Distinguished Lecture

Cognitive and Cooperative Communications: The Quest for Realizing the Ultimate Wireless Dream

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Date:	**18 December 2008, Thursday**
Time:	**10:30 a.m. – 12:00 noon**
Venue:	**G3, Electrical Engineering Building**

Abstracts

Undoubtedly wireless communications will certainly continue to witness spectacular developments due to the emergence of new interactive multimedia applications and highly integrated systems driven by the rapid growth in information services and microelectronic devices. Broadband data access at high transmission rates will be needed to provide users packet-based connectivity to a plethora of services. It is also almost certain that future wireless networks will consist of complementary systems with a set of different standards and technologies along with different requirements and complementary capabilities that will offer users ubiquitous wireless connectivity between mobile and desktop computers, machines, game systems, cellular phones, consumer electronic products, and other hand-held devices. A key requirement in future wireless system is the ability to provide broadband connectivity with end-to-end Quality of Service (QoS), high network capacity, and throughput at a low cost for a highly dense wireless environment.

This talk will discuss the challenges facing future wireless systems and describe some of the key enabling technologies with a special emphasis on cognitive ubiquitous communications networks, cooperative communications, dynamic resource allocation, along with cross-layer design and optimization.

Professor Letaief received the Ph.D. Degrees in Electrical Engineering from Purdue University, USA in 1990. From 1990 to 1993, he was a faculty member at the University of Melbourne, Australia. Since 1993, he has been with HKUST where he is a Chair Professor and Head of the Electronic and Computer Engineering Department and the Director of the Hong Kong Telecom Institute of Information Technology.

Dr. Letaief is an acknowledged authority in the area of wireless and mobile communications. He served as consultants for different organizations and is the founding Editor-in-Chief of the IEEE Transactions on Wireless Communications. He has served on the editorial board of other prestigious journals including the IEEE Journal on Selected Areas in Communications - Wireless Series (as Editor-in-Chief). He has been involved in organizing a number of major international conferences and events. These include serving as the Co-Technical Program Chair of the 2004 IEEE International Conference on Communications, Circuits and Systems, ICCCS'04; General Chair of the 2007 IEEE Wireless Communications and Networking Conference, WCNC'07; as well as the Technical Program Co-Chair of the 2008 IEEE International Conference on Communication, ICC'08.

In addition to his active research and professional activities, Professor Letaief has been a dedicated teacher committed to excellence in teaching and scholarship. He received the Mangoon Teaching Award from Purdue University in 1990; the Teaching Excellence Appreciation Award by the School of Engineering at HKUST (4 times); and the Michael G. Gale Medal for Distinguished Teaching (Highest university-wide teaching award and only one recipient/year is honored for his/her contributions).

He is a Fellow of IEEE and is currently serving as an elected member of the IEEE Communications Society Board of Governors, and an IEEE Distinguished lecturer. He also served as the Chair of the IEEE Communications Society Technical Committee on Personal Communications, Chair of the 2008 IEEE TAB/MGA Visit Program, and is currently serving as the Chair of the Steering Committee of the IEEE Transactions on Wireless Communications. He is the recipient of the 2007 IEEE Communications Society Publications Exemplary Award.

* * * * * **ALL ARE WELCOME** *** * * * *** **For ENQUIRIES:** Dr. Wei Zhang (Ph: 9385 4033)