



## DO&IT Seminar Series

**Speaker:** Vish Krishnan, Professor  
University of California, San Diego

**Date:** Friday, October 31, 2008

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

**Location:** VMH 1335

**Title:** R&D, IT, and Firm Performance  
(with Indranil Bardhan and Gokcen Arkali)

### Abstract:

The impact of Research & Development (R&D) investments on firm performance found in the literature has been mixed ranging from a statistically insignificant effect to a moderately positive relationship. Prior research has often been based on the assumption that investments in R&D are directly associated with product innovation and firm profitability. However, recent data presents a mixed picture since it is unclear to what extent spending on new types of IT allows workers to become more productive and contribute to the growth in firm revenues and margins. In this study, we investigate whether IT spending moderates the impact of R&D spending on firm performance. We begin with a simple analytical model that provides the basis of our empirical model and hypotheses. We test our hypotheses using archival data from 1998-2004 for a panel of 80 large firms across three industries. Our empirical results suggest that IT spending has a significant moderating effect on the relationship between R&D and firm profitability, especially in the high-tech and pharmaceutical industries. These results shed new light on the relationship between R&D and firm performance, especially in knowledge-intensive industries where the interaction effect of R&D and IT is accentuated.