THE UNIVERSITY OF MEMPHIS
Computer Science

COLLOQUIUM SERIES

QuRiNet Testbed and Related Research on Resource Management in Wireless Mesh Networks

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ABSTRACT:
Wireless mesh networks are becoming popular alternatives to wireless LANs and for cost-effective use in varied application environments. Media applications such as video and voice transmissions over mesh are evolving. There are several technical challenges for supporting such applications. Much of these challenges relate to resource management issues in multi-hop wireless communication with limited capacity. This talk will address these issues in two parts. In the first part of the talk, we will overview the ongoing experimental deployment of the Quail Ridge Wireless Mesh Network (QuRiNet); a wide-area mesh testbed encompassing 2000 acres of wild life reserve. In the second part of the talk, we will provide an overview of our ongoing research efforts on quality provisioning and management issues in wireless mesh networks. Experimental research on bandwidth availability, rate adaptation, and supporting video over mesh will be elaborated. Future plans along these lines will conclude the presentation.

Bio:

Dr. Prasant Mohapatra is currently a Professor in the Department of Computer Science at the University of California, Davis. In the past, he was on the faculty at Iowa State University and Michigan State University. He has also held Visiting Scientist positions at Intel Corporation, Panasonic Technologies, Institute of Infocomm Research (I2R), Singapore, and National ICT Australia (NICTA). He was/is on the editorial board of the IEEE Transactions on Computers, IEEE Transactions on Mobile Computing, IEEE Transaction on Parallel and Distributed Systems, ACM WINET, and Ad Hoc Networks. He has been on the program/organizational committees of several international conferences. He was the Program Vice-Chair of INFOCOM 2004, Program Co-Chair of SECON 2004, and Program Co-Chair of QShine 2006. He has been a Guest Editor for IEEE Network, IEEE Transactions on Mobile Computing, IEEE Communications, and the IEEE Computer. Dr. Mohapatra received his doctoral degree from Penn State University in 1993, and received an Outstanding Engineering Alumni Award in 2008.

Dr. Mohapatra's research interests are in the areas of wireless networks, sensor networks, Internet protocols, and QoS. Dr. Mohapatra's research has been funded though grants from the National Science Foundation, Department of Defense, Intel Corporation, Siemens, Panasonic Technologies, Hewlett Packard, Raytheon, and EMC Corporation.

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