



THE CHINESE UNIVERSITY OF HONG KONG  
Institute of Network Coding  
and  
Department of Information Engineering  
*Seminar*



## Network Coding with Distributed Coding Functions

by

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**Date : 12 April 2013 (Friday)**  
**Time : 2:30 - 3:30 pm**  
**Venue : Room 833 , Ho Sin Hang Engineering Building**  
**The Chinese University of Hong Kong**

### Abstract

A novel symbolic approach to network coding is presented. The formalism makes it possible to model potential network changes including link failures, point failures and noisy channels by ideas akin to Kripke's possible world semantics from logic and philosophy. The main result is a max-flow min-cut theorem for networks with distributed coding functions. We illustrate the theorem through a number of examples. The talk will be non technical, focus on the ideas and present problems for possible future collaboration.

### Biography

Dr. Søren Riis received his PhD in mathematical logic from the University of Oxford 1994. He worked as a Associated Research Professor at the international PhD School in Aarhus (1994-1999) and had since 2000 been at Queen Mary University of London where he currently is a director of the center of Discrete Mathematics and a Reader of Computer Science.

His research includes Discrete Mathematics, Proof Complexity, Algebraic proof complexity, Information Theory and Network Coding.

**\*\* ALL ARE WELCOME \*\***