



**RUTGERS**  
UNIVERSITY

Department of Statistics & Biostatistics  
Hill Center, Room 501  
School of Arts & Sciences  
Rutgers, The State University of New Jersey  
110 Frelinghuysen Road.  
Piscataway, New Jersey 08854-8219

www.stat.rutgers.edu  
agray@stat.rutgers.edu  
848-445-2690  
732-445-3428 (fax)

## RUTGERS UNIVERSITY

### DEPARTMENT OF STATISTICS AND BIOSTATISTICS

[www.stat.rutgers.edu](http://www.stat.rutgers.edu)

## Seminar

Speaker: **Professor Tirthankar Dasgupta**  
**Department of Statistics**  
**Harvard University**

Title: **Causal inference from  $2^k$  factorial designs using the potential outcomes model**

Time: **3:20 – 4:20pm, Wednesday, December 12, 2012**

Place: **552 Hill Center**

### Abstract

A framework for causal inference from two-level factorial designs is proposed. The framework utilizes the concept of potential outcomes that lies at the center stage of causal inference and extends Neyman's repeated sampling approach for estimation of causal effects and randomization tests based on Fisher's sharp null hypothesis to the case of 2-level factorial experiments. The framework allows for statistical inference from a finite population, permits definition and estimation of estimands other than "average factorial effects" and leads to more flexible inference procedures than those based on ordinary least squares estimation from a linear model.

(joint work with Natesh Pillai and Donald B. Rubin)

**\*\* Refreshments will be served at @2:50pm in Room 502 Hill Center \*\***

