Seminar Announcement

May 7, Thursday, 4:00pm-5:00pm
Coffee Room (Level 4, 5th SEIEE Building)

Image Quality Assessment

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Abstract

In recent years, we have witnessed a widespread use of image and video applications over networks. Because of the limitations in both transmission and imaging technologies, multimedia delivered over the networks suffers from various types of distortions. It is important for the service providers to be able to identify and quantify the quality degradation in order to maintain the users' quality of experience (QoE). This demands accurate and efficient image/video quality assessment methods which should run in real-time and achieve a performance similar to human visual perception. In this talk, I will present our techniques for reduced-reference image quality assessment and no-reference image quality assessment. If time permits, I will also present our techniques for no-reference 3D image quality assessment and image quality of experience assessment under consideration of viewing distance and compare them to human visual perception. Our results and findings will facilitate the design of digital cameras, image/video coding and transmission.

Biography

Dapeng Oliver Wu received Ph.D. in Electrical and Computer Engineering from Carnegie Mellon University, Pittsburgh, PA, in 2003. Since 2003, he has been on the faculty of Electrical and Computer Engineering Department at University of Florida, Gainesville, FL, where he is currently Professor. His research interests are in the areas of networking, communications, video coding, image processing, computer vision, signal processing, and machine learning. He received University of Florida Research Foundation Professorship Award in 2009, AFOSR Young Investigator Program (YIP) Award in 2009, ONR Young Investigator Program (YIP) Award in 2008, NSF CAREER award in 2007, the IEEE Circuits and Systems for Video Technology (CSVT) Transactions Best Paper Award for Year 2001, the Best Paper Award in Globecom 2011, and the Best Paper Award in QShine 2006. Currently, he serves on the editorial board of IEEE Transactions on Circuits and Systems for Video Technology, IEEE Transactions on Signal and Information Processing over Networks, and IEEE Signal Processing Magazine. He is the founder of IEEE Transactions on Network Science and Engineering. He was the founding Editor-in-Chief of Journal of Advances in Multimedia between 2006 and 2008, and an Associate Editor for IEEE Transactions on Wireless Communications and IEEE Transactions on Vehicular Technology between 2004 and 2007. He has served as General Chair for IEEE GlobalSIP 2015, Technical Program Committee (TPC) Chair for IEEE INFOCOM 2012, and TPC Chair for IEEE International Conference on Communications (ICC 2008), Signal Processing for Communications Symposium. He served as Chair for the Award Committee, Technical Committee on Multimedia Communications, IEEE Communications Society. He is an IEEE Fellow.