A Novel Architecture for Cognitive Radio Networks

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Location: Dong Shang Yuan 406, Wireless and Networking Lab

Abstract

Cognitive radios are designed to sense the unused spectrum (white space) and opportunistically utilize such spectrum to support communications services without affecting the services of the incumbent spectrum users. Unfortunately, most research focuses on either cognitive radio design or spectrum sensing for mostly one-hop communications, leading to schemes only of theoretical research and impractical. In this talk, the speaker will present a novel network architecture enabling spectrum harvesting and more effective use of the harvested spectrum.

Biography

Yuguang "Michael" Fang (F'08) received a Ph.D. degree in Systems Engineering from Case Western Reserve University in January 1994 and a Ph.D. degree in Electrical Engineering from Boston University in May 1997. He was an assistant professor in the Department of Electrical and Computer Engineering at New Jersey Institute of Technology from July 1998 to May 2000. He then joined the Department of Electrical and Computer Engineering at University of Florida in May 2000 as an assistant professor, got an early promotion to an associate professor with tenure in August 2003 and to a full professor in August 2005. He holds a University of Florida Research Foundation (UFRF) Professorship from 2006 to 2009, a Changjiang Scholar Chair Professorship with Xidian University, Xi'an, China, from 2008 to 2011, and a Guest Chair Professorship with Tsinghua University, China, from 2009 to 2012. He has published over 300 papers in refereed professional journals and conferences. Dr. Fang received the National Science Foundation Faculty Early Career Award in 2001 and the Office of Naval Research Young Investigator Award in 2002, and is the recipient of the Best Paper Award in IEEE International Conference on Network Protocols (ICNP) in 2006 and the recipient of the IEEE TCGN Best Paper Award in the IEEE High-Speed Networks Symposium, IEEE Globecom in 2002. He has also received a 2010-2011 UF Doctoral Dissertation Advisor/Mentoring Award, 2011 Florida Blue Key/UF Homecoming

Distinguished Faculty Award and the 2009 UF College of Engineering Faculty Mentoring Award.

Dr. Fang is also active in professional activities. He is a Fellow of IEEE and a member of ACM. He will be the Editor-in-Chief for IEEE Transactions on vehicular Technology (2013-present). He served as the Editor-in-Chief for IEEE Wireless Communications (2009-2012) and serves/served on several editorial boards of technical journals including IEEE Transactions on Mobile Computing (2003-2008, 2011-present), IEEE Transactions on Communications (2000-present), IEEE Transactions on Wireless Communications (2002-2009), IEEE Journal on Selected Areas in Communications (1999-2001), IEEE Wireless Communications Magazine (2003-2009) and ACM Wireless Networks (2001-present). He served on the Steering Committee for IEEE Transactions on Mobile Computing (2008-2010). He has been actively participating in professional conference organizations such as serving as the Technical Program Co-Chair for IEEE INOFOCOM'2014, the Steering Committee Co-Chair for QShine (2004-2008), the Technical Program Vice-Chair for IEEE INFOCOM'2005, the Technical Program Area Chair for IEEE INFOCOM (2009-2013), Technical Program Symposium Co-Chair for IEEE Globecom'2004, and a member of Technical Program Committee for IEEE INFOCOM (1998, 2000, 2003-2008).