

IEEE Distinguished Lecturer Talk

Stochastic Tools used to Improve and/or to evaluate MAC layer in wireless networks

Presenter: Professor Jalel Ben-Othman
Date: Friday, 3 June 2016
Time: 11:00am to 1:00pm
Location: The University of Sydney, School of Electrical and Information Engineering Building (J03), Multi-Purpose Function Room 460.
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Abstract:

Wireless and mobile networks have many advantages such as easy deployment, user mobility and network access to users regardless of their location. The most critical problems that arise in these networks are on the resource allocations such as the limited bandwidth, the propagation (multi-path, fading, distortion) and security since communications are transmitted over radio waves.

In this lecture, work done to model/Improve Quality of Service in Wireless networks will be presented with the following three different methods:

In the first part, a new model based on Markov chains is presented to model the different service classes defined in IEEE 802.16. In the second part, a new AC that we have defined for IEEE 802.16 and we have evaluated using Stochastic Automata Networks will be presented. Finally, a stochastic comparison will be presented for admission control in wireless networks.

Speaker's biography:



Prof. Ben-Othman received his B.Sc. and M.Sc. degrees both in Computer Science from the University of Pierre et Marie Curie, (Paris 6) France in 1992, and 1994 respectively. He received his PhD degree from the University of Versailles, France, in 1998. He was an Assistant Professor at the University of Orsay (Paris 11) and University of Pierre et Marie Curie (Paris 6), in 1998 and 1999 respectively. He was an Associate Professor at the University of Versailles from 2000 to 2011. He is currently full professor at the University of Paris 13 since 2011. Dr. Ben-Othman's research interests are in the area of wireless ad hoc and sensor networks, Broadband Wireless Networks, multi-services bandwidth management in WLAN (IEEE 802.11), WMAN (IEEE 802.16), WWAN (LTE), VANETS, Sensor and Ad Hoc Networks, security in wireless networks in general, wireless sensor ad hoc networks and vehicular ad hoc Networks. He is IEEE Comsoc distinguished lecturer since January 2015. He is member of the IEEE comsoc technical service board since January 2016. He is an active member of IEEE Communication software, CIS-TC, and WTC.