



**THE CHINESE UNIVERSITY OF HONG KONG**  
Department of Information Engineering

*Seminar*

**Mobile Video Perception and QoE Continuum  
for Video Streaming**

by

**Professor Chang Wen Chen**  
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**Date : 29 September, 2014 (Monday)**  
**Time : 2:30pm – 3:30pm**  
**Venue : Room 833 Ho Sin Hang Engineering Building**  
**The Chinese University of Hong Kong**

*Abstract*

It is now a common knowledge for mobile users to notice that the video viewing experience for the same device and same content can be dramatically different. In this talk, recent major progress on how mobile video perception is different from conventional TV viewing experiences in the living room will be presented first. In particular, several key factors, including display size and viewing distance, surrounding luminance, and body movement, is identified which may has significant impact on the mobile users' video perception. Then, a novel concept in Quality of Experience (QoE) continuum is presented that characterizes a cumulative evaluation process of consecutive segments that compose a story line of the streaming video. Under bandwidth constraint, streaming client may select lower-quality segment, pause playback for re-buffering, or both. The momentary QoE loss at these events is described by a cumulative function that integrates the impact of streaming events. This model is fundamentally different from all existing QoE assessment schemes in that temporally cumulative viewing experience of the users, instead of global statistics, is properly evaluated.

*Biography*

Chang Wen Chen is a Professor of Computer Science and Engineering at the University at Buffalo, State University of New York. He has been Allen Henry Endow Chair Professor at the Florida Institute of Technology from July 2003 to December 2007. He was on the faculty of Electrical and Computer Engineering at the University of Rochester from 1992 to 1996, on the faculty of Electrical and Computer Engineering at the University of Missouri-Columbia from 1996 to 2003.

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