



Illinois Center for Wireless Systems

ICWS Seminar Series



Networking Cognitive Radios

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141 CSL

Abstract: The "spectrum paradox" is by now widely recognized. On the one hand, the projected spectrum need for wireless devices and services continues to grow, and virtually all usable radio frequencies have already been allocated. On the other hand, extensive measurements conducted in recent years reveal that much of the prized spectrum lies unused at any given time and location. These measurements form the key rationale for secondary spectrum use through networked cognitive radios that are capable of sensing, learning, and exploiting spectrum opportunities while limiting interference to legacy systems.

In this talk, we discuss challenges and design issues that are unique to cognitive radio networks. Some of our recent work on spectrum sensing and cognition, spectrum opportunity tracking, and cognitive networking will be presented.

Biography: <http://www.ece.ucdavis.edu/~qzhao/> Qing Zhao received the Ph.D. degree in Electrical Engineering in 2001 from Cornell University. From 2001 to 2003, she was a communication system engineer with Aware, Inc. in Massachusetts. She returned to academe in 2003 as a postdoctoral research associate at Cornell University. In 2004, she joined the ECE department at UC Davis where she is currently an assistant professor. Her research interests are in the general area of signal processing, communications, and wireless networking.

Qing Zhao received the 2000 IEEE Signal Processing Society Young Author Best Paper Award. She is an associate editor of IEEE Transactions on Signal Processing and an elected member of the Signal Processing for Communications committee of the IEEE Signal Processing Society. She is the PI of several NSF and DoD projects.

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