# THE CHINESE UNIVERSITY OF HONG KONG Department of Statistics

will present a seminar entitled

Adaptive Randomization in Clinical Trials

by

### Professor Feifang Hu Department of Statistics and Division of Biostatistics and Epidemiology Department of Health Evaluation Science, School of Medicine University of Virginia

on

### Tuesday, 21 November 2006 2:00 pm – 3:00 pm

in

Lady Shaw Building C4 The Chinese University of Hong Kong

#### Abstract:

While clinical trials may provide information on new treatments that can impact countless lives in the future, the act of randomization means that volunteers in the clinical trial will receive the benefit of the new treatment only by chance. In most clinical trials, an attempt is made to balance the treatment assignments equally, thus the probability that a volunteer will receive the potentially better treatment is only 50%. Response-adaptive randomization uses accruing data to skew the allocation probabilities to favor the treatment performing better thus far in the trial, thereby mitigating the problem to some degree.

In this talk, I give a brief review of adaptive randomization. Then I propose some new responseadaptive randomization procedures that have some desirable properties. The resulting randomization procedures provide efficient methods to determine whether a new treatment is effective in a clinical trial, while simultaneously minimizing a clinical trial volunteer's chance of being assigned to the inferior treatment.

# All are Welcome