

# NATIONAL UNIVERSITY OF SINGAPORE

School of Computing

## IS SEMINAR

**Title:**            **Communicative Action with Intelligent System Interfaces: A Review and Future Directions**

**Speaker:**        Professor Shirley Gregor, Australian National University

**Date/Time:**     9 September 2016, Friday, 10:30 AM to 12:00 PM

**Venue:**           Executive Classroom, COM2-04-02

**Chaired by:**    Dr Kankanhalli, Atreyi, Associate Professor, School of Computing  
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### ABSTRACT:

Continuing advances in technology mean an increase in the sophistication of interactions between human and machines. There is a continuing need for effective intelligent system interfaces (ISI) that enable a knowledge dialogue between humans and machines. The importance of ISI has been recognized since the early days of decision support systems and has ongoing significance in applications including recommendation agents, advanced analytics, conversational agents and personal digital assistants. Despite the importance of ISI, the related research remains scattered and the potential for integrating and systemizing knowledge across different forms of ISI has not been sufficiently realized. New forms of ISI are being developed without the benefit of lessons from the past or from experiences with other members of the same family of systems. Thus, the primary aim of this paper is to initiate the development of theory for interfaces of the intelligent systems' class, showing important relationships between specific ISI capabilities and the outcomes of their use. The ISI theory is developed using Habermas's Theory of Communicative Action as a base for a typology of ISI capabilities, complemented by a meta-synthesis of empirical studies. The paper has theoretical significance in that it represents an initial step in integrating knowledge, past and present, for an important class of systems. The establishment of an integrated body of knowledge means that researchers will be better able to identify opportunities for new contributions to knowledge. An integrated knowledge base also means a better base for the design of ISI in future research and practice.

### BIODATA:

Shirley Gregor is the foundation Professor of Information Systems at the Australian National University, where she is a Director of the National Centre for Information Systems Research. Professor Gregor's current research interests include the adoption and strategic use of information and communications technologies, intelligent systems and human-computer interface issues, and the theoretical foundations of information systems. Dr Gregor has led

several large applied research projects funded by the Meat Research Corporation, the Department of Communications, Information Technology and the Arts, the Australian Research Council and AusAID. Professor Gregor spent a number of years in the computing industry in Australia and the United Kingdom before beginning an academic career. She obtained her PhD in Information Systems from the University of Queensland.

Dr Gregor's publications include 4 edited books, 15 book chapters and over 100 papers in conferences and journals such as MIS Quarterly, Journal of the Association of Information Systems, International Journal of Electronic Commerce, International Journal of Human Computer Studies, European Journal of Information Systems and Information Technology & People.

Professor Gregor was inaugural President of the Australasian Association of Information Systems 2002-2003 and was Region 3 (Asia/Pacific) Councillor for the Association of Information Systems 2007-2009. She was a Senior Editor for MIS Quarterly 2008-2010 and was Editor-in-Chief of the Journal of the Association for Information Systems 2010-2013.

Professor Gregor was made an Officer of the Order of Australia in the Queen's Birthday Honour's list in June 2005 for services as an educator and researcher in the field of information systems and in the development of applications for electronic commerce in the agribusiness sector. In 2005 she was elected as a Fellow of the Australian Computer Society and in 2010 she became a Fellow of the Association for Information Systems.