



## **IEEE Vehicular Technology Chapter Presentation**

### **Sensing, Scheduling, and Performance Optimization in Cognitive Wireless Personal Area Networks**

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**Abstract:** Cognitive radio technology can improve spectral utilization in many network applications and thus alleviate the shortage of spectrum opportunities that impedes further development of wireless communications. While the original area of application of cognitive technology was for wireless regional area networks, cognitive capabilities might offer substantial improvements in personal area networks as well. In this talk, I will present some results pertaining to wireless personal area networks that use adaptive frequency hopping to achieve opportunistic/cognitive spectrum access (CPANs). Issues related to spectrum sensing strategies at the MAC level, the tradeoff between spectrum sensing and data communication, and scheduling and performance optimization, will be discussed, and some avenues for future research highlighted.

**Vojislav B. Mišić** (PhD Belgrade, Serbia) is Professor of Computer Science at Ryerson University in Toronto, ON. His research interests include modeling and performance evaluation of wireless networks, and systems and software engineering. He has published over 50 papers in prestigious archival journals and well over a hundred papers at international conferences. He serves on the editorial boards of Peer-to-Peer Networks and Applications journal (Springer) and Int. Journal of Parallel and Emergent Distributed Systems (Taylor & Francis). He is a Senior Member of IEEE, and member of ACM and AIS.

**DATE:** Monday, December 14, 2009

**TIME:** 2:00-3:00pm

**LOCATION:** EIT4149, University of Waterloo

**Invited By Professor Weihua Zhuang**