

## Invited Speaker: Dr. Azzedine Boukerche



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### **The Impact of Mobility on Mobile Ad Hoc Networks**

**Abstract:** Mobile Ad Hoc Networks (MANETs) are wireless networks where nodes exchange of messages does not rely on any previously deployed infrastructure. Portable devices and computational equipment embedded to vehicles both capable of wireless communication have become extremely popular making it possible the establishment of wide ubiquitous networks. Users connected to such networks can access the provided services anywhere and at anytime. Nevertheless, this architecture suffers of a highly unstable topology since links between nodes are constantly breaking due to users movement. Mobility has a paramount influence on the network topology. Therefore, it is of utmost importance to understand the impact of mobility in MANETs. In this work, we perform a thorough analysis on how mobility shape the behavior of MANETs. Our range of observation varies from general MANETs composed by walking users to High-Speed MANETs formed by vehicles moving either in a city environment or in a highway scenario. We were able to identify underlying characteristics of these networks and even showed how these observations can be used to improve the performance of general MANETs.

## **BIOGRAPHY**

Azzedine Boukerche is a Full Professor and holds a Canada Research Chair position in distributed simulation and wireless and mobile networking at the University of Ottawa. He is the Founding Director of PARADISE Research Laboratory at Ottawa U. Prior to this, he held a faculty position at the University of North Texas, USA. He worked as a Senior Scientist at the Simulation Sciences Division, Metron Corporation located in San Diego. He was also employed as a Faculty at the School of Computer Science McGill University, and taught at Polytechnic of Montreal. He spent a year at the JPL/NASA-California Institute of Technology where he contributed to a project centered about the specification and verification of the software used to control interplanetary spacecraft operated by JPL/NASA Laboratory.

**Home Page:** <http://www.site.uottawa.ca/~boukerch/>

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