



The IEEE Montreal Section and Concordia University are inviting all interested IEEE Montreal members and other engineers and students to a technical seminar on:

“Cloud Management: Knowing is Half the Battle”

By: Professor Raouf Boutaba

**D. R. CHERITON SCHOOL OF COMPUTER SCIENCE
UNIVERSITY OF WATERLOO
WATERLOO, ONTARIO**

DATE: Wednesday September 17, 2014.

Seminar Time: 6:00 p.m. – 8:00 p.m.

PLACE: 1515 Ste. Catherine West (corner with Guy St.), Concordia University, Electrical & Computer Engineering Department, Room EV002.184 (with refreshment)

For info, please contact **Dr. Anader Benyamin-Seeyar** at anader.benyamin@ieee.org or <http://ewh.ieee.org/r7/montreal/chapters/COM/index.html>.

Abstract :

The past few years have witnessed the rise of cloud computing, a paradigm that harnesses the massive resource capacity of data centers to support Internet services and applications in a scalable, flexible, reliable and cost-efficient manner. However, despite its success, recent literature has shown that effectively managing resources in production cloud environments remains to be a difficult challenge. A key reason behind this difficulty is that both resources and workloads found in production environments are heterogeneous. In particular, large cloud data centers often consist of machines with heterogeneous resource capacities and performance characteristics. At the same time, real cloud workloads show significant diversity in terms of priority, resource requirements, demand characteristics and performance objectives. Consequently, finding an effective resource management solution that leverages resource heterogeneity to support diverse application performance objectives becomes a difficult problem. The focus of this talk will be on understanding the research challenges introduced by resource and workload heterogeneity in production cloud environments. We will first provide a characterization of workload and resource heterogeneities found in production data centers, and highlight the key challenges introduced by them. We will then describe our recent work towards addressing some of these challenges.

Dr. Raouf Boutaba's University of Waterloo, short Bio:

Raouf Boutaba is a Professor of Computer Science at the University of Waterloo and a David Cheriton Faculty Fellow in Canada. He is the founding Editor in Chief of the IEEE Transactions on Network and Service Management (2007-2010), and on the editorial board of several other journals. He served as the general or technical program chair for a number of international conferences. His research interests are in the areas of network and service management. He has published extensively in these areas and received several journal and conference Best Paper Awards such as the IEEE 2008 Fred W. Ellersick Prize Paper Award. He also received several other recognitions such as the Premier's Research Excellence Award, Industry research excellence Awards, fellowships of the Faculty of Mathematics, of the David R. Cheriton School of Computer Science and outstanding performance awards at the University of Waterloo. He has also received the IEEE Communications Society Hal Sobol Award and the IFIP Silver Core in 2007, the IEEE Communications Society Joe LociCero and the Dan Stokesbury awards in 2009, the IEEE Communications Society Salah Aidarous award in 2012, and the McNaughton Gold Medal in 2014. He served as a distinguished lecturer for the IEEE Computer and Communications Societies. He is fellow of the IEEE and the Engineering Institute of Canada.