

DO&IT Seminar Series

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Date: Friday, January 27, 2012

Time: 2 – 3:30 pm

Location: Room 1335

Title: Adoption of Energy and Carbon Emission Management Systems:
Exploratory Analysis of Global Organizations*

Abstract:

Digital business practices have transformed many aspects of organizations and are beginning to transform environmental management strategies. We focus on systems for managing energy and carbon emissions (carbon management systems). We use qualitative case study data to motivate development of a conceptual framework for carbon management systems. We then use the developed framework to explore the adoption of carbon management systems using a unique data set comprising more than 200 large global firms across ten industries. Results suggest that for this set of firms, adoption propensity is greater in the presence of managerial incentives and carbon targets. In contrast, adoption propensity does not appear to be related to whether a firm is domiciled in a country that is a signatory to a global climate agreement (whether legally binding or not). We also find that firms that adopt appear to be doing so rationally, meaning that they are making decisions that enhance their environmental performance based on their own facts and specifics – rather than, for example, to engage in greenwashing. Overall, we break new ground in the rapidly emerging field of IS and environmental sustainability by developing new insights about an emerging and important class of environmental information requirements and the systems that are being employed to meet these requirements, with important implications for environmental practices and environmental performance in organizations.

Keywords: carbon management system, carbon targets, endogenous switching regression

* Co-authors are M. S. Krishnan and Terence Saldanha.

**Bio:**

Nigel Melville is an Assistant Professor of Information Systems at the Stephen M. Ross School of Business, University of Michigan. His professional experience includes new product development and research and development with Motorola and co-founding a customer relationship management software company. The common theme was innovative application of information systems to generate new sources of value in organizations, which is the focus of his research. Professor Melville is the author of numerous research articles appearing in leading academic and professional journals such as Information Systems Research, MIS Quarterly, Decision Support Systems, and Communications of the ACM (cited more than 300 times in total - ISI). He is an editor of the book Global E-Commerce: Impacts of National Environment and Policy (Cambridge University Press, 2006). Professor Melville earned a BS in electrical engineering from UCLA, an MS in electrical and computer engineering from UC Santa Barbara, and a PhD in management from UC Irvine. His hobbies include travel and fitness.