

Akshay Mehra

Ph.D. Candidate

Department of Geosciences, Princeton University

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Education

- Expected 2018* **Princeton University**, Princeton, NJ
Ph.D., Geosciences
Thesis: Constraining the role of biomineralizers in Ediacaran reefs using a novel serial grinding and imaging technique
Advisor: Adam Maloof
- 2011* **Cornell University**, Ithaca, NY
B.Arch.
Thesis: Reclaiming the old Union Carbide factory site in Bhopal, India
Advisors: Vincent Mulcahy and Mary Woods

Publications

Published

1. **Mehra, A.** and Maloof, A.C., 2017. A multiscale approach reveals that *Cloudina* aggregates are detritus and not *in situ* reef constructions. *Proceedings of the National Academy of Sciences of the United States of America*.

In Progress

2. **Mehra, A.**, Samuels, B., and Maloof, A.C., 2018. A novel technique for producing three dimensional data using serial sectioning and semi-automatic image classification. *In prep.*
3. **Mehra, A.** and Maloof, A.C., 2018. Morphological analysis of *Namapoikia*, a putative Ediacaran sponge fossil. *In prep.*
4. Eddy, M.P., **Mehra, A.**, Pamukcu, A., DesOrmeau, J.W., Maloof, A.C., and Schoene, B., 2018. Geochemical and textural evidence for efficient crystal settling in a large, silicic magma chamber. *In prep.*

Conference Proceedings

- 2018* **Mehra, A.** and Maloof A.C., Three dimensional reconstructions of the earliest biomineralizers. Northeastern Geobiology, WHOI, April 2018.
- 2017* Maloof A.C. and **Mehra, A.**, Constraining the role of an Ediacaran biomineralizer using a multiscale methodology. GSA Annual Meeting, Seattle WA, October 2017.
- 2017* **Mehra, A.** and Maloof, A.C., Using serial grinding and imaging techniques to produce three-dimensional models of samples with weak density contrast. GSA Annual Meeting, Seattle WA, October 2017.

- 2016 **Mehra, A.** and Maloof, A.C., Digital reconstructions of *Cloudina* populations: an in-depth, three-dimensional study. AGU Fall Meeting, San Francisco CA, December 2016.
- 2013 Maloof, A.C., Samuels, B., **Mehra, A.**, and Spatzier, A., An automated serial Grinding, Imaging and Reconstruction Instrument (GIRI) for digital modeling of samples with weak density contrasts. AGU Fall Meeting, San Francisco CA, December 2013.

Teaching Experience

- Fall 2016 Teaching Assistant
GEO 201: Measuring climate change: Methods in data analysis & scientific writing
(Utah and New Mexico)
- Spring 2016 Teaching Assistant
GEO 370: Sedimentology
(Andros Island, The Bahamas)
- Fall 2015 Teaching Assistant
FRS 124: State of the Earth: Shifts & cycles
(France and Spain)
- Fall 2014 Teaching Assistant
GEO 201: Measuring climate change: Methods in data analysis & scientific writing
(Utah and Nevada)

Field Experience

- 2017 North Cascades, Washington, USA [2 weeks]
Textural evidence for the presence of a fossilized magma chamber
- 2017 Andros Island, The Bahamas [1 week]
Morphology and hydrology of a tidal channel network
- 2016 Labrador, Canada [1 week]
Stratigraphic and environmental context of Cambrian Archaeocyathid reefs
- 2015 Salient Mountain, Canada [6 weeks]
Mapping, measuring, and sampling from a fossil bearing Ediacaran stromatolite reef system
- 2014 Southern Namibia [8 weeks]
*Describing aggregates of *Cloudina*, one of the earliest biomineralizing organisms*

Professional Experience

- 2011 -2013 **Situ Studio**, Brooklyn, NY
Developed specifications for GIRI (Grinding, Imaging and Reconstruction Instrument), part of the new Digital Fossil Reconstruction Lab at Princeton University. Leveraged numerous architectural tools and methods to create visualizations and analysis for the Forensic Architecture project.

Awards and Honors

2018 Hanna Fellowship, Princeton University

2017 Runner up, AGU Data Visualization and Storytelling Contest

2017 Fan Favorite, Princeton Research Day

2016 Runner up, AGU Data Visualization and Storytelling Contest

2016 Arnold Guyot Teaching Award

University and Professional Service

2016 - 2018 Vice President, Graduate Student Government

2015 - 2016 President, Graduate Student Government