MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

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Bayesian testing and multiple-testing using neutral-data comparisons

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10:20am – 11:10am
Refreshments 10:00am
C405 Wells Hall

Abstract

This talk will describe a method of calibrating Bayes factors derived from a concept known as a neutral-data comparison. The result is a novel assessment of evidence that may be interpreted as a well-formulated alternative to a Bayes factor that is drastically less sensitive to the choice of prior. Neutral-data comparisons furthermore admit a novel, remarkably powerful approach with which to adjust for multiple testing. The talk will discuss approaches to selecting neutral data, including methods that consider rates of asymptotic testing consistency, and methods that connect neutral data to unit-information priors and BIC. The latter are particularly helpful for handling nuisance parameters and for working within model-choice contexts that involve multiple models. These ideas are examined and illustrated on classical inference problems and on a data set of adverse-event frequencies in a vaccine trial.

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