**THE UNIVERSITY**　　　　**OF HONG KONG**

*Institute of Mathematical Research*
*Department of Mathematics*

# INFORMATION THEORY SEMINAR

# Introduction to Non-asymptotic Equipartition Property

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**Abstract**

In this seminar, I will talk about an interesting work by Yang and Meng which can be summarized as follows: The asymptotic equipartition property (AEP) is one of the most fundamental and surprising results in information theory, which states that almost every event has approximately equal probability for sufficiently large block length. However, AEP is not well applicable in the practical cases when the block length is not large. Yang and Meng set up the non-asymptotic equipartition property which quantifies the variance of the probabilities of almost all events for any finite block length, and they also stablished the fixed rate source coding theorem for non-asymptotic circumstance.

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| Date: | December 6, 2012 (Thursday) |
| Time: | 4:00 – 5:00pm |
| Place: | Room 309, Run Run Shaw Bldg., HKU |

*All are welcome*