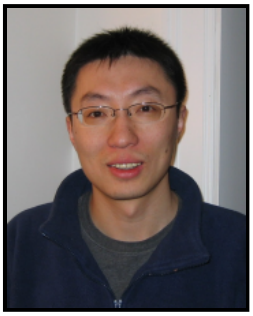

Special Guest Lectures

Estimating PM2.5 Exposure with Statistical Models Based on Satellite Remote Sensing, Meteorology, and Land Use Information

Yang Liu, Harvard University

School of Public Health, Department of Environmental Health

Johnston Hall 338
May 14, 2008 - 11:00 am

Abstract:
Fine particulate matters (PM2.5), generated by fossil fuel combustion and photochemical reactions, are a complex mixture of airborne solid and liquid particles. PM2.5 has been associated with various acute and chronic health outcomes such as minor heart attacks, pulmonary and respiratory diseases, and premature death. Studying the trend and spatial characterization of PM2.5 is important in shaping air quality standards and emissions control policies. Existing ground monitoring networks are spatially sparse, and do not cover many rapidly developing urban areas. This talk presents the general methodology and a case study of developing advanced statistical models to estimate the temporal and spatial distribution of PM2.5 using satellite data, meteorology, and land use information as major predictors.

Speaker's Bio:
Dr. Liu is currently a research associate, after working for two years as a postdoctoral research fellow, in the Department of Environmental Health at Harvard School of Public Health. His research interests include: modeling of the spatial and temporal distribution of urban air pollution; applications of satellite remote sensing in air pollution monitoring and to support pollution control policy making; satellite observations of PM2.5 concentration, composition, and size distribution; and air pollution source apportionment. Dr. Liu received his Ph.D. in Environmental Sciences and Engineering with a minor in Decision Theory from Harvard University; his M.S. in Mechanical Engeering from the University of California, and his B.S. in Environmental Sciences and Engineering from Tsinghua University, Beijing, China.

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