

Name: Dr. Ananya Mukhopadhyay

Present Professional Status: Professor

Residential Address: P-7, East End Row, Garfa Main Road,
Kolkata-700078.

Research Area: Sedimentology, Sequence Stratigraphy, Event Stratigraphy, Petroleum Geology, Tectonic Geomorphology and Basin Tectonics.

Journal Publications:



Kwak, K., Varner, T. S., Saha, S., Bhuiyan, M. U., Kulkarni, H. V., Mukhopadhyay, A., Datta, S. Knappett, P. S. K., 2024. Impact of surficial lithology on arsenic mobility in riverbanks of tidally fluctuating rivers: The Hooghly River, West Bengal, India, Journal of Hydrology Volume 641.

Roy, S., Mandal, P., Chowdhury, A., Abdullah-AL-Wadud, M., Seikh, A. H., Seikh, A. H., Ghosh. M., & Mukhopadhyay, A. (2024). Utilizing machine learning algorithms to predict accuracy of the Index of Relative Tectonic Activity (IRTA), Dhansiri (North) River Basin in India and Bhutan. IEEE Access,12,60482-60495.

Thorie, A., Mukhopadhyay, A., Mazumdar, P., Banerjee, T., 2022. Ooid diversity and Ooimuration in the Neoproterozoic Kunihar Formation, Lesser Himalaya, India., Journal of the Palaeontological Society of India, 67(1), 22-31.

Mazumdar, P., Mukhopadhyay, A., Thorie, A., Banerjee, T., Rai, S.K., 2021. Geochemistry of Neoproterozoic Chhaossa shales, Simla Group, Lesser Himalaya: its implications on provenance and tectonics. Journal of Earth System Sciences, 130, 175. Pp.1-17.

Mazumdar, P., Mukhopadhyay, A., Banerjee, T., Thorie, A., Eriksson, P.G., 2021. Process variations of a Neoproterozoic delta system in response to the influence of mixed-energy systems and sea-level fluctuation: An insight from Simla Group, Lesser Himalaya, India. Arabian Journal of Geosciences. 14, 596.

Thorie, A., Mukhopadhyay, A., Mazumdar P., Banerjee, T., 2020. Characteristics of a Tonian reef rimmed shelf before the onset of Cryogenian: Insights from Neoproterozoic Kunihar Formation, Simla Group, Lesser Himalaya. Marine and Petroleum Geology, 117, 104393

Thorie, A., Mukhopadhyay, A., Banerjee, T., Mazumdar, P., 2018: Giant ooids in a Neoproterozoic carbonate shelf, Simla Group, Lesser Himalaya, India: An analogue related to Neoproterozoic glacial deposits. Marine and Petroleum Geology 98,582-606

Mukhopadhyay, A., Banerjee, T., 2016. Stromatolites: a guideline for development of a carbonateramp, Proterozoic Basantpur Formation, Simla Group (Lesser Himalaya, India). Arabian Journal of Geosciences 9, 1-18

Mukhopadhyay, A., Thorie, A., 2016. Comparative study of two relatives, MISS and Stromatolites: example from the Proterozoic Kuniyar Formation, Simla Group, Lesser Himalaya. *Arabian Journal of Geosciences* 9, 554

Mukhopadhyay, A., Mazumdar, P., Van Loon, A.J., 2016. A new 'superassemblage' model explaining proximal-to-distal and lateral facies changes in fluvial environments, based on the Proterozoic Sanjauli Formation (Lesser Himalaya, India). *Journal of Palaeogeography* 5 (4), 391-408

Ananya Biswas, Jim Zimbleman, Henrik Hargitai, 2015 : Zibar. **Encyclopedia** of Planetary Landforms, Eds. Henrik Hargitai & Akos Keresztore, vol.1, Springer, NewYork.

Ananya Biswas, 2014-**Contributions in** Global Edition of Essentials of Geology, 12th Edition by Frederick K.Lutgens, Edward J.Tarbuck and Dennis G.Tasa (ISBN: 9781292057187), Pearson, New Delhi.

Biswas, A. and Mukhopadhyay, B.P., 2011. Signature of a Paleogene Submarine-fan from the Jenam Formation, Barail Group, Assam-Arakan Orogen, Northeastern India. *Journal of Geological Society of India*, vol.78 (December Issue).

