



***FALL 2007 GRADUATE SEMINAR SERIES
and The MORE SCIENCE PROGRAM***

Friday, November 16, 2007

4:00 – 4:50 p.m. MB 0.224

***Guest Speaker: Yong Q. Tian
UMASS Boston***

Yong Q. Tian is an assistant professor in GIS and Remote Sensing for Water Resources, and the Director of The Certificate Program in Geographic Information Technology in the department of Environmental, Earth and Ocean Sciences at University of Massachusetts-Boston. He completed his B.S, M.S and Ph.D. degrees from China, England, and New Zealand respectively. Tian was a research scientist in watershed science for six years in the New Zealand National Research Institutes. After transferred to USA in 2000, He was a post-doc for two years at UC Berkeley, and a faculty member at New Mexico State University. His representative research has been published in journals including Journal of Environmental Quality, Atmospheric Environment, Agricultural and Forest Meteorology and Hydrological Processes.

***Estimating Dissolved Organic Carbon Export from
Terrestrial Landscape to Coastal Water using Remote Sensing
and GIS Technologies***

A quantitative understanding of the relationship between terrestrial dissolved organic carbon (DOC) inputs and riverine DOC flux to coastal water can help in preserving or restoring marine ecosystems. Due to the complex mixing of fresh and marine water in river plume regions, DOC concentrations change dramatically over relatively small spatial scales. In this talk, I will present a recent research result of examining the sources and the transport mechanisms of DOC from terrestrial ecosystems to oceans by integrating in situ measurement, remote sensing estimating, and GIS watershed modeling. A quantitative model was created based on discrete samples collected monthly in the last two years. Daily subbasin flow was simulated using a Soil and Water Assessment Tool (SWAT) to estimate DOC flux. The study demonstrated that terrestrial sources of DOC to estuaries can be potentially associated with land cover/landuse, biophysical seasonal variation and climate conditions.