

PHD SEMINAR ANNOUNCEMENT  
Department of Statistics

Spatial Statistics for Modeling Phytoplankton

WEDNESDAY, August 27, 2003, 3:00 pm  
Eckhart Hall, Room 110, 5734 S. University Avenue

Leah Welty  
Department of Statistics, University of Chicago

**ABSTRACT**

Phytoplankton are important elements of lake and ocean ecosystems: they are the base of aquatic and oceanic food chains and may affect global climate through fixation of atmospheric carbon by photosynthesis. Statistical challenges associated with modeling phytoplankton biomass include calibration of indirect measurements, covariance model specification for anisotropic processes, combining different measurement methods, and computational limitations associated with large data sets. We present potential solutions to these problems that though developed with an eye to understanding phytoplankton dynamics are general enough to be relevant to many spatial and environmental problems.