

Lisette E. Melendez | Earth and Planetary Sciences

Curriculum Vitae (Abbreviated)

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RESEARCH INTERESTS.

My research primarily focuses on understanding the processes and formation mechanisms that shape planetary surfaces in order to constrain the evolutionary history of these planetary bodies over the course of geologic time. My research interests comprise of understanding the mineralogical composition, geomorphology, and evolutionary trends of planetary surface environments on a wide range of scales, from micro-meter sized particles within thin sections of meteorites to paraglacial features on Mars that measure in the hundreds of meters. I aim to understand how planetary surfaces are altered using both laboratory techniques, like microscopy and spectroscopy, on samples and analogues, as well as larger-scale remote-sensing and GIS techniques.

As a scientist, I am dedicated to advocating for the inclusion of those with historically minoritized identities within STEM and building communities where diverse contributions are both welcomed and listened to.

EDUCATION.

University of South Florida | Honors College Tampa, FL
Bachelor of Science – Geology w. minor in Astronomy Aug. 2021
• Cumulative GPA: 3.70 | Major GPA: 4.00

SELECT EXPERIENCE.

Post-Baccalaureate Research Assistant Nov. 2021 - Present
University of South Florida Tampa, FL

- Researched the ontogeny and systematics of the Pennsylvanian Cladid Crinoid *Erisocrinus*

Planetary Geology Intern Jun. 2021 – Aug. 2021
Smithsonian National Museum of Natural History Washington D.C.

- Created a boulder classification system for the diverse surface morphology of asteroid (101955) Bennu using the Small Body Mapping Tool and images from the OSIRIS-REx's Camera Suite.
- Linked boulder diversity and morphology to carbonaceous chondrite meteorites from the museum's collection.

Curatorial Intern Jan. 2021 – Aug. 2021
Institute for Digital Exploration Tampa, FL

- 3D digitization of archaeological artefacts and bronze casts using LiDAR, close-range scanning, and digital photogrammetry.

Diversity, Equity, and Inclusion Intern Aug. 2020 – Jun. 2021
NASA Headquarters Washington D.C.

- Developed and designed the logistics of a strategic communication series denoting the importance of mindful and inclusive language.

Planetary Geology Intern Jun. 2020 – Aug. 2020
Smithsonian National Museum of Natural History Washington D.C.

- Quantified the environmental response to deglaciation and paraglaciation within Martian craters using ArcGIS and images from the Mars Reconnaissance Orbiter (CTX and HiRISE); won Dwornik Award at LPSC 2021.

Planetary Geology Intern May 2019 – Jul. 2019
Brown University | Leadership Alliance Providence, RI

- Investigated the effects of perennial dust deposits on water-ice sublimation on the north polar layered deposits of Mars.

SKILLS.

Languages and Software Python, MATLAB, R, ESRI ArcGIS, Small Body Mapping Tool, Adobe Creative Suite

Spacecraft Data Mars Reconnaissance Orbiter's HiRISE, CTX, MOLA and OSIRIS-REx's Camera Suite

OUTREACH AND SERVICE.

Science Communication Intern Mar. 2020 – Dec. 2020
Time Scavengers Tampa, FL

- Created content about the latest planetary science findings with the aim of making articles more accessible to the public.

Geology Club President Aug. 2019 – May. 2021
University of South Florida Tampa, FL

- Founded the Geology Club's Student Peer Mentoring Program and led outreach events to local high school students.