

Indujaa Ganesh

University of Arizona
1629 E University Blvd Tucson, AZ 85721

indujaa@email.arizona.edu
+1 510 925 7056

EDUCATION

- Doctoral candidate**, Planetary Sciences expected 2022
Lunar and Planetary Laboratory, University of Arizona, Tucson
Thesis: Modeling and radar studies of pyroclastic volcanism on Mars and Venus
- Master of Science** (*en route*), Planetary Sciences 2020
Lunar and Planetary Laboratory, University of Arizona, Tucson
- Master of Technology**, Geoinformatics and Natural Resources Engineering 2017
Indian Institute of Technology Bombay, Mumbai
Thesis: Morphometric analyses of Interior Layered Deposits in Valles Marineris, Mars
- Bachelor of Engineering**, Geoinformatics 2014
College of Engineering Guindy, Anna University, Chennai
Thesis: Sub-pixel analysis of slope streaks in Arabia Terra, Mars

AWARDS & SCHOLARSHIPS

- Amelia Earhart Fellowship 2021
- Lunar and Planetary Laboratory Curson Education Plus Fund Award 2021, 2018
- University of Arizona Galileo Circle Scholarship 2021, 2020
- Venus Exploration and Analysis Group Travel Award 2019
- Future Investigators in NASA Earth and Space Science and Technology 2019
- Graduate & Professional Student Council (GPSC) Travel Grant 2018
- Government of India – Ministry of Human Resource Development’s Postgraduate Scholarship 2015
- German Academic Exchange Service’s (DAAD) Working Internships in Science and Engineering Scholarship 2013
- Indian Academy of Sciences Summer Research Fellowship 2012

RESEARCH EXPERIENCE

- Graduate Research Assistant**, University of Arizona
Advisor: Prof. Lynn Carter
- SHARAD mapping of Arsia Mons caldera on Mars Aug 2017 – Jul 2019
 - Pyroclastic flow deposits on Venus: emplacement and radar characteristics Jul 2019 – now
- Exploration Science Summer Intern**, Lunar and Planetary Institute
Advisor: David Kring
- Investigations of potential landing sites for NASA’s Artemis program June & July, 2020
- MTech. thesis**, Indian Institute of Technology Bombay
Advisor: Prof. Alok Porwal
- Geomorphology of Layered Deposits of Valles Marineris July 2016 – May 2017

DAAD Summer Intern, Institute of Geography, University of Heidelberg

Advisor: Prof. Bernhard Hoefle

Processed LiDAR point clouds for LVISA project
(<http://lvisa.geog.uni-heidelberg.de/>)

June & July, 2013

Summer Research Fellow, Physical Research Laboratory, Ahmedabad

Advisor: Prof. S. A. Haider

Analysis of seasonal variations in the lower atmosphere of Mars

June & July, 2012

PUBLICATIONS

Ganesh, I., McGuire, L. A., and Carter, L. M. Modeling the dynamics of dense pyroclastic flows on Venus: insights into pyroclastic eruptions. *Journal of Geophysical Research: Planets* (2021). doi: 10.1029/2021JE006943.

McGuire, L. A., Youberg, A. M., Rengers, F. K., Abramson, N. S., **Ganesh, I.**, Gorr, A. N., Hoch, O., Johnson, J. C., Lamom, P., Prescott, A. B., Zanetell, J., Fenerty, B. Extreme Precipitation Across Adjacent Burned and Unburned Watersheds Reveals Impacts of Low Severity Wildfire on Debris-Flow Processes. *Journal of Geophysical Research: Earth Surface* (2021). doi: 10.1029/2020JF005997.

Ganesh, I., Carter, L. M., and Smith I. B. SHARAD mapping of Arsia Mons caldera. *Journal of Volcanology and Geothermal Research* (2020). doi: 10.1016/j.jvolgeores.2019.106748

CONFERENCE ABSTRACTS

Ganesh, I., Carter, L. M., and Henz, T. N. Radar backscatter models of possible pyroclastic deposits on Venus. 19th Meeting of the Venus Exploration Analysis Group (2021). # 8038

Ganesh, I., Carter, L. M., and Henz, T. N. A radiative transfer approach to modeling polarimetric radar backscatter from possible pyroclastic deposits on Venus. AGU Fall meeting (2021). # 92514

