Department of Systems Engineering and Engineering Management

Seminar Series

A Cognitive Neuroscience Approach to Multisensory Driver Interface Design

Dr. Cristy Ho

Abstract

Recent behavioural studies of multisensory integration have highlighted the existence of robust crossmodal links in information processing between various different combinations of sensory modalities. In this talk, I will demonstrate how a better understanding of these crossmodal links in information processing may have important implications for the applied domain, for example, in the design of multisensory in-car warning signals for collision avoidance. A series of laboratory-based and driving simulator studies designed to assess the relative effectiveness of various auditory and tactile warning signals in alerting and reorienting drivers' spatial attention will be presented. The potential value of such multisensory in-car warning signals for collision avoidance is discussed with reference to recent cognitive neuroscience research. The likely merits of approaching the design of effective multisensory warning signals for human operators by studying the information processing mechanisms in the human brain are also discussed.
About the Speaker

Cristy Ho received her DPhil degree in experimental psychology from the University of Oxford, United Kingdom. She completed postdoctoral research training in various laboratories including the Crossmodal Research Laboratory at Oxford and the Psychology Department at The University of Hong Kong. Her research has focused on investigating the effectiveness of multisensory warning signals in driving. In 2006, she received the American Psychology Association's New Investigator Award in Experimental Psychology: Applied. This award is given for the most outstanding empirical paper authored by a young scholar published in the Journal of Experimental Psychology: Applied.

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All are welcome!

SEEM Seminar 2011-2012/020