The University of Hong Kong
Department of Psychology

Departmental Seminar

Leveraging Crowds to Bridge Communication Barriers

Date: May 20, 2013 (Monday)
Time: 11:30 a.m. – 12:30 p.m.
Venue: Social Sciences Chamber, 11/F, The Jockey Club Tower, Centennial
           Campus, HKU
Speaker: Dr. Xiaojuan Ma
           Huawei Noah's Ark Laboratory
           Hong Kong

About the Speaker:

Xiaojuan Ma, Ph.D., is researcher at Huawei Noah's Ark Lab. Before joining Noah's Ark, she was a postdoctoral researcher in the Human-Computer Interaction Institute at Carnegie Mellon University (CMU), and was awarded Computing Innovation Fellow by Computing Research Association. Dr. Ma received her Ph.D. degree from the Computer Science Department of Princeton University in 2010. She worked as a research fellow in the Department of Information Systems, National University of Singapore before joining CMU. Dr. Ma's background is in Human-Computer Interaction. She is particularly interested in human computation and crowdsourcing, multimedia-augmented communication support for both human-human and human-robot interactions, design, visual/auditory perception, and (computational) linguistics.

Abstract:

Human communication takes place in both spoken and written modes, as in face-to-face conversations, Internet Browsing, etc. However, for people with language disabilities, people with low literacy, and people with poor command of a language, receiving and expressing information via a language is difficult. Therefore, people seek alternative ways to communicate when words fail.

In multimedia communication design, it is desirable for designers to gain an understanding of how people will interpret their work. Traditional methods such as design critique, do not scale well when hundreds and even thousands of design alternatives comprise a vast design space. We propose a strategy that leverages collective judgments to help creating multimedia representations to bridge language barriers. We integrated crowdsourced evaluation with conventional design methods such as participatory design and eye tracking. We demonstrate the efficacy of this method in three different domains: augmentative and alternative communication for people with language disorders, doctor-patient communication in medical care, and design communication. We show that this strategy effectively measures the communicative value of design alternatives, uncovers factors that can influence design decisions, and supplements designer intuition.