

NIPA CHAKROBORTY

Department of Geosciences

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Education

Master of Science (M.S.) in Geosciences

Auburn University

Thesis: "Tying Forearc Basin Evolution and Earthquake Rupture Segmentation of the Cascadia Subduction Zone."

Auburn, AL, USA

Spring 2025 (expected)

Bachelor of Science (B.Sc.) in Geology

Dhaka University

Specialization: Geophysics/Geosciences

Dhaka, Bangladesh

Spring 2023

Research Experience

Graduate Research Assistant – CASIE21, Dept. of Geosciences, Auburn University, USA

May 2024 to Present

Project Name: A new subsurface framework for the Cascadia subduction zone derived from integrated analyses of the CASIE21 long-offset multi-channel seismic experiment

- Working with a focus on stratigraphical analysis to pick horizons in the Cascadia Forearc basin to tie the unconformity with the paleo seismic evolution of the basin to further tie it up with the large interval earthquakes related to the Cascadia subduction zone of the Pacific Ocean. I used Kingdom software to analyze the seismic profiles of CASIE21 and other legacy data.

Teaching Experience

Graduate Teaching Assistant, Dept. of Geosciences, Auburn University, USA

Aug 2023 to May 2024

Courses Taught: Dynamic Earth Lab (GEOL 1100)

- Gained incredible experience working with 60-75 students per semester (per classroom, 20-25 students of undergraduate level).
- Conducted in-class and one-on-one Geology course material and instructed students through the lab activities, assisted with grading lab assignments and final exams, and provided constructive feedback to students.
- Proctor course examinations, made lab kits, and attended weekly lab meetings to discuss important topics for the following lab.

Field Experience

Fieldwork on Landslide in Cox's Bazar and Water Quality in Saint Martin Island, Bangladesh

Feb 2022

Geological Report Name: Integrated geological fieldwork in and around Bazar town with special emphasis on geo-resources and geohazards, Bangladesh

- Worked with a focus on landslide and other geological surveys while studying slope stability of Bangladesh's Cox's Bazar area.
- Conducted a field survey on aquifer control and water quality along with sample analysis at the last point of Bangladesh, Saint Martin Island.

Fieldwork on Regional Geology of Sylhet Area, Bangladesh

Feb 2021

Geological Report Name: Investigation on Road cut section of Jaintiapur- Jaflog area, Sylhet, Bangladesh

- Mapped land use & land cover changes in the Sylhet area of Bangladesh using remotely sensed satellite images.

Fieldwork on Regional Geology of Kaptai Area, Bangladesh

Jan 2020

Geological Report Name: Study of Lichubagan-Kaptai Road Cut Section, Kaptai, Rangamati, Bangladesh

- Collected lithological and bed attitudinal data; investigated stratigraphy and other structures for general geology; afterward applied for correlation of petroleum geological aspect of specific locations in southern Bangladesh.

Fieldwork on Sitakund Anticline, Bangladesh

Jan 2019

Geological Report Name: Study on Sitakund Anticline between Choto Dargar Hat and Barabkund, Chittagong, Bangladesh

- Gathered all the geological information during a seven-day visit to nearby places to analyze sedimentary samples. Further

geological maps and cross-sections of the Sitakund anticline in Chittagong, Bangladesh, were created.

Programming Language Skills

GMT, Python

Seismic Software Proficiency

Seismic image Interpretation on Kingdom software, Horizon picking, Griding and Interpolation, Horizon correlation

Grants Awarded

- USSSP Travel Grant - ECORD Summer School, Downhole Logging for IODP Science 2024, U.S. Science Support Program, USA (2024) - \$3400
- Honors Scholarship (B.Sc.) 2021, University of Dhaka, Bangladesh (2022-2023) BDT 4,200
- Board Scholarship (HSC) 2017, Government of Bangladesh, Bangladesh (2018-2021) BDT 21,400
- Board Scholarship (SSC) 2015, Government of Bangladesh, Bangladesh (2016-2017) BDT 8,400

Skill Development Training/Workshop

- European Consortium for Ocean Research Drilling (ECORD) Summer School 2024: Downhole Logging for IODP Science, The University of Leicester, UK (27th July – 2nd August 2024)
- Imperial Barrel Award Program 2024, American Association of Petroleum Geologists (AAPG), USA, Spring 2024
- Best Practices in Research Workshop, Auburn University, USA (9th September 2024).
- Publishing a Manuscript, the Editorial and Peer Review Process Workshop, Auburn University, USA (July-August 2024).
- Responsible Conduct of research (RCR), CITI (Collaborative Institutional Training Initiative) program Course, Auburn University, USA (September 2023).

Leadership Roles

- Secretary of Cultural Affairs Outreach, Bangladesh Student Organization, Auburn University, USA (2023-2024)
- Mentors and Onboarding Guides for the First Year Experience Program, Graduate Student Council, Auburn University, Fall 2024
- Vice President, SPE Dhaka University Chapter (2022-2023)
- Treasurer, SPE Dhaka University Chapter (2021-2022)
- Communication Chairpersons, SPE Dhaka University Chapter (2019-2020)

Community Service, Extra-Curriculars, and Outreach Activities

Extra-Curriculars

- Management Trainee at Admin and HR department in YSSE (May2021-August2021)
- Intern at Admin and HR department in YSSE (December 2020-April 2021)
- Music Representative, Geology Art, and Cultural Club (2019-2022)
- Participant, Bangladesh Youth Leadership Center (BYLC) career boot camp (one month long- December 2020)

Outreach Activities

- Destination STEM volunteer, Dept. of Geosciences, AU (Fall 2023)
- Organized Petromania Resurrection Lecture Program by SPE Dhaka University Chapter (March 2023)
- Organized a collaborative Geological Fieldwork at Chittagong Anticline, Khagrachori, Bangladesh, with the involvement of AAPG, SEG, EAGE, and SPE Dhaka University Student Chapters.
- Hold Membership Campaigns on behalf of SPE Dhaka University Chapter (2023)
- Helped to Organize the GEODESENCE international workshop by SPE Dhaka University Chapter (March 2022)
- Helped to Organize the Petrobowl workshop by SPE Dhaka University Chapter (March 2022)
- Organized a three-day geological fieldwork project by SPE Dhaka University Student Chapters at Sylhet Gas Field Limited, Chiknagul, Bangladesh (January 2022)
- Hold Petromania Endgame Presentation Competition on behalf of SPE Dhaka University Chapter (2021)

Affiliations

- American Geophysical Union (Since 2024)
- American Association of Petroleum Geologists (Since 2019)
- Society of Petroleum Engineers (Since 2018)

References

Available upon request