

MINI-WORKSHOP ANNOUNCEMENT  
Department of Statistics

**The Nature of Spatial Variation in Crop Yields**

by

David Clifford  
Department of Statistics, University of Chicago

Tuesday, July 8, 2003, 9:30 am in Eckhart 110  
5734 S. University Avenue

ABSTRACT

In this talk I will propose a thesis relating to the nature of spatial variation in agricultural crop yields. An empirical study of several examples has shown that a model based on the logarithmic covariance function performs well in comparison with other alternatives. The model, an extreme point on the boundary of the Matérn class, is stationary, isotropic, and invariant under conformal transformation. Following an introduction to the data and relevant background material, recent theoretical developments that lead to increased speed and accuracy in computing will be discussed. Future plans will be outlined in the areas of theoretical, computational and applied work. These will include the development of tests for anisotropy, analytic calculations for the power model, and spatio-temporal modeling.