

CURRICULUM VITAE

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RESEARCH INTEREST

Sedimentology, Sequence Stratigraphy, Sediment Geochemistry

RESEARCH (PhD)

Title: Barremian-Coniacian Sediments and Sequence Building in the Pondicherry Sub-Basin of Cauvery Basin, India

Supervisor: Prof. Subir Sarkar, Dept. of Geological Sciences, Jadavpur University

Synopsis: The work had focused on state-of-art process-related as well as palaeogeography-related facies analysis enhancing the power of resolution of sedimentological studies of Barremian-Coniacian sediments in Pondicherry sub-basin of Cretaceous Cauvery intracratonic rift basin. For this purpose a detailed account of lithologic, structural, organizational and ichnological variations in outcrops has been considered. The goal of the work is to identify various palaeogeographies and to record palaeogeographic shifts through space and time which ultimately help to understand the mode of sequence-building pattern of the Group. The geochemical characteristics have also been considered during the present study. The purpose is to evaluate the effects of intra-basinal processes on source-related information extracted from bulk sediment composition. Geochemical data also considered to note the variable degrees of mixing of contributions from different sources which favors continuation of rifting. Weathering intensity and the estimated mean annual temperature is inferred from the chemical data.

ACADEMIC CAREER

B.Sc. (2007) University of Burdwan
M.Sc. (2009) Jadavpur University
PhD (2016) Jadavpur University

ACHIEVEMENTS

- Awarded for best presentation in young scientist/students category at 3rd *International Palaeogeography Conference*, 2017 held in China.
- Secured 2nd position in Public Service Commission (West Bengal), 2015 for the post of Assistant Professor (Geology).

PROFESSIONAL AFFILIATION

1. **Reviewer**, Journal of Palaeogeography, Journal of Arabian Earth Science, Journal of Indian Association of Sedimentologists and book chapters for Springer.
2. **Governing Council Member**, Indian Association of Sedimentologists (IAS) since 2016.
3. **Member**, Society for Sedimentary Geology (SEPM) since 2014.
4. **SEPM Student Member**, Wilson Award Selection Committee in 2015.
5. **Member**, Geological Society of America (GSA) from 2010-2011.

COLLABORATION

1. Prof. R. Nagendra, Dept. of Geology, Anna University, India
2. Prof. Hairuo Qing, Dept. of Geology, University of Regina, Canada

PUBLICATIONS

1. Mukhopadhyay, S., Choudhuri, A., **Chakraborty, N.**, Sarkar, S., 2019. Aseismic tectonism-induced soft-sediment deformation in a tranquil palaeogeography: Chikkshelikere Limestone Member, India in: *Geological Evolution of Precambrian Indian Shield* (Ed.), SES Series, Springer. Chapter 16, 351-372p.
2. **Chakraborty, N.**, Sarkar, S., Mandal, A., Mandal, S., Bumby, A., 2018. Microenvironmental Constraint on $\delta^{13}\text{C}$ Depletion: Garudamangalam Sandstone, Cauvery Basin, India. *Journal of Marine and Petroleum Geology* 91, 776-784 (Impact factor: 3.790).
3. **Chakraborty, N.**, Mandal, A., Choudhuri, A., Mandal, S., Sarkar, S., 2018. Indigenous siliciclastic and extraneous polygenetic carbonate beds in the Albian-Turonian Karai Shale, Cauvery Basin, India. *Carbonates and Evaporites* 33(3), 561-576 (Impact factor: 0.830).
4. **Chakraborty, N.**, Sarkar, S., 2018. Syn-sedimentary tectonics and facies analysis in a rift setting: Cretaceous Dalmiapuram Formation, Cauvery Basin, SE India. *Journal of Palaeogeography* 7 (2), 146-167 (Impact factor: 2.020).
5. **Chakraborty, N.**, Sarkar, S., Mandal, A., Mejjama, W., Tawfik, H. A., Nagendra, R., Bose, P. K. and Eriksson, P. G., 2017. Physico-chemical Characteristics of the Barremian-Aptian Siliciclastic Rocks in the Pondicherry Embryonic Rift Sub-basin, India in: *Sediment provenance: influences on compositional change from Source to Sink* (Ed.), Elsevier. Chapter 6, 85-121p.
6. Mandal, A., Koner, A., Sarkar, S., Tawfik, H. A., **Chakraborty, N.**, Bhakta, S., Bose, P. K., 2016. Physico-chemical tuning of palaeogeographic shifts: Bhuj Formation, Kutch, India. *Journal of Marine and Petroleum Geology* 78, 474-492 (Impact factor: 3.790).
7. Bose, P. K., Sarkar S., Das, N. G., Banerjee, S., Mandal, A. and **Chakraborty, N.**, 2015. Proterozoic Vindhyan Basin: configuration and evolution” in “Precambrian Basins of India: Stratigraphic and Tectonic Context”. *Geological Society of London, Special Memoir No. 43*, 85-102 (Impact factor: 3.300).
8. Sarkar, S., **Chakraborty, N.**, Mandal, A., Banerjee, S. and Bose, P.K., 2014. Siliciclastic-Carbonate Mixing Modes in the River-Mouth Bar palaeogeography of the Upper Cretaceous Garudamangalam Sandstone (Ariyalur, India). *Journal of Palaeogeography* 3 (3), 233-256 (Impact factor: 2.020).
9. Sarkar, S., Banerjee, S., Samanta, P., **Chakraborty, N.**, Chakraborty, P. P., Mukhopadhyay, S. and Singh, A. K. 2014. Microbial mat records in siliciclastic rocks: Examples from Four Indian Proterozoic basins and their modern equivalents in Gulf of Cambay. *Journal of Asian Earth Sciences* 91, 362–377 (Impact factor: 3.059).
10. Mandal, S., Sarkar, S., **Chakraborty, N.** and Bose, P.K., 2014. Palaeogeography, palaeohydraulics and palaeoclimate of the Mio-Pliocene Siwalik Group, Eastern India. *Journal of Palaeogeography* 3 (3), 270-296. (Impact factor: 2.020).

