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Robust Portfolio Selection

by

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3:15 p.m. — Refreshments before the seminar
3:30 p.m. — Graduate Seminar
Rooms 4125A + 4125B Mechanical Engineering

ABSTRACT — Parameters in a portfolio selection problem are typically estimated from a finite amount of data. Consequently, the parameter estimates are always erroneous. Moreover, optimal solutions to the portfolio selection models tend to amplify these parameter errors several fold, resulting in "error-maximized and investment irrelevant" portfolios.

Robust optimization has recently emerged as a particularly useful methodology for optimizing performance in the presence of data errors. In this talk we will survey some of our recent work on robust formulations for portfolio selection. In particular, we will discuss a robust version of the mean-variance and the mean-CVaR portfolio selection problem. We will illustrate these methods on examples from equity portfolio management, pension-fund management, and credit portfolio management.

(Parts of this talk are joint work with Donald Goldfarb, Emre Erdogan, and Ka Chun "Alfred" Ma.)

BIO — **Garud Iyengar** received a B. Tech. in Electrical Engineering from IIT Kanpur in 1993 and a Ph.D. in Electrical Engineering from Stanford University in 1998. Since then he has been with the Department of Industrial Engineering and Operation Research Department at Columbia University where he is currently an Associate Professor.

Host: Prof. Diwakar Gupta