

Joyeeta Bhattacharya

PhD candidate

Department of Earth, Environmental and Planetary Sciences, Rice University

Personal Website: <https://jbearthscience.wixsite.com/joyeetabhattacharya>

Google Scholar: <https://scholar.google.com/citations?user=GGVhFy8AAAAJ&hl=en>

Career goal:

Seeking a position of lecturer/ assistant professor/ research scientist in a university or research organization where my scientific expertise, cultural competence and teaching abilities will be instrumental in the progress of geoscience research with an emphasis on diversity and inclusivity within the geoscience workforce and academia.

Education:

PhD, Rice University (August 2015- Present)

Earth Science: Stratigraphy- Sedimentary Geochemistry- Paleooceanography

Thesis title: Response of marine carbonate accumulation to carbon cycle perturbations during the hothouse-warmhouse climate of the Eocene

MS, Jadavpur University, India (2012-2014), University Gold Medalist, 1st rank holder

Applied Geology

Thesis Title: Structural and metamorphic evolution of ultra-high temperature khondalites in Chhotanagpur Gneissic Complex, India

BS, Jadavpur University, India (2009-2012), University Gold Medalist, Highest Honors with Distinction

Geological Sciences

Professional Appointments

Teaching Assistant, Department of Earth, Environmental and Planetary Sciences, Rice University

- Earth Science Graduate Seminar Series (Fall Semester 2020)
- Introduction to Earth (Spring Semester 2020)
- Earth, Environment and Society (Fall Semester 2019)
- Paleooceanography (Spring Semester 2019)

Research Assistant, Department of Earth, Environmental and Planetary Sciences, Rice University (Fall Semester 2015 - Present)

Met-Ocean Summer intern, MatthewsDaniel-Bureau Veritas (2018)

- Oceanographic and meteorological forecasting service provider for clients in offshore oil and gas rigs.

Shipboard Sedimentologist, IODP Expedition 371 (2017)

Tasman Frontier Subduction Initiation and Paleogene Climate

- Development of lithostratigraphic framework of six Tasman region's drill sites
- Macroscopic and microscopic core description
- Subsurface geological interpretation using regional seismic data.
- XRF, XRD and SEM instrument handling

STEM Mentor, STEM-IBB Mentorship Program, Rice University (2016)

- Mentoring a first-generation high school student of underrepresented ethnicity in a summer research program organized by the STEM Council at Rice University.

Exploration Geologist Summer intern, Oil and Natural Gas Corporation, India (2013)

- Reservoir characterization of Bengal-Purnea oil field area
- Well Log and 2-D seismic interpretation

Summer Research Fellow, Indian Academy of Sciences (2012)

Project title: Tracing paleoprecipitation in Holocene Central India using phytoliths in soil.

Research interests

Stratigraphy, Sedimentology, Isotope Geochemistry, Paleoceanography, Paleoclimatology.

Peer reviewed publications

[5] **Bhattacharya J.**, Yeung L.Y., Cong L., Dickens G.R. and Sun T.: Size-fraction specific isotope variations as a framework for interpreting early Eocene bulk sediment carbon isotope records. (Accepted in *Paleoceanography and Paleoclimatology*).

[4] **Bhattacharya J.** and Dickens G.R.: Eocene carbonate accumulation in the north-central Pacific Ocean: new insights from Ocean Drilling Program Site 1209, Shatsky Rise. *Sedimentary Geology*, 2020. <https://doi.org/10.1016/j.sedgeo.2020.105705>

[3] Sutherland R., Dickens G.R., Blum P., Agnini C., Alegret L., Asatryan G., **Bhattacharya J.**, Bordenave A. et al: Continental scale geographic change across Zealandia during subduction zone initiation. *Geology*, 2020. <https://doi.org/10.1130/G47008.1>

[2] Sutherland R., Dickens G.R., Blum P., Agnini C., Alegret L., **Bhattacharya J.**, Bordenave A., and Exp. 371 Scientists: Tasman Frontier Subduction Initiation and Paleogene Climate. *Proceedings of the International Ocean Discovery Program*, Volume 371, 2019. <https://doi.org/10.14379/iodp.proc.371.101.2019>

[1] Sutherland R., Dickens G.R., Blum P., Agnini C., Alegret L., **Bhattacharya J.**, Bordenave A., and Exp. 371 Scientists: Tasman Frontier Subduction Initiation and Paleogene Climate (27 July–26 September 2017). *International Ocean Discovery Program Expedition 371 Preliminary Report*, 2018. <https://doi.org/10.14379/iodp.pr.371.2018>

Manuscripts in review

[1] **Bhattacharya J.**, Yeung L.Y., Cong L., Dickens G.R. and Sun T.: Size-fraction specific isotopic variations as a framework for interpreting early Paleogene bulk sediment carbon isotope records. (*Paleoceanography and Paleoclimatology*).

Manuscripts in preparation

[3] **Bhattacharya J.**, Westerhold T., Yeung L.Y., Alegret L., Dallanave E., Dickens G.R. and Agnini C.: The dynamic climate of middle Eocene: new evidences from the southwest Pacific. (To be submitted to *Climate of the Past*.)

