

# Keynote Speech

Dec. 7, Sunday, 1:40-2:40pm

## Scalable Video Transport over Wireless Networks

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### *Abstract*

With the emergence of broadband wireless networks and increasing demand of multimedia information on the Internet, wireless multimedia services are foreseen to become widely deployed in the near future. Real-time video transmission typically has requirements on quality of service (QoS). However, wireless channels are unreliable and the channel bandwidth varies with time, which may cause severe degradation to video quality. In addition, for video multicast, the heterogeneity of receivers makes it difficult to achieve efficiency and flexibility. To address these challenging issues, three techniques, namely, scalable video coding, network-aware adaptation of end systems, adaptive QoS support from networks, have been developed. In this talk, I will unify the three techniques and present an adaptive framework, which addresses video transport over wireless networks.

### *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 Associate Professor. His research interests are in the areas of networking, communications, video coding, image processing, computer vision, signal processing, machine learning, and network security. He received AFOSR YIP award in 2008, ONR 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, and the Best Paper Award in International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine) 2006. Currently, he serves as the Editor-in-Chief of Journal of Advances in Multimedia, and an Associate Editor for IEEE Transactions on Wireless Communications, IEEE Transactions on Circuits and Systems for Video Technology, and International Journal of Ad Hoc and Ubiquitous Computing. He was an Associate Editor for IEEE Transactions on Vehicular Technology between 2004 and 2007. He is also a guest-editor for IEEE Journal on Selected Areas in Communications, Special Issue on Cross-layer Optimized Wireless Multimedia Communications. He has served as Program Chair for IEEE International Conference on Communications (ICC 2008), Signal Processing for Communications Symposium, and as a member of executive committee and/or program committee of over 50 conferences. He is Vice Chair of Mobile and wireless multimedia Interest Group (MobIG), Technical Committee on Multimedia Communications, IEEE Communications Society. He serves as Chair for the Award Committee, Technical Committee on Multimedia Communications, IEEE Communications Society.