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Speaker: J. Alberto Espinosa, Ph.D.
Associate Professor of Information Technology
and UPS Faculty Fellow
Kogod School of Business
American University

Date: Friday 17, 2012

Time: 2-3:30 pm

Location: Room 1335

Title: Temporal Distance, Synchronicity and Team Performance

Abstract:

We often hear that dispersed teams, enabled by information technology (IT), are affected by time zone differences or "temporal distance" in profound ways. And yet, research to date has not systematically examined whether and how gradations of temporal distance affect team performance. Furthermore, processes linking temporal distance with team performance have not been adequately investigated. In this experimental study we investigate how temporal distance affects interaction synchronicity, communication performance and team performance in three different types of tasks carried out by dyads in a laboratory setting. The experimental design is 3x4 factorial between subjects, with three task type manipulations (simple, complex, and equivocal) and four temporal distance conditions (implemented as work time overlap treatments): 100% (or full) work time overlap, 67% (or 2/3) overlap, 33% (or 1/3) overlap, and 0% (or no) overlap. Participants performed a map drawing task simulating collaboration in dispersed knowledge work teams. Our results show that temporal distance reduces interaction synchronicity and that this effect is positively moderated by task equivocality. Synchronicity in turn is associated with less conveyance of information and more convergence of meaning in team members' communication. Conveyance communication volume is positively associated with speed, whereas convergence communication volume is associated with higher product quality (i.e., accuracy).

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Bio:

J. Alberto Espinosa is currently an Associate Professor of Information Technology at the Kogod School of Business, American University. He holds a Ph.D. and Master of Science degrees in Information Systems from the Tepper School of Business, Carnegie Mellon University; a Masters degree in Business Administration from Texas Tech University; and a Mechanical Engineering degree from Universidad Catolica, Peru. His research focuses on coordination and performance in global technical projects across global boundaries, particularly distance and time separation (e.g. time zones). Prof. Espinosa employs a multiple method approach in his research, including theoretical, lab experiments, qualitative studies and survey methods, but his primary focus on on-site field studies in large technical organizations. His work has been published in leading scholarly journals, including: Management Science; Organization Science; Information Systems Research; the Journal of Management Information Systems; IEEE Transactions on Engineering Management; Communications of the ACM; Information, Technology and People; and Software Process: Improvement and Practice. His work has also been published in leading academic conference proceedings and is a frequent presenter in those conferences. He teaches introduction to information technology, business requirements analysis, database and web programming. He also has several years of working experience, first as a design engineer and later as a senior manager with international organizations directly supporting, supervising and formulating policy for finance and global IT functions, where he designed and developed a number of software applications to support geographically distributed work.