



ANNOUNCES A  
COLLOQUIUM

## Dr. Ruth Heller

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will speak on

## Meta-Analysis Using Partial Conjunction Hypotheses

**Time: 3:00 – 4:00 PM**

**Date: Friday, October 31, 2008**

**Place: Tuttleman Learning Center 203AB**

### Abstract

I will present a stagewise approach for testing several hypotheses, that first finds a  $1 - \alpha$  confidence lower bound on the number of false hypotheses, and then identifies the individual false hypotheses. The lower bound is found by testing for partial conjunction hypotheses, introduced in Benjamini and Heller (2008). This lower bound is then incorporated in a stepwise procedure for testing the individual null hypotheses. The potential gain in power over common stepwise procedures may be large, since inferences from individual hypotheses are pooled to get the lower bound. Moreover, the  $1 - \alpha$  lower bound may be of interest in itself when testing a family of hypotheses. I demonstrate the usefulness of the approach in a meta-analysis that combines the results of different studies on related hypotheses. Next, I suggest a similar approach to address the problem of combining studies that examine many hypotheses. I apply the method to examples from genomics, where the need to combine studies with high dimensional data has been identified.

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