ABSTRACTS AND SEMINARS

1. Chakraborty and Srimani, 2019. "A mega event deposit reported from Late Cretaceous coast: Garudamangalam Sandstone, Cauvery Basin, India" at Dr. Harisingh Gour Vishwavidyalaya, Sagar, p.33 (35th Convention, Indian Association of Sedimentologists).
2. Chakraborty, 2017. " $\delta^{13}\text{C}$ Depletion in Tidal Sediments: Upper Cretaceous Garudamangalam Sandstone, Cauvery Basin, India" at Sant Gadge Baba Amravati University, Amravati (34th Convention, Indian Association of Sedimentologists).
3. Chakraborty and Sarkar, 2017. "Tectono-sedimentary facies model for carbonate shelf: Albian to Cenomanian Dalmiapuram Formation, Cauvery Basin, India" at Chengdu, Sinchuan Province, China, p.47 (3rd International Palaeogeography Conference); *Oral presentation*.
4. Chakraborty et al., 2016. "Tectono-sedimentation history of Cretaceous carbonate shelf at passive continental margin: Dalmiapuram (Limestone) Formation, Cauvery Basin, South India" at BHU, Varanasi, p.57 (33rd convention of Indian Association of Sedimentologists); *Oral presentation*.
5. Chakraborty et al., 2016. "Allogenic carbonates driven by three different agents onto the muddy shelf within the Karai Shale, Cauvery Basin, India" in 2015 at Beijing, China, p.11 (2nd International paleogeography conference).
6. Chakraborty and Sarkar, 2015. "Source and climatic conditions of Gondwana equivalent Early Cretaceous sediments: Records from Cauvery Basin, India" in 2015 at BSIP, Lucknow, p.28 (International conference on Current perspectives and emerging issues in Gondwana evolution); *Oral presentation*.
7. Chakraborty, 2014. "Sedimentation sequences through the Cretaceous climatic perturbations in India – a research potential" at Geological Survey of India, Kolkata [Regional Brain Storming Session (BSS) on 36th IGC: An Opportunity for Advancement of Geosciences]; *Oral presentation*.
8. Chakraborty, 2014. "Indigenous siliciclastic and allogenic carbonates in the Cretaceous Karai Shale, Cauvery Basin, India" at Jadavpur University, Kolkata (Research Meeting sponsored by SEPM & organized by JUGS); *Oral presentation*.
9. Chakraborty and Sarkar, 2013. "Indigenous siliciclastic and extraneous polygenetic carbonate beds in the Albian-Turonian Karai Shale, Ariyalur, India" at BSIP, Lucknow, p.5. (International Geoscience Programme Project 608 entitled in Cretaceous ecosystems and their responses to palaeoenvironmental changes in Asia and the Western Pacific); *Oral presentation*.
10. Chakraborty, 2013. "Frailty of lithofacies analysis in palaeogeographic and palaeoenvironmental interpretation of the Cretaceous Karai Shale, Ariyalur District, India" at Jadavpur University, Kolkata, p.62 (IGU conference on Modern geological and geophysical methods and their applications); *Poster presentation*.
11. Bose et al., 2013. "A new record of mid-cretaceous meteorite fall on eastern coast of India." in 2013 ISSN No: 0270-9511, 1863.pdf (**Extended abstract** on 44th Lunar and Planetary Science Conference).
12. Chakraborty et al., 2012. "Physico-chemical traits of the Barremian-Aptian non-marine Sediments, Trichnopoly, India" at Pondicherry University, p.7. (29th convention of Indian Association of Sedimentologists); *Oral presentation*.