DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Departmental Seminar

# Dr. Clement LEE

School of Mathematics, Statistics and Physics
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UK

will give a talk
entitled

# A HIERARCHICAL MODEL OF NON-HOMOGENEOUS POISSON PROCESSES FOR TWITTER RETWEETS

## Abstract

We present a hierarchical model of non-homogeneous Poisson processes (NHPP) for information diffusion on online social media, in particular Twitter retweets. The retweets of each original tweet are modelled by a NHPP, for which the intensity function is a product of time-decaying components and another component that depends on the follower count of the original tweet author. The latter allows us to explain or predict the ultimate retweet count by a network centrality-related covariate. The inference algorithm enables the Bayes factor to be computed, in order to facilitate model selection. Finally, the model is applied to the retweet data sets of two hashtags.

on

**Wednesday, January 2, 2019**

*(Refreshments will be served from 2:15 p.m. <u>outside Room 301 Run Run Shaw Building</u>)*

**2:30 p.m. – 3:30 p.m.**

at

**Room 301, Run Run Shaw Building**

**<u>Visitors Please Note</u> 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