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ISM SEMINAR
Spring Term 2014

Speaker:	**Professor Youngjin Yoo (Temple University, USA and WBS)**
Title:	**Digital Design Tools and the Temporality of Design: A Case of Semiconductor Chip Design**
Date:	**Wednesday 26 February 2014**
Venue:	**M2, Teaching Centre**
Time:	**15.00**

Abstract: Designing semiconductor chips is a complex, digitally mediated process. While already using fully digitalized tools with various affordances, chip designers continue to augment their cognitive efforts by using advanced computational tools in order to deal with growing complexity of their design tasks. The introduction of such advanced computing capabilities such as simulation introduces causal ambiguity in the process, which reconfigures the designer-tool relationship, altering the temporal rhythms of work. Through a qualitative, multi-project case study at one of the world's largest semiconductor manufacturers, we show that different types of affordances lead to different constructions of the temporal modes of designing. We found that existing digital design tools afford a *uni-threaded temporal mode of designing* by a sequential ordering of human and tool actions; advanced digital design tools affords *a multi-threaded temporal mode of designing* by braiding together of multiple threads of human and tool actions.

Biography: Youngjin Yoo is the Director of Center for Design+Innovation at Temple University, where he is Professor in Management Information Systems and Strategy, and Irwin L. Gross Senior Research Fellow. He is also WBS Distinguished Research Environment Professor at Warwick Business School, UK and is a visiting faculty member at the Indian Business School. Prior to joining Temple University, he was the Lewis-Progressive Chair of Management at Case Western Reserve University. He is also leading the Urban Apps & Maps Studios, which is a university-wide interdisciplinary research and development program for urban civic innovations. His research interests include: digital innovation, design, and experiential computing. His work was published at leading academic journals such as MIS Quarterly, Information Systems Research, Organization Science, the Communications of the ACM, and the Academy of Management Journal. He is Senior Editor of MIS Quarterly, the Journal of AIS, and the Journal of Information Technology, and is on the editorial boards of Organization Science, Scandinavian Journal of Information Systems, and Information and Organization. He was a former senior editor of the Journal of Strategic Information Systems and an associate editor of Information Systems Research and Management Science. He received over $3.5 million in research grant and has worked with leading companies including Samsung Electronics, American Greetings, Bendix, Moen, Intel, Andersen Consulting, IDEO, Gehry and Partners, Lotus, NASA, Parker Hannifin, and Poly One, among others.

Contact: Alison Solman, ISM Group
Alison.solman@wbs.ac.uk
024 7652 4101

This seminar has been organised by the iSM Group.