

The AIAA, ASME, and the Vibration Institute are jointly sponsoring the annual Engineers' Week dinner:

Experiences & Challenges in Planetary Exploration

AIAA Distinguished Lecturer



ROBERT D. BRAUN

February 23rd 2006
6:00-7:00 pm - Social Hour
7:00 pm - Dinner
8:00 pm - Presentation

Rensselaer Polytechnic Institute
Hefner Alumni House
1301 Peoples Ave. Troy, NY 12180

Cost:
\$20.00-- members of any society
\$25.00--guests and non-members
\$10.00--students

**For reservation please contact:
Howard M Brilliant (518)-385-3318 by February 17.**

Abstract:

Experiences & Challenges in Planetary Exploration

NASA is in the midst of a new era of planetary exploration characterized by grand scientific goals and significant engineering challenges. In this talk, NASA's strategy for the robotic exploration of Mars will be presented. Science goals and engineering challenges of the successful Mars Pathfinder, Mars Global Surveyor, Mars Odyssey and Mars Exploration Rover missions will be presented. In addition, the exciting series of missions scheduled for flight in the coming decade (Mars Reconnaissance Orbiter, Phoenix, MSL and Mars Sample Return) will be discussed. Drawing on the speaker's personal experience in these missions, this talk will also highlight the team aspects required in development of complex engineering and science systems.

Biography:

Dr. Robert D. Braun serves as the David and Andrew Lewis Associate Professor of Space Technology at the Georgia Institute of Technology. He has seventeen years experience performing design and analysis of planetary flight systems and has contributed to the design, development, test and operation of several robotic space flight systems. He was a member of the Mars Pathfinder design team from 1992 to 1997, participating in landing operations for this mission. He has also contributed to the Mars Global Surveyor, Mars Microprobe, Mars Sample Return and Mars Surveyor 2001 flight projects. From 2001-2003, Dr. Braun managed the development of the Aerial Regional-scale Environmental Survey (ARES) Mars Scout mission, a proposed 2008 scientific survey utilizing a Mars airplane. Dr. Braun serves as a systems engineering consultant to the Jet Propulsion Laboratory on the Mars Exploration Rover, Genesis and Mars Phoenix flight projects and is a member of the NASA Planetary Protection Advisory Committee.

Dr. Braun received a B.S. in Aerospace Engineering from Penn State in 1987, M.S. in Astronautics from the George Washington University in 1989, and Ph.D. in Aeronautics and Astronautics from Stanford University in 1996. He has received the 1999 AIAA Lawrence

Sperry Award, two NASA Exceptional Achievement Medals and six NASA Group Achievement Awards. He is an AIAA Associate Fellow and the principle author or co-author of over 100 technical publications in the fields of atmospheric flight dynamics, planetary exploration, multidisciplinary design optimization and systems engineering.

Menu Choices:

Chicken Tuscany or Baked Fettuccini (vegetarian), tossed garden salad, vegetable, potato or rice, roll, dessert, beverage. Soft drinks and snacks available during the social hour.

For Directions visit:

<http://www.alumni.rpi.edu/heffnerhouse/DrivingDirections.htm>

Directions to the Heffner Alumni House

From the West: From the New York State Thruway, take Exit 24, Albany, onto I-90 East. Proceed 6 miles to the exit for I-787 North. Take I-787 North to the exit for Route 7 East, Troy-Bennington. (You may notice a sign for Rensselaer and Russell Sage College at the previous exit, but the Route 7 exit provides an easier approach to the campus.) Follow signs for Route 7, Hoosick Street. At the fourth traffic light, turn right onto 15th Street. At the second traffic light, turn right onto Peoples Avenue. The Heffner Alumni House is one block down on the southwest corner.

From the East: From I-90 (Massachusetts Turnpike, Berkshire Spur of the New York Thruway), take Exit B1. Continue west 13.5 miles to the exit for I-787. Keep right on the exit ramp for I-787 North, Troy. Take I-787 North to the exit for Route 7 east, Troy-Bennington. (You may notice a sign for Rensselaer and Russell Sage College at the previous exit, but the Route 7 exit provides an easier approach to the campus.) Follow

signs for Route 7, Hoosick Street. At the fourth traffic light, turn right onto 15th Street. At the second traffic light, turn right onto Peoples Avenue. The Heffner Alumni House is one block down on the southwest corner.

From the South: From I-87, New York Thruway, take Exit 23, Albany-Rensselaer-Troy, and follow signs for I-787 North. Take I-787 North to the exit for Route 7 East, Troy-Bennington. (You may notice a sign for Rensselaer and Russell Sage College at the previous exit, but the Route 7 exit provides an easier approach to the campus.) Follow signs for Route 7, Hoosick Street. At the fourth traffic light, turn onto 15th Street. At the second traffic light, turn right onto Peoples Avenue. The Heffner Alumni House is one block down on the southwest corner.

From the North: From I-87, Adirondack Northway, take Exit 7, Route 7 East, towards Troy. Follow signs for Route 7, Hoosick Street. At the fourth traffic light, turn onto 15th Street. At the second traffic light, turn right onto Peoples Avenue. The Heffner Alumni House is one block down on the southwest corner.

Distribution of Section Newsletter

The Hudson Mohawk newsletter is posted at:
www.asme.org/sections/udson-mohawk.

Once each newsletter is posted on the Section's web page, an e-mail notification and link to the above website is sent to members who have e-mail addresses in the ASME member database. If you are an active member of ASME and did not receive an e-mail notification, please go to the ASME web site and update your membership information.

<http://members.asme.org/myasme/login/myasme.cfm>