Mukhopadhyay, B.P., Biswas, A. and Kumar, R. 2010. Signature of as part of Proterozoic Fan-Delta system from the Chhaosa Formation, Simla Group, Himachal Pradesh. *Gond.Geol.Mag.*, v.25(2), pp.251-258.

Biswas, A. and Mukhopadhyay, B.P., 2006. Deep-water clastics from the Laisong Formation, Paleogene Barail Group, Assam-Arakan orogen, India., vol.25, *Bangladesh Journal of Geology*.

Biswas, A. 2005. Coarse aeolianites : sand sheets and Zibar-Interzibar Facies from the Mesoproterozoic Cuddapah Basin, India. *Sedimentary Geology*, v.174, pp.149-160.

Biswas, A. jointly with P.K.Dasgupta and R.Mukherjee 2005: Cyclicity In Palaeo- To Neoproterozoic Cuddapah Supergroup And Its Significance In Basinal Evolution. Chapter 11, In: "Cyclic Development of Sedimentary Basins" Eds. J.M.Mabesoone and V.H.Neumann, Elsevier, Amsterdam.

Biswas, A. jointly with P.K.Dasgupta and R.Mukherjee 2005: The Assam-Arakan Orogen: Basinal Configuration and Sedimentation, In: *Himalaya-Geological Aspects*, vol.1, Satish Serial Publishing House, 503pp.

Biswas, A. 2003. Ancient Erg reconstruction: a case history from the Egalapenta Member of the Proterozoic Srisailem Formation, Cuddapah basin, India. *Indian Journal of Earth Sciences*, v.30, pp.63-71.

Biswas, A. 1999. Bounding surfaces in aeolian composite complex of Proterozoic Srisailem sedimentation of the Cuddapah Supergroup in Mehboobnagar district, Andhra Pradesh and their bearing on accumulation of draas. *Indian Journal of Landscape Systems and Ecological Studies*, v.22, no.2, p.105-107.

Projects Completed:

Cyclicity in the Paleogene facies of the Assam-Arakan orogen and the role of arc-trench set-up in basinal evolution. Sanctioned by the Department of Science & Technology, Govt. of India. (2005-2008)

Sedimentation and Palaeogeographic Model for the Late Proterozoic sequences of the Shimla Area and their sub-surface equivalents in the Himalayan Foothills of Himachal Pradesh with a view to Assess their Hydrocarbon Potential—Sanctioned by Oil & Natural Gas Corporation Ltd. (ONGCL), India-- (2010-2014)

Study of sedimentation pattern and facies development in relation to Proterozoic extensional tectonics and crustal rifting in the Alwar basin, North Delhi Fold Belt, Rajasthan, Sanctioned by the Department of Science & Technology, Govt. of India. (2011-2014)

Geohydrological Investigation of Water Resources of Howrah District to Address the Problematic Decentralized Planning of Drinking Water--Govt. of West Bengal (2010-2013)

Detailed Hydrogeological Study to Assess the Sustainability of Water Sources Especially During The Lean Season For 2 x 500 MW Extension Project At Sagardighi Thermal Power Project, District Murshidabad, West Bengal, India. Sanctioned by **West Bengal Power Development Corporation Ltd (WBPDC)**

Consultancy project with C E Testing Ltd. :

Petrographic Analysis of Rock Samples related to Chennai Metro Construction, Sanctioned fund Rs. 5 Lakhs.

Contributions in Recent International and National Seminars & Conferences:

ISC2026: 22nd International Sedimentological Congress (ISC) to be held in New Zealand in 2026

Mukhopadhyay. A., Banerjee, T., Impress of a Mixed, Transgressive Wave-tide Dominated Coastal succession from a Proterozoic Extra-peninsular Basin in the Lesser Himalaya, India

RCRM 2024: 4th International Conference on River Corridor Research and Management, At IIT Guwahati, Assam 2024

Roy. S., Mukhopadhyay. A., Bandyopadhyay. S., Revealing the Impact of Neotectonics: A Geomorphological Study of the Dhansiri(North) River Basin in the Himalayan Foreland

Saha, S., Roy, S., Mukhopadhyay. A., Lithological Controls over River Profiles in Umiam River Basin, Meghalaya.

