

*For favour of posting*

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE  
THE UNIVERSITY OF HONG KONG

Departmental Seminar

**Dr. Lucy Lu XIA**

Department of Statistics  
Stanford University  
USA

will give a talk  
entitled

## **GENERAL GRAPHICAL MODEL VIA PROJECTED DISTANCE COVARIANCE**

### **Abstract**

Measuring conditional dependence is an important topic in econometrics with broad applications including graphical models. Under a factor model setting, a new conditional dependence measure based on projection and distance covariance is proposed. The corresponding conditional independence test is developed with the asymptotic null distribution unveiled where the number of factors could be high-dimensional. It is also shown that the new test has control over the asymptotic significance level and can be calculated efficiently. A generic method for building dependency graphs without Gaussian assumption using the new test is elaborated. Numerical results and real data analysis show the superiority of the new method.

on

**Thursday, January 24, 2019**

*(Refreshments will be served from 9:15 a.m. outside Room 301 Run Run Shaw Building)*

**9:30 a.m. – 10:30 a.m.**

at

**Room 301, Run Run Shaw Building**

**Visitors Please Note that the University has limited parking space. If you are driving please call the Department at 3917 2466 for parking arrangement.**

All interested are welcome