

A Planetary Geologist's Swiss Army Knife: The Impact Crater

Impact craters are a ubiquitous landform on solid bodies in our solar system, and form through high-speed impact of meteorites, comets and asteroids on a planetary surface. Their recognizable shape and features have permitted scientists to extract a myriad of valuable information about the surface properties, crust, tectonic evolution and volatile/climate histories of solar system objects using remote sensing observations. The presentation will demonstrate the numerous ways in which impact craters are the “Swiss Army knife” on a planetary geologist’s toolbelt, including examples from Rogers’ research.

Deanne Rogers is an Associate Professor of Geosciences at Stony Brook University. She uses remote sensing techniques, statistical methods and laboratory spectroscopy to investigate planetary surface processes. She is a Co-Investigator on the Mars Odyssey mission and a Participating Scientist on the Mars Science Laboratory mission. She is a member of the NASA Solar System Exploration Research Virtual Institute (SSERVI) sub-node at Stony Brook University and was previously a collaborator on the Mars Exploration Rover and OSIRIS-REx missions. Rogers was named a NASA Planetary Science Division Early Career Fellow in 2008 and serves on the editorial board for the Journal of Geophysical Research--Planets. She previously served on the National Academies’ Committee on Planetary Protection. She teaches courses in remote sensing, natural hazards, environmental geology, and geomorphology.