

Business Statistics Summer School 2007 Seminar Series

**Bayesian Statistics and Computation:
An Advanced Tool for Quantitative Decision Making**

Speaker: Xiao-Li Meng, Department of Statistics, Harvard University

Time: 4:00-6:00 p.m., Thursday, July 12, 2007

Venue: C405

Abstract:

In business, finance, and other endeavors that require constant decision making, effectively combining quantitative information with subjective judgment is critical in achieving success and maintaining competitiveness. Bayesian methodology is ideally suited for this task because it provides a coherent and rigorous probability-based framework for statistical analysis with explicit subjective input via prior specification. The first part of this tutorial demonstrates the modeling aspects of Bayesian Statistics via a couple of examples on airline stocks and insurance mortality. Aided by movies, the second part introduces Markov chain Monte Carlo (MCMC), a general class of simulation methods that have revolutionized the Bayesian Statistics since 1990s because they made it possible to fit many realistic Bayesian models that defeat traditional computational methods.

