BLOOMBERG SCHOOL of PUBLIC HEALTH

Department of Biostatistics

JOINT BIOSTATISTICS SEMINAR

TO INTRODUCE DRS. JEFF LEEK AND MICHAEL ROSENBLUM

(New faculty in the Department of Biostatistics)

Low Dimensional Classifiers from High-Dimensional Data

Dr. Jeff Leek, Assistant Professor

From imaging to microarrays, high-dimensional data are increasingly common in the biomedical sciences. One of the most frequent applications of these data is in the development of classifiers. I will discuss a statistical framework for building low-dimensional rank-based classifiers from high-dimensional data. This framework can be thought of as an extension of the very successful top-scoring pairs classifier for microarray data. I will discuss connections to other classification schemes and illustrate the properties of this approach on examples from microarray classification and facial recognition. Joint work with Don Geman, Giovanni Parmigiani, and Leslie Cope.

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Optimizing Group Sequential Designs that Allow Changes to the Population Sampled Based on Interim Data

Dr. Michael Rosenblum, Assistant Professor

We consider randomized trials in which the composition of the population sampled may be changed during the course of the trial, in response to data already collected. Such designs can have greater probability of demonstrating effectiveness of a treatment, compared to static designs, when it is initially uncertain in which subpopulations a treatment will be most effective. However, in allowing such data-dependent changes to the population sampled, care must be taken to ensure family-wise Type I error is controlled. We give a general method for constructing trial designs that (1) allow for changes (based on a prespecifed decision rule) to the population sampled based on interim data, (2) make no model assumptions, and (3) guarantee asymptotically correct, family-wise Type I error. Joint work with Mark van der Laan

The Johns Hopkins Bloomberg School of Public Health
Department of Biostatistics, Wednesday, September 16, 2009
Room W2030 School of Public Health, 4:00-5:00pm (Refreshments: 3:30)