Title: Sensitivity Analysis and Epidemiologic Triangulation

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Abstract: Epidemiologic triangulation integrates evidence from a variety of studies that have unrelated sources of bias. Sensitivity analysis assesses how a conclusion would change if assumptions were relaxed. Causal interpretations of associations between measures of health and air quality require a non-confounding assumption. Exposures are not randomly assigned nor selected, but with integrated sensor monitoring systems and annotation a key confounding parameter can be estimated. This talk introduces three important parameters for improved causal inference from observational data. We present a framework for collaboration between exposure scientists, epidemiologists, mathematicians, statisticians, and data scientists.