



## 2011 Fall Colloquium Series

### **Dr. –Ing. Ralf Srama**

Associate Researcher, IRS, University of Stuttgart  
Senior Scientist, Max Planck Institute  
Adjunct Associate Professor, CASPER

### **In-situ Dust Instrumentation**

Dust is observed in the solar system and beyond since decades by remote sensing techniques, but the derived information about the dust particle properties is limited. In-situ dust instrumentation is capable to determine the grain properties as trajectory, speed, size, charge and composition simultaneously. The first in-situ sensors in interplanetary space were flown already more than 30 years ago with great success. In the meantime, the instruments became more sensitive and reliable. Such instruments are suited for Earth orbiting satellites, moon or planetary orbiters and interplanetary missions. This talk discusses the basic instrument principles like charge induction, impact ionisation, depolarization or time-of-flight mass spectrometry. An overview is given about various space missions and the dust sensors flown.

*Professor Srama was appointed as an Adjunct Associate Professor for CASPER in fall 2010. He is an associate researcher at IRS (Institute of Space Systems) at the University of Stuttgart and a senior scientist at the Max Planck Institute for Nuclear Physics.*

**Thursday, September 15, 2011**

**3:00 p.m.**

**Baylor Sciences Building, Room D.110  
Baylor University, Waco**

**For additional information please call Sherri Honza x1271**