Ganesh, I., McGuire, L. A., and Carter, L. M. Modeling the emplacement of pyroclastic density current (PDC) deposits on Venus: a comparison between concentrated and dilute PDC transport regimes. AGU Fall meeting (2021). # 92589

Hager, J., Ort, M. H., Henry, C. D., Silleni, A., and **Ganesh, I.** Using Anisotropy of Magnetic Susceptibility (AMS) to Determine the Flow Characteristics of a Pyroclastic Density Current: The Nine Hill Tuff, Nevada and California. AGU Fall meeting (2021). # 922399

Henz, T., **Ganesh, I.**, and Carter, L. M. Measuring the Radar Properties of Pyroclastic Deposits in Eistla Regio, Venus. 52nd Lunar and Planetary Science Conference (2021). Virtual conference. # 2150

Ganesh, I., McGuire, L., and Carter, L. M. Dynamics of Dense Pyroclastic Flows on Venus – Insights into Pyroclastic Eruptions. 52nd Lunar and Planetary Science Conference (2021). Virtual conference. # 1218

Kumari, N. **Ganesh, I.**, Lang, A., Bretzfelder J., M., and Kring, D. A. Geological Diversity at Two Potential Landing Sites in the Lunar South Pole. 52nd Lunar and Planetary Science Conference (2021). Virtual conference. #1197

Bretzfelder J., M., Lang, A., **Ganesh, I.**, Kumari, N., and Kring, D. A. Geological Analysis and Possible EVA Targets for an Artemis III Landing Site Bounded by Shackleton and Slater Craters. 52nd Lunar and Planetary Science Conference (2021). Virtual conference. # 1148

McGuire, L. A. et al. (including **Ganesh, I.**). Extreme precipitation reveals impacts of a low severity wildfire on debris-flow processes. AGU Fall meeting (2020). # 736986

Ganesh, I., McGuire, L. A., and Carter, L. M. Modeling Deposition from Dense Pyroclastic Density Currents on Venus. 18th Meeting of the Venus Exploration and Analysis Group (2020). Virtual conference.

Ganesh, I., McGuire, L. A., and Carter, L. M. Pyroclastic Flow deposition on Venus. 51st Lunar and Planetary Science Conference (2020). Cancelled.

Ganesh, I., Carter, L. M., and Smith, I. SHARAD mapping of the Caldera of Arsia Mons. 50th Lunar and Planetary Science Conference (2019), The Woodlands, Texas, # 1859

Ganesh, I., Carter, L. M., and Smith, I. Subsurface Interfaces in the Arsia Mons Caldera - Observations from SHARAD. 49th Lunar and Planetary Science Conference (2018), The Woodlands, Texas, # 2807

Ganesh, I. and Porwal, A. A GIS Based Compilation of Morphometric Parameters of Valles Marineris ILLDs. 48th Lunar and Planetary Science Conference (2017), The Woodlands, Texas, # 2324

Sarkar, R., Singh, P., **Ganesh, I.**, and Porwal, A. Origin of mass wasting features in Juventae Chasma, Mars. 47th Lunar and Planetary Science Conference (2016), The Woodlands, Texas, # 1876

Singh, P., Sarkar, R., **Ganesh, I.**, and Porwal, A. Origin of fluvial channels in the walls of Juventae Chasma: evidences of groundwater sapping? 47th Lunar and Planetary Science Conference (2016), The Woodlands, Texas, # 1878

WORKSHOPS

NASA Planetary Volcanology Workshop, Hilo, Hawaii	2019
Workshop on Geology and Geophysics of the Solar System, Petnica, Serbia	2018

TEACHING

Graduate Teaching Assistant , University of Arizona PTY5 170B2 – The Universe and Humanity: Origin and Destiny Duties included grading homework, proctoring exams, holding office hours, conducting review sessions, and guest lectures.	Fall 2018
Graduate Teaching Assistant , Indian Institute of Technology GNR 603 – Introduction to Principles of Remote Sensing Duties included grading, conducting lab demonstrations, and guest lectures.	Fall 2016

SERVICE

Organizing committee , Lunar and Planetary Laboratory Conference Co-organizer for the annual intra-department conference.	2018– 2021
Served as executive secretary on NASA review panels	2020– now
Reviewer for Journal of Geophysical Research	2020– now