[2] Stratford W., Sutherland R., Dickens G.R., Blum P., Collot J., Gurnis M., Saito S., Agnini C., Alegret L., Bordenave A., Asatryan G., **Bhattacharya J.**, Chang L., et al.: Timing of Eocene compressional plate failure during subduction initiation, northern Zealandia, southwestern Pacific. (To be submitted to *G3*)

[1] **Bhattacharya J.**, Dickens G.R., Dallanave E., Agnini C. and Collot J.: A novel middle Eocene carbon isotope stratigraphy of New Caledonia. (Journal TBD)

First-authored conference abstracts

[7] **Bhattacharya J.**, Cong L., Yeung L.Y., Dickens G.R. and Sun T., 2020: Understanding global carbon cycle perturbations of early Paleogene using size-fraction-specific isotopic variations in open marine bulk carbonates: AGU Fall Meeting, 2020.

[6] **Bhattacharya J.** and Dickens G.R., 2019 Changes in pelagic carbonate accumulation across the Eocene epoch: new insights from ODP Site 1209, Shatsky Rise, Central Pacific Ocean: AGU Fall Meeting, 2019.

[5] **Bhattacharya J.**, Cong L., Dickens G.R., Yeung L.Y. and Sun T., 2019: Stable isotopic composition of size fractions in early Paleogene sediments: implications on bulk carbonate isotopic analysis: GSA Annual Meeting, 2019.

[4] **Bhattacharya J.** and Dickens G.R., 2018: Record of carbon cycling in sediments from northern Zealandia: AGU Fall Meeting, 2018.

[3] **Bhattacharya J.** and Dickens G.R., 2018: Eocene carbonate dissolution events in the North Pacific Ocean: Geological Society of America, 2018.

[2] **Bhattacharya J.** and Dickens G.R., 2017: Paleogene Carbonate Dissolution Events and Their Link with Wilcox Formation Deep Water Sands: AAPG Annual Convention, 2017

[1] **Bhattacharya J.** and Dickens G.R., 2016: Paleogene carbonate dissolution events in the North Pacific Ocean: AGU Fall Meeting, 2016.

Reviewer service

[1] *Geodynamica Acta*: Ongoing review of research article named: ‘Microfacies analysis of Eocene carbonates from eastern Alborz Zone (NE Iran): Community evolution and paleoenvironmental implications.’

Convener Service

[1] Elson A.L., Bryant R., O’Connor L. and **Bhattacharya J.**: Mesozoic and early Cenozoic greenhouse climates: Extreme analogues for future global change: AGU Fall Meeting, 2019.

Invited talks:

[1] Departmental Seminar at Binghamton University, SUNY

Awards, Grants and Scholarships:

- American Geophysical Union Austin Endowment Fund, 2020 (\$1,000)
- Alison Henning Teaching Award, 2020 (\$1,000)
- IODP Expedition 371 Travel Allowance, 2020 (\$2500)
- Geological Society of America Annual Meeting Travel Grant, 2019 (\$150)
- Women in Natural Sciences Travel Grant Award 2019 (\$500)
- Douglas and Martha Lou Broussard Fellowship, 2019 (\$7,500)
- NSF Scholarship for Urbino Summer School in Paleoclimatology 2018 (10 students awarded each year from the US) (\$1200 plus travel allowance)
- AAPG Grants in Aid 2018 (\$2,000)
- Geological Society of America SC Meeting Travel Grant, 2018 (\$500)
- IODP-USSSP-Post Expedition Funding, 2018 (\$15,000 plus travel allowances)
- IODP-USSSP-Expedition Salary for IODP Expedition 371, 2017 (\$7,500 plus travel allowances)
- USSSP-Shipboard Sedimentology Short Course Travel Grant, 2016
- CSIR-UGC Research Scholarship; November 2014-May 2015, Jadavpur University, India (USD Equivalent: \$4,000)
- Women in Higher Studies Scholarship, Hindustan Unilever, India, 2012-2014 (USD Equivalent: \$2,000)
- Jadavpur University Post Graduate Merit Award (USD Equivalent: \$250)
- Indira Gandhi Scholarship, Central Government of India, 2012-2014 (USD Equivalent: \$1,200)
- P.N. Bose Memorial Award (Jadavpur University), 2014

- Gold medal for 1st rank in M.S. (Applied Geology), Jadavpur University, 2014
- Gold medal for 1st rank in B.S. and highest honors (Geological Sciences), Jadavpur University, 2012

Memberships and collaboration:

- American Geophysical Union
- Geological Society of America
- The Oceanographic Society
- American Association of Petroleum Geologists
- Ongoing collaboration in multiple international projects involving IODP 371 post expedition work.
- Collaboration with geoscientists in New Caledonia and New Zealand involving Paleogene sedimentary geochemistry of onshore New Caledonian sediment sequences.

Extra-academic service:

- Vice President of American Association of Petroleum Geologists (AAPG) Rice University Students' Chapter (2017-2020)
- Committee member and organizer of AAPG Student Expo, Houston (2016-2019)
- Secretary of American Association of Petroleum Geologists (AAPG) Rice University Students' Chapter (2016- 2017)
- Secretary and Treasurer of Geounion, Department of Earth Science, Rice University (2016- 2017)
- Student member volunteer of Geophysical Society of Houston and Houston Geological Society
- Treasurer of AAPG Students' Chapter Jadavpur University (2010-2011)

Personal interests:

- Travel photography
- Science writer in Outcroppings (Rice University), The JU Journal and The Telegraph in Schools (India).