

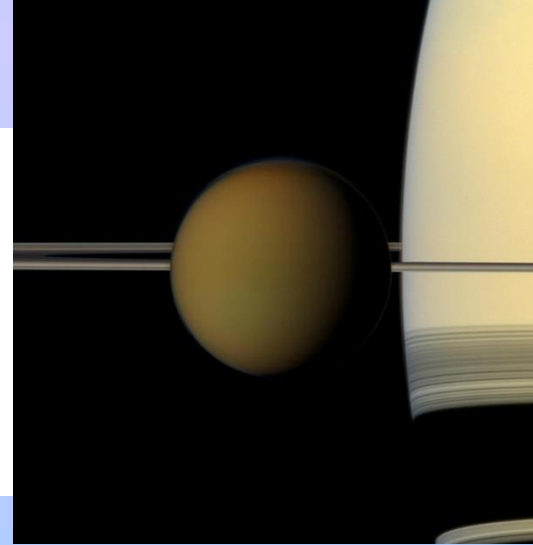


**PHYSICS & ASTRONOMY COLLOQUIUM  
UNIVERSITY OF WISCONSIN – STEVENS POINT**

**FRIDAY, MAY 12, 2017**

**TIME 2:00 pm**

**Room A109 SCI**



**Dr. Rosaly Lopes – Harlow Shapley Lecturer**

**Jet Propulsion Laboratory**

## **The Geology of Titan as Revealed by the Cassini-Huygens Mission**

### **ABSTRACT:**

The Cassini-Huygens mission has been orbiting Saturn since 2004, making new discoveries about Saturn's atmosphere, rings, and its many moons. Saturn's largest moon Titan is covered by a dense atmosphere and haze, which obscured the view of Voyager, the previous spacecraft to visit/fly-by the Saturn system. Cassini carried a probe, Huygens, which landed on Titan and revealed its surface for the first time. Cassini also carries a radar instrument that is able to penetrate the atmosphere and haze to reveal geologic features in detail. Titan has shown itself to be one of the solar system's most intriguing objects for study, with a variety of unusual materials on its surface, such as hydrocarbons. Titan is very geologically complex, and its features found large craters, cryovolcanoes, mountains, flowing channels, vast fields of dunes, and giant lakes and seas of liquid hydrocarbons. Titan appears to be very Earth-like in its geology, despite the very different surface conditions and composition, and has become known as "the Earth of the outer solar system."

Dr. Rosaly M. C. Lopes is a Senior Research Scientist at NASA's Jet Propulsion Laboratory, where she is also Manager of Planetary Science Section. She obtained a B.Sc. in Astronomy (1978) and Ph.D. in Physics (planetary science, 1986) at University College London (University of London), UK. Her research expertise is on planetary geology and volcanology and she has studied Mars, Io, and Titan. She was a member of Galileo's Near-Infrared Mapping Spectrometer team from 1991-2003 and has been the Investigation Scientist for the Cassini Titan Radar Mapper since 2003. Her service experience includes being Chair of the Division for Planetary Sciences of the AAS (2012-2013), Chair of the IAU's Outer Solar System Task Group (since 2006). She is a Fellow of the AAAS and GSA and has, among other awards, the Carl Sagan Medal from the DPS (2005) and the NASA Exceptional Service Medal (2007).

Dr. Lopes' visit to our campus is financially supported by the American Astronomical Society through the Harlow Shapley Lectureship Program, by the College of Letters and Science of the University of Wisconsin – Stevens Point through an Enhancement Grant, and by the UWSP Department of Physics and Astronomy.

***Faculty, staff and students are cordially invited to attend.***

***Refreshments will be served beginning at 1:30 pm***