The IEEE Montreal Section and Montreal Communications & Information Theory Chapter is inviting all interested IEEE Montreal members and other engineers and students to a technical seminar on:

Multigigabit Wireless Multimedia Communications:
Future and Core Technologies

By: Professor Vijay K. Bhargava, FRSC, FIEEE
University of British Columbia
Candidate for IEEE Communications Society President-Elect

DATE: **Monday May 10, 2010**.

TIME: Refreshments and Networking: **6:00 p.m.; Seminar: 6:15 p.m. – 7:45 p.m.**
PLACE: Concordia University, Electrical & Computer Engineering Department, **Room EV003.309**
ADMISSION: Free (preferred getting your participation note).

For info, please contact Dr. Anader Benyamin-Seeyar at anader.benyamin@ieee.org or http://ewh.ieee.org/r7/montreal .

Abstract :

The millimeter wave technology has been known for several decades but was mainly used for military communications. In this presentation we specifically focus on 60 GHz band as recently a massive unlicensed spectrum up to 9GHz has been allocated worldwide in this band for civilian communication. This spectrum is a very promising candidate for multigigabit wireless transmission systems including wireless personal area network (WPAN) as well as Wireless local area network (WLAN) usage. The effective interference level in this band is less severe then those WLAN systems deployed in the congested WiFi bands (2-2.5 GHz and 5-5.8 GHz). As a result, higher frequency reuse can be achieved, leading to a very high throughput network. After summarizing the current status of standardization activities for 60 GHz band we will focus on a series of technical challenges that need to be resolved before the full deployment of multigigabit wireless multimedia communications. These include 60 GHz propagation and antennas, CMOS circuit design, modulation schemes, LDPC-based error correction schemes and MAC layer design.

Dr. Vijay Bhargava's short Biography:

Vijay Bhargava, an IEEE volunteer for three decades, is Professor in the Department of Electrical and Computer Engineering at the University of British Columbia in Vancouver, where he served as Department Head during 2003-2008. As a senior level IEEE volunteer, he has lectured in 66 countries and assisted IEEE Presidents in negotiating sister society agreements in India, Japan and Russia.

Vijay has served as the IEEE Vice President for Regional Activities Board, now known as Member and Geographic Activities (MGA) Board. During his tenure the program known as Graduates of the Last Decade (GOLD) was conceived and he developed a profound understanding of how IEEE Societies, Regions, Sections, Chapters and Student Branches work. He is the Founder of the IEEE Pacific Rim Conference on Communications, Computers and Signal Processing and of the Canadian Conference on Electrical and Computer Engineering.

Vijay played major role in the creation of the IEEE Communications and Networking Conference (WCNC) and *IEEE Transactions on Wireless Communications*, for which he served as the Editor-in-Chief during 2007-2009. In 2010, he was appointed for a two year term as the IEEE Communications Society Director of Journals. He is a past President of the IEEE Information Theory Society.

Vijay Bhargava is a candidate for IEEE Communications Society President-Elect in the forthcoming election.