
- 3) Chaulya, S.K., Prasad, G.M., Mandal, S.K., Banerjee, G., Singh, P.K., Dey, S., Virendra Kumar, Naresh Kumar, Preity, Rawani, V.K., Richa, M., Sunil Kumar, Rajak Krishna Kumar, Saw, G. (2021) **“Solar-based Multipurpose Utility System”**.

B. Copyrights

- (i) **Soil and Water Health Reporting Software** (062CR2020, 05.11.2020), No. SW-14170/2021, dated 11/02/2021.

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

11. Honors/Awards/Recognitions/Fellowships/Scholarships/Professional Memberships received: Nil

12. Societal Contributions: Nil