# PRIYA TRIPATHI

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## EDUCATION

**Banaras Hindu University** **Sep 2023 - May 2025**
*M.Sc Geology with 8.56 CGPA*

**University of Allahabad** **Jul 2020 - Apr 2023**
B.*Sc (Physics, Mathematics, Geology) with 86%*

## PROJECT WORK

### MAPPING OF DYKE SWARMS ON VENUS WITH IVRG GROUP

*(Affiliated with the International Venus Research Group, Canada)*

- Undertaking geological mapping of dyke swarms within Bereghinya Planitia (V-8 quadrangle) using the full-resolution Magellan SAR data with the help of ArcGIS and JMARS software.
- My study area extended from 5°–20°E, and 20°–40°N. This region worked as a bridge between the Bereghinya Arachnoid Group and extended into the Central Eistla Regio. The study aims to map and classify radiating, circumferential, and linear dyke swarm sets associated with the Ponmakya, Beyla, Kumang coronae and Bereghinya archnoids cluster group to explore the tectonic-magmatic-volcanic activity of this region.
- The main objective is to develop the geological tectono-magmatic evolution history of the area, which serves as a bridge between two geologically distinct regions.

### INTERNSHIP:TERRESTRIAL ANALOGUES STUDY OF STROMATOLITES FOR MARS

*(Affiliated with the Indian Institute of Science and Technology, Thiruvanthapuram)*

- Investigated stromatolites from the Chandi Formation of the Chhattisgarh Basin as potential terrestrial analogues for early Martian life through mineralogical and morphological characterization using petrographic analysis, hyperspectral imaging, and FTIR spectroscopy.
- Aimed to assess the site's potential for biosignature preservation through spectral comparison with Martian data.

### DISSERTATION: PRELIMINEARY MAPPING OF DYKE SWARMS ON VENUS

*(Affiliated with the Banaras Hindu University, Varanasi)*

- I have undertaken mapping within V-8 quadrangle of Venus and the study area is bounded by 25 to 40 N and 10 to 20 E.
- My preliminary work is based on the mapping of the 15,000 extensional lineaments interpreted as mafic dyke swarms and classifying them as radiating, circumferential, and linear sets of dyke swarms at scale of 1:500,000 using full-resolution Magellan SAR data with the help of ArcGIS and JMARS software.

## CONFERENCE PRESENTATIONS

Tripathi, P., Ernst, R.E., El Bilali, H., Srivastava, R. K., (2025) Preliminary Mapping of Dyke Swarms in Bereghinya Planitia, North of Central Eistla Regio, Venus. Lunar and Planetary Science Conference 2025 (March 10–14), The Woodlands, Texas, USA. Abstract No 1266.

Dyke Swarms of Bereghinya Planitia, North Of Central Eistla Regio, Venus. GAC-MAC-IAH- CNC (2025), Ottawa, Canada.

Mapping of Dyke Swarms in Bereghinya Planitia, North of Central Eistla Regio, Venus. PRL Venus Conference 2025

## SKILLS

- Technical Skill: ArcGIS, JMARS, ORIGIN, Microsoft Office
- Soft skills: Effective Communication, Problem Solving, Teamwork, Report Writing
- Field Geology Techniques: Rock identification, Geological Mapping
- Optical Microscope Handling and Hyperspectral Spectroscopy

## CERTIFICATIONS AND ACHIEVEMENT

- **BHU Gold Medal:** Prof. Maharaj Narain Mehrotra Gold Medal in Environmental Geology in M.Sc
- **START-ISRO**: START (Space Science and Technology Awareness Training) programs.
- **Workshop: AR**SEO AND CC
- **NPTEL:** Geomorphology (IIT Roorkee);Remote Sensing and GIS (IIT Guwahati); Environmental Geomechanics (IIT Bombay).
- **Internship Certificate:** On completion of my 45-day internship at IIST.
- 5th Venus Science Conference at PRL(Venus-SC 2025)
- Medal for Volunteering and "AAGAJ" inter-departmental Sports Fest
- CUET PG 2023- AIR 37 (National-level entrance exam for postgraduate admissions)
- IITJAM 2023-AIR283