

## DO&IT Seminar Series

**Speaker:** D.J. Wu, Associate Professor  
College of Management  
Georgia Institute of Technology

**Date:** Friday, February 20, 2009

**Time:** 2-3:30 pm

**Location:** VMH 1335

**Title:** IT Implementation Contract Design: Analytical and Experimental Investigation of IT Value, Learning, and Contract Structure

### Abstract:

This article analytically and experimentally investigates how firms can best capture the business value of information technology (IT) investments through clever IT contract design. Using a small sample of outsourcing contracts for enterprise information technology (EIT) projects in several industries, coupled with reviews of contracts used by a major enterprise software maker, the authors determine the common provisions and structural characteristics of EIT contracts, which they use to develop an analytical model of optimal contract design with principal-agent techniques. The model captures key characteristics of EIT contracts, including a staged, multi-period project structure, learning, probabilistic binary outcomes, variable fee structures, possibly risk-averse agents, and implementation risks. The model shows that incentive contracts with a multi-period structure, combined with the appropriate project scope, create greater overall value, because they prompt the implementation team to exert greater effort while also capturing learning benefits and reducing risk. The results are consistent with prior empirical findings that payoffs from enterprise resource planning implementation are concave with the scope of the project. To test and validate the model predictions and key assumptions, the authors use controlled laboratory experiments.

**Bio:**

Dr. D. J. Wu is an Associate Professor and Thomas R. Williams Wachovia Term Professor in Information Technology Management, College of Management, Georgia Institute of Technology.

Dr. Wu's current research interests are: Economics of enterprise IT, enterprise software implementation, electronic markets, and procurement auctions. Dr. Wu's work has been published in academic journal such as *Management Science*, *Journal of Management Information Systems*, *European Journal of Operational Research*, *Decision Support Systems*, among others. His work won the “Best Paper in Valuing IT Opportunities” award and the “Best Paper in Web-based Information Systems and Applications” award, at the *27th International Conference on Information Systems*, Milwaukee, WI, 2006.

Dr. Wu serves on the editorial boards of *Management Science* as an associate editor and *Production and Operations Management* as a senior editor. He obtained his B.E. in Computer Science from Tsinghua University, China, and his M.A. and Ph.D. from the Wharton School, University of Pennsylvania, USA.