



## Seminar

### **R. Steven Nerem**

Professor, Aerospace Engineering Sciences  
Associate Director, CCAR  
Fellow, CIRES

## **Weighing Water from Space: How Satellite Technology Is Being Used to Measure Changes in the Earth's Water Reservoirs**

Over the last several decades, satellite technology has fundamentally changed how we monitor water as it moves around on the surface of the Earth. Satellite altimetry has provided observations of how much water is in the oceans and satellite gravity measurements have provided observations of the distribution of water and ice on the continents. Together, these tools have led to a new understanding of the role of water in Earth system science and its potential socioeconomic impacts. The technology that allows these measurements will be reviewed and the major scientific accomplishments will be summarized. In addition, the impact of future technology developments and satellite missions will be discussed.

**Friday, February 20, 2015**  
**2:00 – 3:00 pm**  
**Koelbel Business School KOBL 330**

### **Biography:**

**R. Steven Nerem** has been a faculty member in the Department of Aerospace Engineering Sciences (AES) and the Colorado Center for Astrodynamics Research (CCAR) at the University of Colorado Boulder since 2000. He has served as Associate Director of CCAR since 2002, and became a Fellow in the Cooperative Institute for Research in the Environmental Sciences in 2003. His research interests include satellite altimetry, sea level change, Earth gravity field determination, time variations of the Earth's gravity field, planetary geodesy, precision orbit determination, and astrodynamics. Prof. Nerem is a Fellow of the American Geophysical Union (AGU), and an Associate Fellow of the American Institute of Aeronautics and Astronautics. Dr. Nerem has been honored with several awards, including the NASA Exceptional Scientific Achievement Medal (1995), the AGU Geodesy Section Award (2006), and most recently, the inaugural American Astronautical Society Earth Science and Applications Award (2014).