Assistant Professor in
Astronomy, Planetary Science, and/or Geoscience Education Research

The School of Earth and Space Exploration (SESE) at Arizona State University (ASU) invites applications for an appointment as a full-time, tenure-track Assistant Professor in discipline-based education research (DBER) in astronomy education, planetary-science education, and/or geoscience education. The anticipated start date is August 2020. We encourage applications from a diverse range of candidates with research and teaching interests in areas such as active learning, cognitive and affective processes, digital (virtual reality, augmented reality, and online) teaching and learning, accessible science education, cross-cultural and place-based teaching and learning, ethnographic observation, mixed-methods assessment, and professional preparation and professional development of Earth and space science teachers.

A signature characteristic of the academic environment at ASU is integration of research and teaching across traditional disciplinary boundaries. ASU is noted for being a global-scale research university that is singularly free of academic barriers, and it has a long-lived and robust tradition of scholarly integration in science, technology, engineering, and mathematics (STEM) education, with DBER faculty in many different STEM disciplinary units who actively collaborate with each other and with education-research faculty in the Mary Lou Fulton Teachers College, which is one of the nation's foremost producers of K-12 STEM teachers. We seek applicants who would be especially excited to catalyze research and educational collaborations with other faculty, groups, and units. Existing areas of STEM education research in SESE that may present opportunities for collaboration include teaching and learning in geoscience, environmental science, and sustainability science; geocognition; visualization; online astronomy and geology courses; adaptive and immersive virtual learning environments; place-based and culturally diverse teaching and learning; informal (free-choice) education and public science literacy; STEM teacher professional preparation and professional development; and ethnogeology.

About ASU and SESE
For a number of years, ASU has been ranked #1 for innovation by *US News and World Report*. Spread across four main campuses in the Phoenix metropolitan region, it is the nation's largest public university with about 103,000 students enrolled, including 30,000 online students. ASU has an inclusive and diverse student community reflective of the U.S. population. Read more about ASU at http://www.asu.edu and http://newamericanuniversity.asu.edu/about.

The College values our cultural and intellectual diversity, and continually strives to foster a welcoming and inclusive environment. We are especially interested in applicants who can strengthen the diversity of the academic community. Learn more about what The College of Liberal Arts and Sciences has to offer by visiting https://thecollege.asu.edu/faculty.

SESE brings together all of Earth and space science at ASU, including astronomy, geology, astrophysics, astrobiology, cosmology, geophysics, geochemistry, exploration systems design, and Earth and space science education. A central part of the SESE mission is to develop new technologies to enable scientific exploration and effective teaching and learning alike. SESE originated and hosts a number of STEM

education and outreach programs with global reach, including the NASA Mars Education Program (mars.asu.edu), which enables students, teachers, and the public around the world to participate in Mars exploration; the Center for Education through Exploration (etx.asu.edu), which promotes STEM learning through exploration of the unknown by developing and deploying engaging and adaptive digital learning curricula and platforms (vft.asu.edu); and the Interplanetary Initiative, an interdisciplinary and multi-institution partnership to plan and realize a viable and sustainable future for humanity in space. SESE is also home to one of two ASU-based teams that are part of NASA's Science Activation Collective (science.nasa.gov/learners), which is the cornerstone for education and outreach activities by NASA's Science Mission Directorate.

SESE leads the NASA Psyche asteroid mission as well as the Lunar Reconnaissance Orbiter Camera (LROC), Mars Odyssey THEMIS, and Mars 2020 rover Mastcam-Z imaging investigations, and recently led the NSF EarthScope Program. SESE is also a key participant in many other ongoing and future NASA missions, including Mars Reconnaissance Orbiter, Lucy, OSIRIS-REx, Europa Clipper, and SPHEREx, other international deep space missions like Mars Express, JUICE, and EMIRS, as well as balloon-borne missions STO-2, GUSTO, BLAST-TNG, TIM, EXCLAIM, and ASTHROS. SESE researchers lead the Cubesat missions LunaH-Map and SPARCS and collaborate on the development of ground-based radio telescopes HERA, MWA, and OVRO-LWA. ASU astronomers and planetary scientists have significant experience using the Hubble Space Telescope (HST) as well as ground-based instruments in the Arizona telescope system (to which we have access), including the Magellan telescopes in Chile and the Large Binocular Telescope in Arizona. As well, ASU is a partner in the development of the Giant Magellan Telescope (GMT) and playing significant roles in the development and planning for the James Webb Space Telescope All SESE faculty benefit from a variety of state-of-the-art technology-enabled classrooms and laboratories. Read more about SESE at https://sese.asu.edu.

Essential Duties

The successful candidate will be expected to develop a vibrant externally funded research program, engage undergraduate and graduate students through effective teaching and mentoring, participate in service to the University and profession, and build productive relationships with faculty both within and beyond the School. The successful candidate will complement work by existing SESE faculty in developing new courses in science education and allied fields to offer to students at ASU and/or online; and in sharing the excitement, process, and results of scientific exploration and research with the local community and public.

Minimum Qualifications

- Doctorate in science education research; or a doctorate in astronomy, planetary science, geoscience, physical science, cognitive science, statistics, or related field with a doctoral dissertation or postdoctoral experience in DBER in astronomy, planetary science, and/or geoscience education or related field by time of appointment.

- Experience in quantitative and qualitative methods of discipline-based STEM educational research such as: statistical analysis, linear and structural equation modeling, ethnographic observation, and instrument design and validation.
- Evidence of scholarly contributions in DBER in astronomy, planetary science, and/or geoscience education; scholarship of teaching and learning; curriculum; assessment; and/or teacher professional development.
- Demonstrated potential to establish an externally-funded research program.
- Demonstrated success or evidence to quality teaching at the undergraduate and graduate levels.

Desired Qualifications

- Bachelors or masters degree in a physical-science or natural-science or engineering discipline; preferably astronomy, planetary science, or geoscience.
- Demonstrated success or evidence of commitment to meeting the needs of diverse student populations and/or engaging diverse communities.
- Demonstrated success or evidence of commitment to interdisciplinary collaboration.
- Experience in curriculum, course, and/or degree development and evaluation.
- A research focus with the potential to advance the mission of the University.

To apply, please submit electronically the following materials to http://apply.interfolio.com/71949: (1) a cover letter that includes contact information (including email addresses and phone numbers) for three references who may be contacted at a later stage of consideration, (2) a comprehensive curriculum vitae that includes a complete publication record, (3) a research statement describing previous work, interests, and anticipated future plans (not to exceed three pages, plus references and figures), (4) a teaching statement describing experience, interests, and philosophy (not to exceed two pages), and (5) a statement addressing how your past and/or potential contributions to diversity and inclusion will advance ASU's commitment to inclusive excellence.

Initial deadline for receipt of complete applications is January 20, 2020; Applications will continue to be accepted on a rolling basis for a reserve pool. Applications in the reserve pool may then be reviewed in the order in which they were received until the position is closed.

A background check is required for employment.

Arizona State University is a VEVRAA Federal Contractor and an Equal Opportunity/Affirmative Action Employer. All qualified applicants will be considered without regard to race, color, sex, religion, national origin, disability, protected veteran status, or any other basis protected by law. https://www.asu.edu/aad/manuals/acd/acd401.html and https://www.asu.edu/titleIX/
In compliance with federal law, ASU prepares an annual report on campus security and fire safety programs and resources. ASU's Annual Security and Fire Safety Report is available online at https://www.asu.edu/police/PDFs/ASU-Clery-Report.pdf. You may request a hard copy of the report by contacting the ASU Police Department at 480-965-3456.