

Mohini Jodhpurkar

CONTACT

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EDUCATION

Geological Sciences PhD

August 2020 — Present

Arizona State University

- Graduate Research Assistant
- Involved in Mastcam-Z and Perseverance operations roles as a Mars 2020 science team member
- Investigating the northern fan deposit and other putative deltaic deposits across the surface of Mars
- Examining anomalies in hydrogen signatures at the lunar south pole in support of LunaH-Map and other upcoming lunar missions
- Elected to Grad Council as DEI Grad Student Advocate

Geology

August 2015 — May 2019

College of William and Mary

- Graduated Cum Laude, 3.5 GPA
- Founding member of W&M chapter of Association of Women Geoscientists
- Member of Sigma Gamma Epsilon, the geology honor society
- Music Minor
- Structural and Introductory Geology Teaching Assistant
- STEM panelist for welcoming prospective students/incoming freshmen
- Involved in several extracurricular executive boards

WORK EXPERIENCE

USGS Astrogeology Center

June 2019 — July 2020

Contractor

- Mapping and identifying stratigraphy in the Melas Basin
- Paleobedform survey and modeling on Mars, particularly in the Melas Chasma
- Updating Apollo mission landing site maps with the latest data
- Digitizing Apollo landing site maps
- Crater counting and density plotting on the Moon
- Studying Moulton Crater and its surroundings

Smithsonian National Air and Space Museum

May 2018 — August 2018

Research Intern

- Mapping backslopes of three tessera on Venus using ArcMap
- Calculating backscatter coefficients and creating potential ejecta parabolas for impact craters using Excel
- Mapping nearby geologic features (impact and volcanic)

- Devising a classification scheme for tessera terrain
- Creating a relative stratigraphic sequence for one of the three sites
- Comparing properties such as topography and emissivity across latitude
- Presented at LPSC 2019 (Abstract #2570)
- This work culminated in a senior undergraduate thesis (submitted May 2019)

**Northern Arizona University
(USGS Astrogeology Center)**

June 2017 — August 2017

REU Intern

- Mapping complex bedding patterns in the Medusae Fossae Formation using HiRISE images in ArcMap
- Measuring bedding orientation using a program in MATLAB
- Comparing orientations to known dune bedding patterns to interpret ancient wind patterns
- Interpreting the origins of the Medusae Fossae Formation
- Comparing these properties to those at Gale Crater
- Presenting at LPSC 2018 (Abstract #2695)

W&M Department of Geology

January 2019 — May 2019

Teaching Assistant

- Teaching several sessions of Structural Geology
- Preparing items for lectures
- Answering questions during lecture and lab
- Preparing and setting up for lab
- Holding tutoring sessions outside of class time
- Assisting with field trips
- Taking inventory of items
- Grading assignments in the class

W&M Department of Geology

August 2018 — December 2018

Teaching Assistant

- Assisting with teaching the introductory geology lab
- Answering questions
- Preparing and setting up for lab
- Holding tutoring sessions outside of class time

W&M Department of Geology

August 2016 — May 2019

Grader

- Grading all the papers for the students in the introductory classes along with some upper level ones
- Using Excel to manage grades
- Communicating with professors about problems that prove more challenging to the students

**Virginia Institute of Marine
Science**

January 2017 — May 2017

Undergraduate Research Intern

- Preparing samples
- Taking inventory
- Putting samples in the oven/conducting LOI analyses

- Processing and labeling sediment
- Working with water samples
- Going to the study sites for field work

PRESENTATIONS AND AWARDS

- First and presenting author for GSA 2021 talk titled "Mapping and Interpreting the Northern Fan Deposits in Jezero Crater, Mars" (October 2021)
- First and presenting author for PCCM 2021 talk titled "Characterizing Moulton Crater and Its Surroundings" (August 2021)
- First and presenting author for LPSC 2021 posters titled "Mapping and Interpreting the Northern Fan Deposit in Jezero Crater, Mars" and "Mapping and Interpreting Moulton Crater and its Surroundings" (March 2021)
- Co-author on JGR:Planets paper titled " Ancient Martian Aeolian Sand Dune Deposits Recorded in the Stratigraphy of Valles Marineris and Implications for Past Climates"
- First and presenting author for LPSC 2020 poster titled "Creating Crater Catalogs of the Apollo 15-16-17 Landing Sites" (March 2020)
- First and presenting author for AGU 2019 poster titled "Geologic Mapping and Stratigraphic Analysis in Southwestern Melas Chasma, Mars" (December 2019)
- First and presenting author for LPSC 2019 poster titled "Relationship Between Radar-Bright Areas and Geologic Landforms in Venusian Tesserae" (March 2019)
- First and presenting author for LPSC 2018 talk entitled "Bedding Geometry in the Medusae Fossae Formation" (March 2018)
- Recipient of W&M Geology departmental Ellen Stofan Scholarship for summer research (May 2018)