



Title: Postdoctoral Research Scientist

Location: Work from home. Upper New England area preferred.

Employee Type: Full-Time

Hours Per Week: 40

Overtime: No

Appointment Period: Initially for one year; potentially renewable for two additional years depending on the availability of funding.

Travel: Some travel required.

Relocation Covered: No

Desired Start Date: May 15, 2021 (negotiable)

Annual Salary: \$53,000 - \$59,000, depending on Experience and Location

Other Benefits: medical and dental insurance, life insurance, disability, retirement plan, plus more

PSI will not sponsor applicants for work visas.

Post Date: Starting April 1, 2021

Contact Information: PSI Human Resources, Email: hr@psi.edu

Summary Job Description:

Applications are invited for a Postdoctoral Research Scientist to work with Dr. R. Aileen Yingst in the sedimentologic and stratigraphic analysis of deposits in Jezero crater, and elsewhere on Mars. Dr. Yingst is a Co-Investigator on Mars 2020's SHERLOC instrument, an arm-mounted fluorescence and Raman spectrometer coupled with a hand-lens scale resolution pair of RGB cameras (ACI and WATSON). The successful candidate will be expected to focus on analysis and interpretation of the fine-scale texture of rocks, grains, outcrop and unconsolidated targets through examination of WATSON images (WATSON acquires images at better than 20 μm /pixel in RGB color), in combination with other M2020 instruments. The successful candidate will work collaboratively with Dr. Yingst to draw connections from the fine-scale data derived from WATSON to the broader analysis of rover-and orbital-derived images to reconstruct the local and regional geologic history of Jezero crater.

Responsibilities include:

- Characterize grain-scale textures and fabrics of rocks in the Perseverance rover workspace
- Link grain-scale textures and fabrics with rover-and orbital-scale understanding of rock units
- Characterize and map geologic deposits using rover and orbital data
- Construct facies maps to understand paleoenvironment and geologic history of deposition
- Construct models of depositional systems to reconstruct their evolution
- Apply terrestrial Earth analogs to interpretation of Mars data
- Assist Dr. Yingst with rover science team operations
- Work with Mars 2020 team members in integrating data analysis and interpretation
- Work within a cross-disciplinary team and attend regular team meetings and telecons (typically aligned to California (USA) time zone (PDT/PST))
- Communicate research results at international conferences and publish in high-ranking international journals.

Required Qualifications:

- Ph.D. in planetary science, earth science, or related field.
- Demonstrated ability to publish in peer-reviewed journals.
- Background in sedimentology and stratigraphy, and/or planetary geology.
- Geological field experience, particularly in sedimentology and stratigraphy is advantageous.
- Experience in analysis of orbital or rover-derived imagery is a plus.
- Ability to work in a collaborative, cross-disciplinary way.

To apply for the position:

If you are interested in applying for this position and you meet the required qualifications for the opening, please submit the following documents to hr@psi.edu:

- A cover letter that substantially addresses your interest and qualifications for this position.
- CV
- Optional: one relevant publication
- The names of three references familiar with your work.
- Completed application and Voluntary Self-Identification form (can be found on www.psi.edu or by sending a request to hr@psi.edu).

Planetary Science Institute
Human Resources
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PSI is an Equal Opportunity/Affirmative Action employer. All qualified applicants will receive consideration for employment without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, disability, or status as a protected veteran, or any other characteristic protected by law.

The Planetary Science Institute is a private, nonprofit 501(c)(3) corporation dedicated to Solar System exploration. It is headquartered in Tucson, Arizona, where it was founded in 1972. PSI scientists are involved in NASA and international missions, the study of Mars and other planets, the Moon, asteroids, comets, interplanetary dust, impact physics, the origin of the Solar System, extra-solar planet formation, dynamic evolution of planetary systems, the rise of life, and other areas of research. They conduct fieldwork on all continents around the world. They also are actively involved in science education and public outreach through school programs, children's books, popular science books and art. PSI scientists and educators are based in numerous states and the District of Columbia, and work from various international locations. In 2014, PSI was ranked 20th in the nation for workplace efficiency and flexibility among US corporations by the Families and Work Institute and the Society for Human Resource Management.