

INDUSTRIAL ENGINEERING AND OPERATIONS RESEARCH

PRESENTS

IEOR MONDAY SEMINAR SERIES

SPRING 2008

FEBRUARY 4, 2008

3:30 – 4:30 P.M.

3108 ETCHEVERRY HALL

The Execution Game

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Abstract:

We consider a trader who aims to liquidate a large position in the presence of an arbitrageur who hopes to profit from the trader's activity. The arbitrageur is uncertain about the trader's position and learns from observed market activity. This is a dynamic game with asymmetric information. We present an algorithm for computing perfect Bayesian equilibrium behavior and conduct numerical experiments. Our results demonstrate that the trader's strategy differs in important ways from one that would be optimal in the absence of an arbitrageur. In particular, the trader's actions depend on and influence the arbitrageur's beliefs. Accounting for the presence of a strategic adversary can greatly reduce transaction costs.

joint work with Ciamac Moallemi and Beomsoo Park

REFRESHMENTS @ 3:00 – 3108 ETCHEVERRY HALL