Biostatistics Seminar

Bayesian 2-stage Space-Time Mixture Modeling with Spatial Misalignment

Andrew B. Lawson, Ph.D.

Professor
Department of Public Health Sciences
Medical University of South Carolina

ABSTRACT

We develop a new Bayesian two-stage space-time mixture model to investigate the effects of air pollution on asthma. The two-stage mixture model proposed allows for the identification of temporal latent structure as well as the estimation of the effects of covariates on health outcomes. In the paper, we also consider spatial misalignment of exposure and health data. A simulation study is conducted to assess the performance of the 2-stage mixture model. We apply our statistical framework to a county-level ambulatory care asthma data set in the US state of Georgia for the years 1999-2008.

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LEPH 115, 60 College Street