Adaptive Wireless Communications for Mobile Broadbands
by
Professor Taejoon Kim
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Date: August 28, 2015 (Friday)
Time: 2:00–3:30 pm
Venue: Rm.222, Ho Sin Hang Engineering Building, CUHK

Abstract:
The ever-growing data traffic has projected the potential spectrum shortage which has been accelerated by the proliferation of smartphone and an explosion of data-intensive applications. Traditionally, almost all the improvement in spectral efficiency has been resulted from the use of multiple-input multiple-output (MIMO) systems where the effective cell size happens to be small. If we continue our growth in data demand, substantial boost of the achievable throughput is inevitable, which is, however, very challenging because spectrum is a limited resource. The key to tackle the problem is to introduce technologies that adapt wireless systems to the changes in networks so that the systems efficiently resort to all the available network resources. The talk will introduce a set of techniques that addresses a part of the problem with the emphasis on MIMO adaptation, cross-layer adaptation, and resource allocation in both cellular and local area networks.

Biography:
Taejoon Kim earned Ph.D. in Electrical and Computer Engineering, Purdue University in 2011. Before joining City University of Hong Kong as an assistant professor in 2013, he was a Senior Researcher in the Nokia Research Center (NRC), Berkeley, California and a postdoctoral researcher at KTH in Sweden. He was the recipient of the Korean government Ph.D. scholarship for studying abroad in 2007 and the Best Paper Award in IEEE PIMRC 2012. His research interests are in the adaptive wireless communications and MIMO systems.

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