

Subhadeep Rakshit

CV

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Research Interests

Nitrogen and carbon biogeochemistry, development of hypoxia, organic matter early diagenesis, benthic-pelagic coupling, reaction transport modeling, ecosystem modeling, changing environment, aquatic biogeochemistry, oceanography.

Education

- **PhD Candidate** — [Department of Oceanography, Dalhousie University, Canada] [2017 – present]
- **B.Sc, M.Sc** — [Indian Institute of Science Education and Research, Kolkata] [2010 – 2015]

Experience

- **Teaching Assistant** — [Dalhousie University] [Winter 2021]
- **TOSST Chair** (elected) [2020-]
- **Convener** — [European Geosciences Union 2020] [2020]
- **Industry internship** — [[ProOceanus](#)] [July-Sept 2019]
- **Research Exchange** — [GEOMAR, Kiel, Germany] [2019]
- **Teaching Assistant** — [Dalhousie University] [Fall 2017]
- **Junior Research Fellow** — [IISER Kolkata] [Dec 2015 - Dec 2016]
- **Summer research intern** — [Indian Institute of Tropical Meteorology, Pune] [May - July 2013]
- **Summer research fellow** — [Indian Institute of Science, Bangalore] [May - July 2012]

Publication ([Google Scholar](#))

- **Subhadeep Rakshit**, Nicolaas Glock, Maria Armstrong, Florian Scholz, Andrew Dale, Christopher Algar. Benthic foraminifera and tubeworms play key roles in sediment early diagenesis in a seasonally hypoxic fjord. (*In prep*)
- **Subhadeep Rakshit**, Andrew Dale, Doug Wallace, Christopher Algar (2023). Sources and sinks of bottom water oxygen in a seasonally hypoxic coastal fjord. *Frontiers in Marine Science*. <https://www.frontiersin.org/articles/10.3389/fmars.2023.1148091/full>
- Sebastian Haas, **Subhadeep Rakshit**, Tim Kalvelage, Carolyn Buchwald, Christopher K. Algar, Douglas W.R. Wallace (2022). Characterization of nitrogen isotope fractionation during nitrification based on a coastal time series. *Limnology and Oceanography*. <https://aslopubs.onlinelibrary.wiley.com/doi/full/10.1002/lno.12161>
- Sebastian Haas, Brent M. Robicneau, **Subhadeep Rakshit**, Jennifer Tolman, Christopher K. Algar, Julie LaRoche, Douglas W.R. Wallace (2021). Physical mixing controls and decouples nitrification via biomass dilution. *PNAS*, 118, e2004877118. <https://www.pnas.org/doi/abs/10.1073/pnas.2004877118>

Conference proceedings:

- **Subhadeep Rakshit**, Richard Davis, Douglas Wallace, Andrew Dale, Christopher Algar. Quantifying oxygen dynamics in a seasonally hypoxic fjord using a coupled benthic-pelagic model, *Liege Ocean Colloquium 2022*, Liege, Belgium.
- **Subhadeep Rakshit**, Andrew Dale, Maria Armstrong, Christopher Algar. Interplay of oxygen and nutrient dynamics in a semi-enclosed estuarine fjord. *Ocean Science Meeting 2022*.
- **Subhadeep Rakshit**, Andrew Cogswell, Sebastian Haas, Devred, E., Davis, R., Patterson, K., Wallace, D. and Algar, C., 2020, May. The influence of bottom water intrusion events on the biogeochemistry of a coastal fjord. In *EGU General Assembly Conference Abstracts* (p. 9525).
- **Subhadeep Rakshit**, Andrew Dale, Maria Armstrong, Christopher K Algar. Benthic Foraminiferal Mediated Denitrification as the Major Nitrogen Sink in a Semi-Enclosed Estuary. *Ocean Science Meeting 2020*, San Diego, USA.
- **Subhadeep Rakshit**, Prasanta Sanyal, Harsh Vardhan Gaur. ^{13}C NMR and isotopic ($\delta^{13}\text{C}$) investigation on modern vegetation samples: a tool to understand the soil organic matter degradation dynamics and preferences. European Geosciences Union (EGU) General Assembly, (2015), 17, EGU2015-3190.
- **Subhadeep Rakshit**, Sambit Ghosh, Prasanta Sanyal, Anoop Ambili. Sedimentary profile from oxbow lake as an archive for past productivity and vegetation changes: a case study from Ganges basin, West Bengal, India. European Geosciences Union (EGU) General Assembly, (2015), 17, EGU2015-3666.

Scholarship and awards

- SOLAS travel grant for attending Liege Ocean Colloquium 2022.
- TOSST student award 2020 (nominated and won)
- Nova Scotia Graduate Scholarship [2019-2023]
- TOSST Fellowship [2017-2020]
- National Eligibility Test (NET) for Lectureship 2015, All India Rank 50.
- INSPIRE Scholarship from MHRD from 2010 to 2015, awarded by Department of Science and Technology (DST), Government of India.
- Awarded the scholarship to carry out summer research project in IITM, Pune (2013).
- Awarded scholarship and certificate in Summer Research Fellowship Programme (SRFP) '12, IAS.

Field and Cruise experience

- Sediment biogeochemistry and paleo-oceanographic sampling onboard **RV Maria S. Merian 2023**.
- Sediment biogeochemistry and deep-sea habitat study along Scotian shelf onboard **Atlantic Condor. 2022**.
- Seasonal water and sediment sampling at Bedford Basin, Canada. **2017-present**.
- Summer **2019**: Research cruise on board **RV Poseidon**, at North Sea transect from Aberdeen to Bremerhaven.
- March **2014**: Marine Biology field work - Tajpur, West Bengal, India
- December **2013**: Sedimentology field work in the Siwalik section of Himalaya - Kangra, Himachal Pradesh, India.
- December **2012**: Structural Geology field work - Galudih, Jharkhand, India

Programming language and software

R (advanced)

MATLAB (moderate, not used in recent times)

Latex (beginner)

QGIS (beginner)

Ocean Data Viewer (beginner)