

## DO&IT Seminar Series

**Speaker:** Michael Padilla, Postdoctoral Research Fellow  
Division of Mathematical Sciences  
Nanyang Technological University, Singapore

**Date:** Tuesday, January 17, 2012

**Time:** 2 – 3:15 pm

**Location:** Room 1335

**Title:** Intermediated Blind Portfolio Auctions

**Abstract:** As much as 12% of the daily volume on the New York Stock Exchange, with similar percentages on other major exchanges, involves sales of portfolios by institutional investors to brokers through blind portfolio auctions. Such transactions typically take the form of a first-price sealed-bid auction in which the seller engages a few potential brokers with a selling price fixed to a particular spot price in the market, brokers' bids indicating the commission they charge for providing the liquidity at that price. Importantly, sellers only provide an aggregate portfolio description to brokers to give each sufficient partial information with which to form their bids while simultaneously hiding exact details that would allow them to engage in surreptitious activities like front-running or pre-hedging.

We consider the introduction of a trusted intermediary to reduce seller transaction costs by addressing issues of informational asymmetry and adverse selection. In particular, we propose a mechanism through which each party provides relevant private information to an intermediary who ultimately reveals only the portfolio contents and price paid, and only to the seller and winning broker. Through the analysis of a game-theoretic model, we consider some of this mechanism's properties and demonstrate substantial potential benefits to sellers. For example, under reasonable assumptions a seller can reduce expected transaction costs by more than 10%. Additional ongoing work will also be briefly introduced.

**Bio:** Michael Padilla received his PhD in Electrical Engineering in September 2011 from Stanford University, where he was advised by Professor Benjamin Van Roy. Earlier he received SM and BS degrees in EE from MIT and UCSD, respectively. Prior to attending Stanford University he was an associate in the Tokyo office of Morgan Stanley. He is broadly interested in research problems that involve some subset of finance and economics, operations, and strategic interaction, using tools such as game theory, optimization, and machine learning. Currently he is a Research Fellow in the Division of Mathematical Sciences at Nanyang Technological University in Singapore.