



SAPIENZA
UNIVERSITÀ DI ROMA

David E. Smith, Massachusetts Institute of Technology
"Planetary Topography from Laser Altimetry"
12 April 2024 at 02:30 pm

At "Sala del Chiostro",
Faculty of Civil and Industrial Engineering
Via Eudossiana 18, 00184, Rome



Dr. David E. Smith joined the staff at the NASA Goddard Space Flight Center working on crustal kinematics and Earth's gravity field modeling. During his time at Goddard was the head of the Laboratory for Terrestrial Physics, leading an international team to measure the motions of Earth's tectonic plates using space geodetic techniques. In the late 1980s, when the U.S. decided to return to Mars, he transitioned to the field of planetary science and moved to the

Massachusetts Institute of Technology (MIT). Dr. Smith was the P.I. for laser altimeters on the Mars Global Surveyor, which provided the first global geodetic quality coordinate frame and topography for Mars. He also served on the team for the MESSENGER mission to Mercury, led the gravity and laser altimetry investigation on the Clementine mission to the Moon in the early 1990s, and was a member of the Laser Ranging science team on the NEAR Shoemaker mission to asteroid 433 Eros. At MIT he is currently the P.I. of the Lunar Orbiter Laser Altimeter (LOLA) instrument on the Lunar Reconnaissance Orbiter mission, which is still operating after nearly fifteen years in lunar orbit, and was Deputy P.I. for the GRAIL gravity mission to the Moon.

In his talk, Dr. Smith presents groundbreaking research in the field of planetary science, leveraging advanced laser altimetry. Dr. Smith and his team have revolutionized our understanding of planetary topography across various celestial bodies. These findings contribute to broader scientific inquiries, such as planetary formation and evolution, and their implications for future exploration missions.