



Todd Barber

Senior Propulsion Engineer, NASA JPL

Red Rover, Red Rover, Send Curiosity Right Over!

The AIAA Student Branch at the University of Cincinnati invites you to join us on Thursday, April 1st for a presentation on the history, motivation, and preparation of the Mars Curiosity Rover.



Thursday April 1st, 2021



7:00 PM EDT on WebEx



<https://ucincinnati.webex.com/ucincinnati/j.php?MTID=m934c6611a06b6702ab81a1522f8fa927>

Meeting number: 120 425 8790

Password: SHxmaigc692



Todd Barber is a JPL senior propulsion engineer, spending two decades 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. It “took the plunge” into Saturn’s atmosphere in 2017 after thirteen years in orbit around Saturn. The MER team launched twin rovers to the red planet in June and July of 2003, and Spirit and Opportunity lasted six years and fourteen years, respectively, into their three-month missions. 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. Todd recently completed working on the Dawn mission, an ion propulsion mission to the two largest main-belt asteroids, Vesta and Ceres. He also recently began supporting the Soil Moisture Active Passive (SMAP) mission and was the Mars2020 propulsion lead engineer for operations. Much to Todd’s delight, he is now supporting the Voyager mission as well, more than forty years after launch.

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. In 2018, Mr. Barber was also honored to receive NASA’s Exceptional Public Service Medal for heading up Cassini’s propulsion team for nearly two decades.

Mr. Barber is a native of Wichita, Kansas, and attended MIT between 1984 and 1990, obtaining B.S. and M.S. degrees in aerospace engineering, with a humanities concentration in music. He is also a composer of church choral music, with two pieces published to date. His hobbies include singing charitably and professionally, playing the piano, snagging degree confluences (exact integer latitude/longitude intersections), visiting all the U.S. tri-state corners and national parks, playing basketball (though it’s been a while), and amateur astronomy.