

MINI-WORKSHOP ANNOUNCEMENT
Department of Statistics

Space-time Modeling of Air Pollution Levels

by

Mikyoung Jun

Department of Statistics, University of Chicago

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5734 S. University Avenue

ABSTRACT

CMAQ is a numerical model which gives concentration and deposition values of various air pollutants. We propose a space-time modeling approach for combining CMAQ output with observations to produce an improved map of air pollution levels. Methodologies to evaluate CMAQ using observations in a space-time context have been developed which also give useful information about the mean and covariance structure of the process. Various models for the mean and covariance structure of the process based on this information will be suggested and some fitted results will be given. Issues of likelihood approximation due to the rather large size of the data will be discussed. Future work will be outlined, including theoretical development of a space-time covariance function on a sphere and handling of missing data.