RCRM 2023: 3rd International Conference on River Corridor Research and Management, At IIT Jammu, Assam 2023

Saha, S., Varner, T. S., Kulkarni, H. V., Roy, S., Kwak, K., Mukhopadhyay, A., Cardenas, M.B., Knappett, P. S. K., Datta, S., Geomorphic Controls on Arsenic Mobility and Enrichment in the Hooghly Riverbanks, West Bengal, India

IGI 2023: 35th National conference of the Indian Institute of Geomorphologists, At Jawaharlal Nehru University, New Delhi 2023

Roy. S., Mukhopadhyay. A., Bandyopadhyay. S., Unveiling Neotectonic Influence: Geomorphic Analysis of the Dhansiri-north River Basin in the Himalaya Foreland

IGI 2022: 34th National conference of the Indian Institute of Geomorphologists, At Savitribai Phule Pune University, Pune 2022

Roy. S., Mukhopadhyay. A., Bandyopadhyay. S., Quantitative Analysis of the Dhansiri(North) River Basin, Bhutan, Arunachal Pradesh and Assam

ICGG 2017: 19th International Conference on Geology and Geophysics, At Barcelona, Spain, Volume: Vol:4, No:2, 2017

Banerjee, T., Mukhopadhyay, A. Comparison of Tidalites in Siliciclastics and Mixed Siliciclastic Carbonate Systems: An Outstanding Example from Proterozoic Simla Basin, Western Lesser Himalaya, India.

Mazumdar, P., Mukhopadhyay, A. Recognition of a Thinly Bedded Distal Turbidite: A Case Study from a Proterozoic Delta System, Chaossa Formation, Simla Group, Western Lesser Himalaya, India.

Thorie, A., Mukhopadhyay, A. Wave Agitated Signatures in the Oolitic Limestones of Kuniyar Formation, Proterozoic Simla Group, Lesser Himalaya, India.

National seminar and field trip on Recent updates in Precambrian Geology, M.L. Sukhadia University, Udaipur 2017:

Thorie, A., Mukhopadhyay, A., Banerjee, T., Mazumdar, P. Genesis of giant oolites in the Proterozoic: a report from Kuniyar Formation, Simla Group, Lesser Himalaya, Himachal Pradesh.

31st Himalaya Karakoram Tibet (HKT) workshop. Wadia Institute of Himalayan Geology, Dehradun:

Kankana Mondal, Ananya Mukhopadhyay, Yateesh Ketholia. Geomorphological controls and sedimentological characteristics from origin to apex of alluvial fan: Teesta River, Sikkim-Himalayas.

Developments in Geosciences in the Past Decade-Emerging Trends for the Future & Impact on Society & Annual General Meeting of the Geological Society of India, 2016:

Thorie, A., Mukhopadhyay, A., Mazumdar, P., Banerjee, T. Influence of wave and tidal currents on the oolites and stromatolites of Kunihar Formation, Proterozoic Simla Group, Lesser Himalaya, India.

Banerjee, T., Mukhopadhyay, A., Mazumdar, P., Thorie, A. Tidal and fluvial controls on the internal architecture and sedimentary facies of a tide dominated depositional system, Proterozoic Simla Group, Western Lesser Himalaya: A journey from shallow marine to coastal marine depositional environment.

National Geo-Research Scholars Meet 2016. Wadia Institute of Himalayan Geology:

Banerjee, T., Mukhopadhyay, A., Thorie, A., Mazumdar, P. New insights into the comparison of tidalites in siliciclastics and carbonate systems: An outstanding example from Proterozoic Simla Basin, Western Lesser Himalaya, India.

Mazumdar, P., Mukhopadhyay, A., Banerjee, T., Thorie, A. Anatomy of a thinly bedded distal turbidite: Insights from a Proterozoic fan delta system, Simla Group, Western Lesser Himalaya, India.

Thorie, A., Mukhopadhyay, A., Mazumdar, P., Banerjee, T. Reminiscence of algal activities (Microbially influenced sedimentary structures/MISS) from a storm-wave influenced Proterozoic siliciclastic tidal flat, Kunihar Formation, Simla Group, Himachal Pradesh.

