

IEEE ComSoc Distinguished Lecturer Tour

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Speaker: Dr. Bechir Hamdaoui, IEEE Distinguished Lecturer, Oregon State University

Title: Unleashing the power of Internet of Things: challenges and key technology enablers.

Abstract: Internet of Things (IoT) has broadly been viewed as the “next industrial revolution”, with enormous potential for changing how people interact, think and live. IoT is making existing applications more efficient in ways that were previously impossible, and is paving the way for a myriad of new distributed, Internet-scale applications and services. Realtime data analytics, situation-awareness, emergency management, precision healthcare, and augmented reality are just a few examples of such emerging applications and services. In essence, these applications rely on large numbers of IoT devices to gather large amounts of streamed data and collaboratively process it to support realtime decision making. However, there are major obstacles and challenges that lie in the way, touching all the various aspects of the IoT ecosystem. In this talk, we shed some light on the key challenges IoT is facing, and highlight potential solutions that can be used to overcome these challenges. Challenges of particular focus are those that pertain to scalability, resource availability, and energy efficiency. We show how one can leverage key emerging technologies, such as cloud computing and virtualization, to overcome energy and spectrum resource limitation, ensure low latency, and avoid traffic jams.

Biography:

Dr. Bechir Hamdaoui is an IEEE Communication Society (ComSoc) Distinguished Lecturer and a Senior Member of IEEE. He is presently an Associate Professor in the School of Electrical Engineering and Computer Science (EECS) at Oregon State University, USA. He received the Diploma of Graduate Engineer (1997) from the National School of Engineers at Tunis, Tunisia. He also received M.S. degrees in both Electrical and Computer Engineering (2002) and Computer Sciences (2004), and the Ph.D. degree in Computer Engineering (2005) all from the University of Wisconsin at Madison.

Dr. Hamdaoui's research interest spans various areas in the fields of computer networking, wireless communications, and mobile computing. His current focus is on complex networked systems, cloud computing & virtualization, cognitive wireless networking, and Internet of Things. He has won several recognition awards, including the 2016 EECS Outstanding Research Award and the 2009 NSF CAREER Award. He has led several interdisciplinary collaborative research projects funded by various federal agencies and private companies, including NSF, QNRF, CISCO, and CIMMYT. He has published over 120 refereed articles mostly in top IEEE transactions, magazines, and conferences.

Dr. Hamdaoui is presently an Associate Editor for IEEE Transactions on Wireless Communications (2013-present). He also served as an Associate Editor for other journals, including IEEE Transactions on Vehicular Technology (2009-2014) and Wireless Communications and Mobile Computing Journal (2009-2016). He is currently serving as the chair for the 2016 IEEE INFOCOM Demo/Posters program and the chair for the 2016 IEEE GLOBECOM Mobile and Wireless Networks symposium. He has also served as the chair for the 2011 ACM MOBICOM's SRC program, and as the program chair/co-chair of many IEEE symposia/workshops, including GC, ICC, IWCMC, CTS, and PERCOM. He also has served on the TPC of many conferences. He is a member of IEEE Computer Society, IEEE Communications Society, and IEEE Vehicular Technology Society.