AIAA North Texas Section

General Meeting

Todd Barber

Senior Propulsion Engineer,

NASA Jet Propulsion Laboratory

Red Rover, Red Rover, Send Curiosity Right Over

Date & Time:
Thursday
September 26th
6:30 pm—8:30 pm

Location:
Spaghetti Warehouse
1255 W Interstate 20
Arlington, TX 76017
Google Maps Link

Cost:
$5 for members
$10 for non-members
$10 at the door

Dinner provided

RSVP:
Please register online at Event Brite

Todd Barber is a JPL senior propulsion engineer, now working as lead propulsion engineer on the Cassini mission to Saturn following part-time work on the Mars Exploration Rover (MER) mission, Deep Impact mission, and the Mars Science Laboratory (MSL) mission, which landed the large rover Curiosity on the red planet on August 5th, 2012. Cassini was launched on October 15, 1997 on its two-billion-mile, seven-year journey to the ringed planet. The MER team launched twin rovers to the red planet in June and July of 2003, and Opportunity is still going strong over nine years after landing. Todd also worked as the lead impactor propulsion engineer on Deep Impact, which successfully crashed into Comet Tempel-1 on Independence Day, 2005, at twenty-three-thousand miles per hour. Mr. Barber worked on the Galileo project for over seven years and his primary responsibility was getting Galileo into Jupiter orbit on December 7, 1995. Todd also worked part-time on the Space Infra-Red Telescope Facility (SIRTF) mission and on the Stardust mission, as well as the Mars Sample Return mission and a Mars airplane study. Todd received NASA's Exceptional Achievement Award in 1996 for his work on Galileo. He also worked three years on the Deep Space One mission, the first NASA mission to use electric propulsion (a la —Star Trek). This mission included flybys of a near-Earth asteroid, Braille, and a comet named Borrelly.

Curiosity's mission to the red planet will be covered in detail. Topics to be discussed include a bit on the history of Mars rovers at JPL, the scientific motivation for Curiosity, and the preparations for launch two days after Thanksgiving in 2011. The science suite on board this one-ton mega rover will be presented, as well as the engineering challenges involved in getting Curiosity to the launch pad, traveling 352 million miles to Mars over 8.5 months, and 'sticking the landing' following the so-called 'seven minutes of terror' on August 5th, 2012. Early mission science results will be presented as well, followed by pop-culture reaction to the rover landing.

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AIAA Section Website: https://info.aiaa.org/Regions/SC/North_Texas/default.aspx