Petroleum in India; present and future - 20th and 21st March, 2015, Calcutta University:

Mukhopadhyay, A., Mukhopadhyay, B.P., Banerjee, T., Thorie, A., Mazumdar, P. Sedimentation Modeling of the Lower Proterozoic Simla Group, Lesser Himalaya, India.

30th Himalaya Karakoram Tibet (HKT) workshop. Wadia Institute of Himalayan Geology, Dehradun 2015:

Thorie, A., Mukhopadhyay, A., Banerjee, T., Mazumdar, P. Ooids - stromatolite associations as proxies for environmental conditions and depositional setting. A case study from Proterozoic Kunihar Formation, Simla Group, Himachal Himalayas, India.

Banerjee, T., Mukhopadhyay, A., Thorie, A., Mazumdar, P. Siliciclastic-carbonate sedimentation and sequence stratigraphy of the lower part of Proterozoic Simla Group, Lesser Himalaya, India- A journey from coastal marine to shallow marine environment.

Mazumdar, P., Mukhopadhyay, A., Banerjee, T., Thorie, A. Development of braided fluvial deposits in response to base level changes- A case study from the Sanjauli Formation, Proterozoic Simla Group, Lesser Himalaya, India.

19th International Sedimentological Congress, 18 -22 august 2014, Geneva, Switzerland:

Biswas, A., Mukhopadhyay, B.P., Banerjee, T., Thorie, A., Mazumdar, P. Sedimentation Modelling as a proxy tool for reconstruction of a Falling Stage System Tract on a

Proterozoic Carbonate Ramp: Evidence from Simla Group, Western Lesser Himalaya, India.

Sedimentation and Stratigraphy & 31st Convention of Indian Association of Sedimentologists (November, 2014):

Mazumdar, P., Mukhopadhyay, B.P., Biswas, A., Banerjee, T., Thorie, A. Signature of palaeoseismicity recorded from the rock strata of the Chhaosa Formation, Simla Group, Himachal Himalay, India.

Banerjee, T., Biswas, A., Mukhopadhyay, B.P., Thorie, A., Mazumdar, P. Facies architecture and sequence stratigraphy of a mid-outer ramp carbonate succession: Basantpur Formation, Proterozoic Simla Group, Western Lesser Himalaya, India.

Thorie, A., Biswas, A., Mukhopadhyay, B.P., Banerjee, T., Mazumdar, P. Control of microbial mat related structures (MRS) on mixed siliciclastic-carbonate platform from Lower Proterozoic Simla Basin (Basantpur Formation), Lesser Himalaya, Simla district, Himachal Pradesh, India.

Sedimentation and Tectonics with Special Reference to Energy Resources of North-East India & 30th Convention of Indian Association of Sedimentologists (November, 2013):

Mukhopadhyay, B.P., Biswas, A., Thorie, A. Signatures of deep marine deposits in the upper part of the Delhi Supergroup, Proterozoic Alwar sub-basin, Rajasthan.

Mukhopadhyay, B.P., Biswas, A., Banerjee, T. Siliciclastic-carbonate sedimentation in a storm-tide influenced Proterozoic fan-delta system, Lower Simla Group, Himachal Himalaya, India.

Biswas, A., Mukhopadhyay, B.P., Mazumdar, P. Signature of a Proterozoic fan-delta system, Middle-Upper Simla basin, Himachal Pradesh, India.

National Seminar, Benaras Hindu University, Varanasi,(8th -9th April) 2011:

Kumar,R., Mukhopadhyay,B.P. and Biswas,A.,2011.Tectonic Evolution of Late Proterozoic Basins of Lesser Himalaya, H.P. National Seminar, Benaras Hindu University, Varanasi.

XXXVI International Association of Hydrologists Congress,(27th to 31st October) 2008:

Mukhopadhyay, B.P., Das, K. & Biswas, A. 2008. A review of Kosi alluvial fan, Bihar, India.-- Hydrogeologic structures, hydrological circumstances, water circulations and future prospects of water resources, Ed. By Secretariat of Research Group on Hydro-environment around alluvial fans. (XXXVI International Association of Hydrologists Congress), pp.415-423.

