

**Meghna Ray**

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Ratemyprofessors: <https://www.ratemyprofessors.com/professor/2879781>

**EDUCATIONAL QUALIFICATIONS**

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PhD (*expected 2027*) University of Georgia, Athens, GA, USA

Dissertation title: *Reconstructing Late Holocene Hydroclimate and Environmental Change in Northwestern Himalaya, India using Lake Sediments: Assessing Connections with the Indus Valley Civilization.*

M.A. 2020, Geography, Jawaharlal Nehru University, India

B.Sc. 2018, Geography, with Honors, University of Calcutta, India

**RESEARCH EXPERIENCE**

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**August 2021-February 2022-** Junior Research Fellow in a project titled “Risk Assessment of Floating Debris Dominated Flash Floods in Trans-Boundary Upper Himalayan Catchments” funded by Defence Geoinformatics Research Establishment (DGRE)/ Defence Research and Development Organization in Indian Institute of Technology, Guwahati, Assam, India.

**FIELD EXPERIENCE**

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**September-October 2024-** 25-day fieldwork to Pir Panjal Ranges to core two lake sites

**May-June 2023-** 20-day fieldwork to Garhwal Himalaya and Zaskar Himalaya to collect lake cores

**August 2021-** trips to Brahmaputra river bank to use Ground Penetration Radar and Multi-Channel Analysis of Surface Waves Survey

**January 2020-** 2-day field visits to the highest point in the Delhi Ridge of the Aravalli Mountains

**June-July 2019-** 17-day fieldwork to Jankar Chu watershed, Himachal Pradesh, India

**PUBLICATION**

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Ray, M., Bharti, R., & Dutta, S. (2022, July). Quantifying Channel Morphology and Tectonic Deformation of Rispana River Basin Using Geomorphic Markers: Impact of

Anthropogenic Factors on the System. In IGARSS 2022-2022 IEEE International Geoscience and Remote Sensing Symposium (pp. 6418-6421). IEEE.

### **CONFERENCE PRESENTATIONS**

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**2025-** A multi-proxy lake-sediment based reconstruction of Holocene hydroclimate variability in Garhwal Himalaya, India. AAG 2025, 24 March 2025

**2022-** Quantifying Channel Morphology and Tectonic Deformation of Rispana River Basin Using Geomorphic Markers: Impact of Anthropogenic Factors on the System. IGARSS 2022-2022 IEEE International Geoscience and Remote Sensing Symposium (pp. 6418-6421). IEEE, 20 January 2022

### **TEACHING EXPERIENCE**

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<b>Course Number and Name</b>	<b>Sessions taught</b>	<b>Average student capacity</b>
GEOG 1113L Introduction to Landforms	Fall'22, Spring'23, Fall'23, Spring'24, Fall'24, Spring'25, Fall'25	35
GEOG 1111L Introduction to Physical Geography	Fall'22, Spring'26	60

### **TECHNICAL SKILLS**

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#### **SOFTWARES USED**

- Python using Jupyter Lab
- QGIS
- ArcGIS
- ERDAS IMAGINE
- HEC-RAS
- RStudio
- Stereonet
- eCOGNITION
- MAXENT

#### **INSTRUMENTS USED**

- Livingstone Corer
- Sonar
- Schmidt Hammer
- Ground Penetrating Radar
- X-Ray Fluorescence Spectrometry

### **ACTIVE ACADEMIC MEMBERSHIPS**

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- American Association of Geographers
  - Paleoenvironmental Change Speciality Group
  - Climate Speciality Group
  - Geomorphology Speciality Group
  - Southeastern Division of AAG
- Geological Society of America

## **ACADEMIC ACCOLADES**

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**2024-** Visiting Graduate Student Program (VGSP) grant by Continental Drilling Facility (CSD) at the University of Minnesota-Twin Cities. A sum of \$1000 to sample and process lake cores.

**2023-** GSA Graduate Student Research Grant by the Geological Society of America. A sum of \$1700 to help with fieldwork expenditure.

**2023-** UGA Summer Research Grant from Graduate School of University of Georgia. A sum of \$1500 to help with fieldwork expenditure

**2023-** PhD Student Research Competition issued by Paleoenvironmental Change Speciality Group, AAG. A sum of \$300 to help with the cost of processing samples in the lab.

**2020-** Online Course from NPTEL by Indian Institute of Technology Kanpur on Photogeology in Terrain Evaluation

**2020-** E-Training on Fundamentals of Aerogeophysical Survey conducted by Geophysics Division of Geological Survey of India Training Institute, Hyderabad, India

**2018-** The John Maynard Keynes Silver Medal from Loreto College awarded for obtaining highest marks in Economics as pass subject in the Calcutta University among all students of the college.

**2016, 2017-** Certificate of Merit for Proficiency in Geography Honours, Loreto College

## **INTERNSHIPS AND VOLUNTEERING EXPERIENCE**

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**2018-** Community Service at All Bengal Women's Union in 2018, Certificate of Merit issued by Loreto College.

**2016-** Volunteered at YODDHAS: Youths Fighting Against Cancer, an NGO providing financial support and acting as a support group for Cancer patients and their families as a content writer, for 4 months

## **PERSONAL INFORMATION**

Date of Birth : 25<sup>th</sup> July 1997  
Nationality : American  
Sex : Female  
Language : English, Bengali, Assamese & Hindi

## **OTHER ACTIVITIES**

**2020-** Participated in number of sporting and dance events in School, College and University. Achieved first position in Badminton singles (Girls) in 2019 and 2020 and doubles (Girls) in 2020 at JNU.

**2018-** Vice President of Wildlife-Environment (WE) Nature Society of Loreto College in 2018.

**2018-** Passed Second year examination of Fine Arts in first class with distinction in the 2017-2018 session, appearing from Chitram Art Centre, Kolkata. Examination organized by All India Fine Arts Association

**2014-** Completed four-year Diploma course in Bharata Natyam course at Kalabhumi, Guwahati in 2014.