Seminar Announcement

Speaker: **ÖMÜR UĞUR**
(METU-IAM)

Portfolio Optimization: dynamic programming and the martingale method.

To overcome some of the drawbacks of the Markowitz mean-variance portfolio optimization, it is possible to formulate a portfolio problem in terms of maximizing an expected utility (an investor's preferences). Main ideas behind the two approaches, dynamic programming (stochastic control) and the martingale method, for the portfolio problem are to be illustrated by solving a simple example in the (binomial) discrete-time setting of a market.

In the continuous-time portfolio optimization, after having derived the Hamilton-Jacobi-Bellman (HJB) equation for the stochastic control approach, the celebrated Merton's portfolio selection problem will be solved (explicitly). Then, the martingale method for the portfolio problem will be introduced and illustrated by examples.

Although the contents and the wording above seem to avoid mathematics, the solutions are closely related with solutions of PDEs (in stochastic control approach) and optimization (in martingale method). The presentation is expected to be over-simplified whenever possible so that an undergraduate student in mathematics or finance can benefit from the highlighted ideas and enjoys the mathematics behind.

DATE: May 20, 2009

TIME: 15:45

PLACE: FEF 403 (Seminar Room)

All interested people are cordially invited. After the seminar, some cookies and soft drinks will be served.