



WCOM: a new Chinese satellite mission for studies of the global water cycle

Dr. Jiancheng Shi,
State Key Laboratory of Remote Sensing Science, Beijing, China

May 30, 2018 (Wednesday), 5:30 PM
Arms Laboratory, Sharp Lecture Hall
California Institute of Technology, Pasadena, CA 91109

METRO LA SECTION GRSS CHAPTER OFFICERS

Kevin Romero, Northrop Grumman
Chair

Dr. Mariko Bürgin, JPL
Vice Chair

Dr. Tushar Thrivikraman, JPL
Treasurer

Dr. Rashmi Shah, JPL
Secretary

Dr. Mark Lamb, Northrop Grumman
Past Chapter Chair

Dr. Paul Rosen, JPL
Past Chapter Chair

Dr. Justin Lazear, Northrop Grumman
IEEE YP Outreach & Education Chair

METRO LA SECTION EXECUTIVE COMMITTEE

Charles Cai, PE, SCE
Section Chair

Kay Nguyen, SCE
Vice Chair

Malak Shirkhani, P.E., SCE
Treasurer

Dewan Jamir, P.E., Burns and McD
Secretary

Eremita Miranda, P.E., SCE
Education Committee Chair

AGENDA

5:30 pm – Refreshments
6:00 pm – Announcements
6:10 pm – Lecture,
Dr. Jiancheng Shi
7:00 pm – Discussion
7:30 pm – Adjournment

The IEEE GRSS Chapter Special Lecture Event

The Water Cycle Observation Mission (WCOM) is the first Earth science driven satellite mission of China with the most synergetic capabilities for global water cycle observations. WCOM is currently under engineering phase and will be launched around 2020.

WCOM aims to measure the global water cycle under global changes through synchronous acquisition of its key elements in an accurate manner. Key elements including soil moisture, ocean salinity, snow water equivalent, soil freeze-thaw, atmospheric water vapor, precipitation and other associated parameters will be measured by improving the accuracy and synchronization. The resulted consistent and accurate datasets will enable us to refine the long-term satellite observations over the past decades, and to represent the changing trend in hydrological elements which are needed for global change studies.



The mission concept of WCOM satellite is a combination of active and passive microwave remote sensors with a wide frequency coverage. The WCOM satellite will be flown with a 6:00 am/pm sun synchronous polar orbit at about 600 km height. The WCOM satellite design provides not only the most sensitive microwave information of the target element but also the environmental variables which are needed in the retrieval algorithms.



Dr. Jiancheng Shi received his B.A. in Hydrogeology and Engineering Geology from the University of Lanzhou in China, and his M.A. and Ph.D. degrees in Geography from the University of California, Santa Barbara (UCSB) in 1982, 1987, and 1991, respectively. He then worked the Institute for Computational Earth System Sciences (later Earth Research Institute) at UCSB as a research professor. In 2010, he joined Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences as director and senior research scientist at the State Key Laboratory of Remote Sensing Science in Beijing, China. His research interests are microwave remote sensing of water cycle related components. He has published more than 300 journal and conference papers. He is a PI of Chinese Global Water Cycle Mission and Fellows of IEEE and SPIE.

Directions and Parking: Parking on the Caltech campus is accessible from Michigan Avenue, south of Del Mar Avenue. Parking is free after 5 pm. Arms Lab location: <http://www.caltech.edu/map/charles-arms-laboratory-of-the-geological-sciences>

Reservation: Please RSVP with your IEEE membership # to la.grss.officers@ieee.org. You are welcome to bring your spouse as a guest. Non-members can go to www.ieee.org/join, then send your membership number.