



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



**Network Coding with Correlated Sources, and  
Some Results on The General Broadcast Channel**

by

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**Date : 12 January 2011 (Wednesday)**

**Time : 11:30 am - 12:30 pm**

**Venue : Room 833, Ho Sin Hang Engineering Building  
The Chinese University of Hong Kong**

*Abstract*

In this presentation, I will briefly talk about the problems I have been working on in collaboration with several leading researchers in the past 5 months in the Institute of Network Coding. I will begin by talking about a technique for proving converses to the network coding problem with correlated sources based on “uncertainty computations”, and show how one can strictly improve over the traditional cut set bound. This is a joint work with Dr. Yang, Prof. Jaggi and Prof. Yeung. Then I will summarize a collection of results that Prof. Nair, I and two of Prof. Nair’s students have on the general broadcast channel. These include finding the capacity region of new classes of broadcast channels, answering an important open problem regarding the best known outer bound, and several other results and insights which enhance our understanding of the broadcast channels.

*Biography*

Amin Aminzadeh Gohari is a postdoc at INC at the Chinese University of Hong Kong. He received B.Sc. from Sharif University, Iran in 2004, and Ph.D in electrical engineering at the University of California, Berkeley in 2010. He received the 2010 Eli Jury Award and the 2009-2010 Bernard Friedman Memorial Prize in Applied Mathematics both from UC Berkeley. He also received the Gold Medal from the 41<sup>st</sup> International Mathematical Olympiad, and the First Prize from the 9<sup>th</sup> International Mathematical Competition for University Students.

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