

Title: Roving Mars: From Sojourner to Perseverance

On Feb 18, 2021 NASA landed the fifth rover on the surface of Mars to explore an ancient lake deposit in Jezero crater. Since the first rover, Sojourner, landed in 1997 our knowledge of our sister planet has expanded tremendously through a suite of orbiter, lander and rover missions. Perseverance sets the stage for the next ambitious breakthrough, the return of a well characterized set of geologic samples from Mars. Perseverance is equipped with sophisticated instrumentation to understand the environmental conditions linked to the habitability of early Mars and will collect rock cores intended to be returned to Earth. The talk will discuss the evolution of orbital information for selecting landing sites, the improvement and increased sophistication in engineering our roving vehicles and the scientific discoveries and accomplishments of our six-wheeled Martian explorers.

Dr. Wendy Calvin is Foundation Professor and Chair of the Department of Geological Sciences and Engineering at the University of Nevada, Reno. She earned her B.S. in physics and mathematics at the University of Denver in 1983 and her Ph.D. in Geophysics at the University of Colorado, Boulder, in 1991. Dr. Calvin is a planetary scientist who uses remote sensing data sets and laboratory and field analysis to identify and map the surface composition of solid planets in the solar system, including Earth. Her primary research interests include Mars surface alteration and polar processes and Earth as an analog for Mars.