

BIOSTATISTICS SEMINAR

A Bayesian Approach for Analyzing Method Comparison Studies with Multiple Methods

By

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Abstract:

Evaluation of agreement between two or more methods for clinical measurement is a topic of considerable interest in health sciences. The focus of this talk is on studies comparing more than two methods. We develop Bayesian methodologies for multiple comparisons and ranking pairs of methods on the basis of their extent of agreement by modeling the data in a hierarchical model framework. Moreover, it is straightforward to incorporate covariates in the analysis. These procedures are simulation-based and can be used with any scalar measure of agreement currently available in the literature. Unlike a frequentist approach, they are easy to derive and do not require a large sample size to be valid. Simulations show that they also have reasonably good frequentist performance. The flexibility of the proposed methodologies is illustrated by applying them to two real datasets from the literature.

Monday, November 5, 2007

12:00 noon - 1:00 p.m.

Grace Crum Rollins Building, 8th floor

Rita Anne Rollins Room