



IEEE Hong Kong Chapter of CAS/COM



Department of Electrical & Electronic  
Engineering

**IEEE Communication Society Distinguished Lecturer Seminar**

**Multigigabit Wireless Multimedia Communications: Future and Core Technologies**

By

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**University of British Columbia, Vancouver, Canada**

**Candidate for IEEE Communications Society President-Elect**

Date : 19 May 2010 (Wednesday)

Time : 5:00 p.m. to 6:30 p.m. (Light refreshment starts at 4:45 p.m.)

Venue : Lecture Theatre CYC –B, Chow Yei Ching Building

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**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 than 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

**ABOUT THE SPEAKER**

**Vijay Bhargava**, an IEEE volunteer for three decades is a 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. He has held short term visiting appointments at the University of Hong Kong and the City University of Hong Kong. Twice, during his sabbatical year, he has been a Visiting Professor at the Hong Kong University of Science and Technology. He is a Fellow of the IEEE and of the Royal Society of Canada.

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 assisted IEEE Presidents in negotiating sister society agreements in India, Japan and Russia. He assisted IEEE Hong Kong Section in the establishment of their Information Theory Chapter. Vijay played a 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.

**ALL ARE WELCOME**

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