Geo India Conference & Exhibition, (16th to19th September) 2008:

Biswas, A., Kumar, R. & Mukhopadhyay, B.P. 2008 : A tectono-sedimentary model of the Proterozoic Simla Group, Lesser Himalayas and its bearing on potentiality as a hydrocarbon reservoir., GEOINDIA-Extended Abstracts volume.

National Seminar volume on "Earth Resources, Environment and Earth Sciences for Society" SALEM,(17th to 25th February) 2008:

Mukhopadhyay, B.P., Kumar, R. & Biswas, A. 2008. A foreland depositional environment as evidenced from the Mesoproterozoic sedimentary succession in Chattisgarh basin, Central India craton, India—Extended Abstract in National Seminar volume on "Earth Resources, Environment and Earth Sciences for Society" SALEM.

International Conference on Precambrian Sedimentation and Tectonics and Second GPSS meeting, IIT Bombay, (10th to 12th December) 2007:

Biswas, A. and Mukhopadhyay, B.P., 2007. Deep-water sedimentation from Proterozoic Nallamalai Group : Records of Basinal Instability In An Extensional Regime. Extended Abstract, International Conference on Precambrian Sedimentation and Tectonics and Second GPSS meeting, IIT Bombay.

Biswas, A. and Mukhopadhyay, B.P., 2007. Nature of sedimentation of the Proterozoic Gulcheru Formation, Cuddapah Supergroup, India. Extended Abstract, International Seminar on Crustal evolution, sedimentary processes and metallogeny, Dharwad, Karnataka.

International Seminar on Crustal evolution, sedimentary processes and metallogeny, SDM College of Engineering and Technology, Dharwad, Karnataka, (28th November to 1st December) 2007:

Mukhopadhyay, B.P. and Biswas, A. 2007. Facies analysis of Cumbum volcanoclastics from extensional Proterozoic Cuddapah Supergroup, Peninsular India. Extended Abstract, International Conference on Precambrian Sedimentation and Tectonics and Second GPSS meeting, IIT Bombay.

Mukhopadhyay, B.P. and Biswas, A. 2007. Facies Analysis of the Pulivendla Formation, Chitravati Group, Proterozoic Cuddapah Supergroup, India. Extended Abstract, International Seminar on Crustal evolution, sedimentary processes and metallogeny, Dharwad, Karnataka.

Biswas, A. 2004 : Mesoproterozoic Turbidite Systems From Cuddapah Basin, India : Records Of Deep-Water Clastics, Nallamalai Group, Congress Extended Abstract vol. of 32nd International Geological Congress, (August), 2004, Florence Session, Italy.

Biswas, A. 2003 : Depositional Milieu and Provenance of the Oligocene Laisong Formation, Barail Group, North Cachar Hills, Assam-Arakan Orogen, India. Congress Extended Abstract vol. of 5th International Petroleum Conference (Petrotech-2003).

Biswas, A. 2002 : Preservation of facies attributes in Precambrian turbidites and canyons from high-grade terrains of Kodaikanal and Coimbatore, Peninsular India. Extended

Abstract in Congress vol. of 16th International Sedimentological Congress, Johannesburg, South Africa.

Biswas, A. 2000 : (International Young Scientist Hutchison Award winning abstract from IUGS, UNESCO & Key Note Paper) Coarse aeolianites : sand sheets and Zibar-Interzibar Facies from the Mesoproterozoic Cuddapah Basin, India. Congress vol. of 31st International Geological Congress, Rio-de-Janeiro.

Biswas, A. 1996 : Aeolian-Fluvial and Shallow-Marine Interaction during the closing phase of the Proterozoic Cuddapah Supergroup, India. Congress vol. 2 of 3 of 30th International Geological Congress, Beijing, P.R.China, p.197.

Other institutional responsibilities: Member ICC (Internal complaints Committee-2025 onwards)

Information of Research Scholars:

Name	Enrollment No	Registration No	Ph.D. Status	Award date
Alono Thorie	-	PhD/R/2013/0042	Awarded	06/12/2021
Priyanka Mazumdar	-	PhD/R/2013/0041	Awarded	18/05/2022
Tithi Banerjee	-	PhD/R/2013/0043	Awarded	09/02/2022
Shayani Roy	2020ESP002	2021ESPR002	Ongoing	
Saptarshi Saha	2022ESP001	2024ESPR001	Ongoing	