THE UNIVERSITY   **OF HONG KONG**

INFORMATION THEORY SEMINAR

A Graph Theoretical Approach to Network Encoding Complexity

Mr. Li Xu

The University of Hong Kong

Abstract

In a directed acyclic network with multiple pairs of sources and sinks, there is a group of edge-disjoint paths between each pair. The paths from different groups may have to merge with each other. No matter what groups we choose, the number of mergings among them is always bounded by a function of the minimum edge-cuts between the pairs of sources and sinks, which is independent of the size and topology of the network. This function is closely related to the network encoding complexity for many significant networks. We compute some exact values of and bounds on it.

Date: October 18, 2012 (Thursday)

Time: 4:00 – 5:00pm

Place: Room 309, Run Run Shaw Bldg., HKU

All are welcome