

## SEMINAR

### *Point Processes and Asynchronous Event Sequence Analysis*

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**Abstract:** Real-world interactions among multiple entities, such as user behaviors in social networks, job hunting and hopping, and diseases and their complications, often exhibit self-triggering and mutually-triggering patterns. For example, a tweet of a twitter user may trigger further responses from her friends. A disease of a patient may trigger other complications. Temporal point processes, especially Hawkes processes and correcting processes, have a capability to capture the triggering patterns quantitatively. This talk aims to introducing basic concepts of point processes and proposing a series of cutting-edge techniques for practical applications. In particular, the Granger causality analysis of Hawkes processes, the clustering problem of event sequences, the combination of deep learning and point processes, and some interesting applications will be discussed.

Bio: Hongteng Xu is a Ph.D. candidate in the School of Electrical and Computer Engineering, Georgia Tech, jointly supervised by Prof. Hongyuan Zha (CSE) and Prof. Mark A. Davenport (ECE). At the same time, he is a research assistant in the College of Computing at Georgia Tech. He received his Bachelor Degree in Electronic and Information Engineering from Tianjin University in 2010 and his dual Master Degree in ECE from Shanghai Jiao Tong University and Georgia Tech in 2013. His research interests include machine learning and its applications, e.g., computer vision and data mining. Currently, he has published over 20 papers on top conferences and journals.

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