FALL 2007 GRADUATE SEMINAR SERIES and The MORE SCIENCE PROGRAM

Friday, October 19, 2007

4:00 – 4:50 p.m. MB 0.224

Guest Speaker: Yongwei Sheng

UCLA

Yongwei Sheng is a scientist in the field of Geospatial Information Systems and Technologies (GIST) with research interests in photogrammetry, remote sensing, geographic information systems (GIS), and their applications in large-area environmental monitoring and assessment. He graduated from Earth Science Department, Zhejiang University with B.S. and M.E. in 1988 and 1991, respectively. He obtained his Ph.D. in Environmental Science, Policy and Management in 2000 from University of California, Berkeley. He was a Research Scientist at National Satellite Meteorological Center of China between 1991 and 1995. He was on faculty of SUNY College of Environmental Science and Forestry, teaching photogrammetry and remote sensing. He is now an Assistant Professor at UCLA Geography Department, teaching GIS and remote sensing. He has published ~30 journal papers, including three in Science. His current research projects include 3-D information technologies in geospatial information science, pan-Arctic assessment of decadal terrestrial water storage change, paleo- and recent lake dynamics on the Tibetan Plateau within the Upper San Pedro Partnership.

Remote Sensing of Lake Dynamics in the Context of Global Change: A Global Perspective

Sensitive to global warming, lakes are experiencing significant changes. Terrestrial lakes are a critical component in the global water cycle and balance, yet are poorly observed variable outside of the U.S. and Europe. The problem is particularly acute in remote areas, such as the lake-abundant Arctic/sub-Arctic and the Tibetan Plateau. Owing to its broad spatial coverage and monitoring capability, remote sensing appears to be the only feasible approach to inventory lake dynamics at regional and global scales. A systematic assessment of lake changes in the past ~30 years (since the first available high-resolution imagery) is crucial for us to understand the impacts of global change on lake dynamics. This talk reports the progress of several projects on satellite-based lake dynamics studies in the pan-Arctic region and on the Tibetan Plateau. In addition, this presentation extends to global lake dynamics monitoring, and summarizes the problems, challenges, critical techniques and possible solutions.