



Entry, Descent and Landing Technology Investments to Enable a New Era of Mars Exploration

Thursday, April 19th, 2018
Reception: 2 pm | Seminar: 2:30 pm
Kay Boardrooms, Kim Bldg.



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ABSTRACT

In the past twenty years, significant advances have been made in our ability to land scientific payloads on the Mars surface. These advances have come largely from continued evolution and refinement of Viking-era spaceflight technology. In this past decade, a suite of new entry, descent and landing (EDL) technologies has been matured and is rapidly approaching readiness for mission infusion. This presentation will provide an overview of present EDL capabilities and discuss the basis for this set of technology investments. Looking forward, the benefit of these technology investments will be characterized in terms of the potential future missions that may soon be possible. While Mars exploration will be the focus of this talk, the application of some of these same technologies to science missions to other planetary bodies and a variety of Earth-based applications will also be discussed.

BIO

Robert D. Braun is a recognized authority in the development of entry, descent and landing systems and the advancement of space technology. He has contributed to the formulation, development, and operation of multiple space flight missions. He began service as the Dean of the College of Engineering and Applied Science in January 2017. From 2003 to 2016, he served as a faculty member at the Georgia Institute of Technology where he led the Space Systems Design Laboratory and founded the Center for Space Technology and Research. He was previously a member of the technical staff of the NASA Langley Research Center for 16 years, and served as the NASA Chief Technologist in 2010 and 2011. Braun is a member of the National Academy of Engineering, Vice Chair of the National Academies Space Studies Board, a Fellow of the AIAA and AAS, and the author or co-author of over 300 technical publications in the fields of atmospheric flight dynamics, planetary exploration, design optimization, and systems engineering. He received a B.S. in Aerospace Engineering from Penn State, M.S. in Astronautics from the George Washington University, and Ph.D. in Aeronautics and Astronautics from Stanford University.

