

## CURRICULUM VITAE

### Identifying Information

**Name:** Pratik Santra.

**Position Title:** 3<sup>rd</sup> Year Ph.D. student at The Department of Geosciences

### Organization and Location

**Name:** The University of Arizona

**Location:** Tucson, Arizona, USA

### Professional Preparation

PhD, Geosciences, University of Arizona, Tucson, Arizona, USA	Fall, 2023- Present
MSc, Applied Geology, University of Calcutta, Kolkata, West Bengal, In	2018–2020
BSc, Geology, University of Calcutta, Kolkata, West Bengal, India	2015-2018

### Publications and Conference Abstracts:

Moitra, P., Albadi, A., Tatsch, A., & **Santra, P.** (2025). *Flow- and Fracture-Driven Bubble Throat Growth Rates and Dynamic Permeability in Crystallizing Magma*. *Geochemistry, Geophysics, Geosystems*, 26(2). <https://doi.org/10.1029/2024gc011932>

**Santra, P.**, Moitra, P., Barnes, J., & Mallik, A. (2025). *New insights into the dynamics of explosive lunar volcanism through the textural analysis of 74001/2 glass beads*. **NASA Exploration Science Forum 2025**.

**Santra, P.**, Moitra, P., Barnes, J., & Mallik, A. (2025). *Investigating the dynamics of explosive lunar eruptions through the textural analysis of 74001/2 glass beads* (Abstract #1832). **56th Lunar and Planetary Science Conference**.

**Santra, P.**, Moitra, P., Barnes, J., & Mallik, A. (2024). *Investigation of the dynamics of explosive lunar eruption from the 74001/2 glass bead textures*. University of Arizona. **AGU Fall Meeting 2024**, Abstract #P54B-03.

Sequeira, N., **Santra, P.**, and Volvoikar, S. (2023) *Structural-metamorphic evolution of the Paleoproterozoic amphibolite facies metapelitic rocks in South Maharashtra, India: Implications for the northward extent of the Archean Dharwar Craton, and the Madagascar connection*. **AGU Fall Meeting 2023**, Poster #T03-07.

### Awards:

**Second Place, Student Oral Talk Competition** — NASA Exploration Science Forum 2025

Selected for **Galileo Circle Scholar** 2024-2025

Selected for the **Spencer R. Titley Graduate Fellowship** Summer, 2024  
at the University of Arizona

Selected for the post of **Project JRF under the SERB sponsored** May 2022- April  
**2023 research Project** at Goa University, India.

**Fieldwork experience:**

<u>Death Valley, California:</u> Study of various geomorphological and tectonic features in Death Valley and comparing them with planetary analogs.	2024
<u>Flagstaff, Arizona:</u> Understanding the geomorphology of Flagstaff's geological features and identifying the main surface processes that shape planetary surfaces and their interpretations.	2023
<u>Goa and Maharashtra:</u> Study of detailed tectonic fabrics among the different lithological units. Structural mapping, collection of different rocks for analysis of structural evolution and metamorphism history.	2022
<u>Canacona, Goa:</u> Collection of well water sample for trace element analysis in ground water in South Goa.	2022
<u>Angul and Chandipur, Orissa:</u> Identification of sedimentary structures, lithology of Barakar sedimentary unit. Detailed paleo-ecological study in the intertidal, subtidal and supratidal area of Chandipur. Construction of facies map of the environment.	2019
<u>Jajpur, Orissa:</u> Visiting Chromite mines and getting acquainted with mining works.	2017
<u>Galudih, Jharkhand:</u> Study of the structural features and mapping of fold present in the field area. Identification of fold interference pattern.	2017
<u>Maithon, Jharkhand:</u> Identification of various geomorphological features, rock types, and introduction to field instruments, and field mapping.	2016

**Synergistic Activities:**

Abartan: Reunion of Department of Applied Geology, University of Calcutta  
Volunteered in designing and social media promotion. 2018

**Previous Research Experience:**

Project Junior Research Fellow (JRF) at Goa University, India, May 2022- April 2023

Topic: Deciphering the tectonic evolution of the Precambrian rocks along the West Coast of India at the proposed northern margin of the Western Dharwar Craton, and the Madagascar-India connection revisited.

Supervisor: Dr. Nicole Sequeira

M.Sc. Thesis, University of Calcutta, India

Sept 2019- Sept 2020

Topic: Study of Sub-solidus re-equilibration texture in rocks of Koraput Alkaline Complex, Eastern Ghats Granulite Belt, India.

Supervisor: Dr. Biswajit Ghosh

**Skills:**

Technical: Perple\_X, alphaMELTS software package, JMicroVision Version 1.2.7, ImageJ, Preparation of detailed map, QGIS.

Computer: Microsoft Office Tools, Windows and MATLAB, Adobe Suites, Corel Draw

Graphics Suite, ImageJ.

Instruments: Petrological Microscope, SEM (Hitachi S-4800), EPMA, Automatic XRF pellet press.

Linguistic: English, Hindi, and Bengali.