SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
Faculty of Engineering
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Area: Signal Processing & New Media

Host: Dr Zhao Qi

TOPICS	**:**	**Mobile Video Perception and QoE Continuum for Video Streaming**
SPEAKER	**:**	**Professor Chang Wen Chen** **State University of New York at Buffalo, USA**
DATE	**:**	**27 October 2014, Monday**
TIME	**:**	**3:00 pm to 4:00 pm**
VENUE	**:**	**E5-02-32, Engineering Blk E5, Faculty of Engineering, NUS**

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.

He has been the Editor-in-Chief for IEEE Trans. Multimedia since January 2014. He has also served as the Editor-in-Chief for IEEE Trans. Circuits and Systems for Video Technology from 2006 to 2009. He has been an Editor for several major IEEE Transactions and Journals, including the Proceedings of IEEE, IEEE Journal of Selected Areas in Communications, IEEE Journal of Journal on Emerging and Selected Topics in Circuits and Systems. He has served as Conference Chair for several major IEEE, ACM and SPIE conference related to multimedia video communications and signal processing. His research is supported by NSF, DARPA, Air Force, NASA, Whitaker Foundation, Microsoft, Intel, Kodak, Huawei and Technicolour.

He received his Bachelor of Science from University of Science and Technology of China in 1983. MSEE from University of Southern California in 1986, and PhD from University of Illinois at Urbana-Champaign in 1992. He and his students have received eight(8) Best Paper Awards or Best Student Paper Awards over the past two decades. He has also received several research and professional achievement awards, including the Sigma Xi Excellence in Graduate Research Mentoring Award in 2003, Alexander von Humboldt Research Award in 2009, and the State of University of New York at Buffalo Exceptional Scholar – Sustained Achievement in 2012. He is an IEEE Fellow and SPIE Fellow.