Many cities are embarking on ambitious plans to cover large geographical areas with high-performance wireless access networks employing a mesh architecture. In this talk, I will describe key challenges encompassing mesh network architectures, technologies, and protocols, as well as new applications enabled by mesh. I will draw on our experiences from the deployment and operation of the Technology For All mesh network in Houston, Texas, an IEEE 802.11 network serving the low-income community.

About the Speaker: Edward Knightly is a professor of Electrical and Computer Engineering at Rice University. He received the B.S. degree from Auburn University and the M.S. and Ph.D. degrees from the University of California at Berkeley. He is an associate editor of IEEE/ACM Transactions on Networking. He served as technical co-chair of IEEE INFOCOM 2005 and served on the program committee for numerous networking conferences including ICNP, INFOCOM, IWQoS, MobiCom, and SIGMETRICS. He will be the general chair of MobiSys 2007. He received the National Science Foundation CAREER Award in 1997 and the Sloan Fellowship in 2001. He is a senior member of the IEEE. His research interests are in the areas of mobile and wireless networks and high-performance and denial-of-service resilient protocol design.