

Ayoti Banerjee

Assistant Professor (West Bengal Education Service), Department of Geology, Durgapur Government College, West Bengal, India

(Jan 2025-Present): Teaching undergraduate and postgraduate courses in Sedimentology, Remote Sensing, Geostatistics and Geochemistry, supervising M.Sc. dissertation research of Postgraduate students and undertaking departmental and college administrative responsibilities.

Research interests include Sedimentology, Stratigraphy, Geostatistics, Petroleum Geology, Remote Sensing and Climate Change.

(Sep 2019-Dec 2024): PhD. thesis titled ' Sedimentary Basin Analysis and Stratigraphic Evolution of the Mesoproterozoic Succession, in and around Raipur, Chhattisgarh, India'. Research was supported by a Doctoral Fellowship from the **Ministry of Statistics & Programme Implementation, Government of India.**

Work History

2017-07 -
2019-08

Geologist

Cairn Oil & Gas, Vedanta Limited, Gurgaon, Haryana

- Supported end-to-end field development activities, including well planning, real-time drilling monitoring (RTM), data management, post-drill evaluation and STOIP recalculation for the RFQ-1 and RFQ-2 drilling campaigns in collaboration with Halliburton and Baker Hughes.

Education

2014-07 -
2017-06

Masters of Science & Technology: Applied Geology

**Indian Institute of Technology (Indian School of Mines)
– Dhanbad, Jharkhand, India**

- Graduated **Magna Cum Laude with OGPA 9.42.**
- Received Institute Merit Cum Means Scholarship (2015, 2016)
- Dissertation title: Diffusion controlled corona growth: An evidence of element mobility during



Contact

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Skills

Well Planning



Static Modelling



Statistical Analysis



Data Management



Real Time Drilling
Monitoring



metamorphism in mafic dykes from **Southern Granulite Terrain, Tamil Nadu, South India.**

2011-07 - **Bachelor of Science: Geological Sciences**

2014-06 **Presidency University, Kolkata, India**

- Majored in Geology with **CGPA 8.15.**

Publications

1. Rai, R., Lahiri, S., **Banerjee, A.**, Santra, S., Kumar, S., & Mamtani, M. A. (2026). Estimating anisotropy of fracture patterns using Gray Level Co-occurrence Matrix (GLCM) approach: Implication on understanding permeability anisotropy. **Journal of Structural Geology (I.F 3)**
2. Mustafi, S., **Banerjee, A.**, Palit, S., & Pal, R. K. (2025). PredSL: Prediction of snow cover and lake area change using cellular automata. **GeoRisk: Assessment and Management of Risk for Engineered Systems and Geohazards (I.F 5.3)**
3. Mustafi, S., **Banerjee, A.**, Palit, S., & Pal, R. K. (2025). Assessment of factors leading to glacial lake outburst floods using ensemble learning: A case study of Shishper Glacier, Himalayas. **Natural Hazards (I.F 4.5)**
4. Lahiri, S., **Banerjee, A.**, Roy, A., Jha, M., Gulzar, S. M., & Lucca, A. (2025). Exploring spatial heterogeneity and topological properties of fracture networks: A statistical characterization. **Journal of Structural Geology (I.F 3)**
5. **Banerjee, A.**, Banerjee, S., Banerjee, A., & Dasgupta, S. (2025). Glauconite and ferric illite authigenesis in marine settings as a source for geologic hydrogen. **Current Science (I.F 1.1)**
6. **Banerjee, A.**, Patel, A. K., Lahiri, S., Majumder, P., Banerjee, A., & Dasgupta, S. (2025). Genesis of coexisting authigenic ferric illite and glauconite in the Deodongar Sandstones, Chhattisgarh Basin, India: Unravelling redox dynamics of a Mesoproterozoic Sea? **Precambrian Research (I.F 2.7)**

Technical Trainings

- International Remote Sensing Summer School, at **University of Southern California (USA)**, organized by the **IEEE Geoscience and Remote Sensing Society** and the **Ming Hsieh Institute**, alongside the **IEEE International Geoscience and Remote Sensing**

Relationship development



Languages

Hindi



English



Bengali (Native)



Software

Petrel



MS Office



QGIS



Python



Interactive Petrophysics



RocDok



Symposium (IGARSS 2023) (July, 2023).

- Geostatistics & Spatial Data Analytics for Reservoir Modelling under the guidance of **Prof. Tapan Mukherji, Stanford University, USA** (November,2019).
- Sequence Stratigraphy: Principles and Applications under the guidance of **Prof. Octavian Catuneanu, University of Alberta, Canada** (January,2019).

Accomplishments

- Graduate Aptitude Test in Engineering for Geology-Geophysics organized by Indian Institute of Technology: - **AIR 58, 2020.**
- All India Examination of Indian Statistical Institute for MoSPI funded Fellowship in Geological Sciences Programme: - **AIR 01, 2019.**
- National Eligibility Test (Junior Research Fellowship and Lectureship in Earth science) conducted by CSIR: - **AIR 46, 2018.**

Certifications

2017-07	Dale Carnegie Course: Campus to Corporate
2011-03	Dramatics on Shakespeare & Tagore under Professor Amitava Roy 'Shakespeare Society of Eastern India'

Interests

Arts & Dramatics, Creative Writing, Classical Literature