A Game-Theoretic Approach for Spectrum Sharing in Unlicensed Bands

Alireza Babaei

Postdoctoral Fellow, Department of Electrical and Computer Engineering
Auburn University, Auburn, AL

Abstract

Spectrum sharing in unlicensed band (e.g., Industrial, Scientific and Medical (ISM), Unlicensed National Information Infrastructure (UNII), etc.) is considered to be a popular and successful instance of coexistence of multiple wireless systems. The idea is that a set of networks, e.g., 802.11 networks, Bluetooth systems, etc. are allowed to coexist and share the common spectrum. The systems do not cooperate and each selfishly tries to make the most out of the spectrum. In this talk we investigate how Game theory can be used to enforce fair and efficient spectrum sharing rules among the systems.

Bio

Alireza Babaei is a Postdoctoral Fellow in the Wireless Engineering Research and Education Center, Department of Electrical and Computer Engineering, Auburn University under the supervision of Dr. Prathima Agrawal. He received his PhD in Electrical Engineering from George Mason University, Fairfax, VA in 2009 and is the recipient of the outstanding graduate student award from GMU. He has served as guest editor for IEEE Wireless Communications Magazine and is a member of IEEE. His active areas of research include wireless communications and networking, modeling and performance evaluation of random networks and cognitive radio networks.

FRIDAY, SEPTEMBER 24, 2010, 3:00 P.M.
235 BROUN HALL

http://www.eng.auburn.edu/~pagrawal/seminar/2010