香港城市大學
City University of Hong Kong

電腦科學系
Department of
Computer Science

COMPUTER SCIENCE COLLOQUIUM

Network Measurement at Scale

SPEAKER **Prof Patrick P. C. LEE**

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DATE 14 February 2019 (Thursday)
TIME 10:30 am - 11:30 am
VENUE CS Seminar Room, Y6405
6th Floor, Yellow Zone
Yeung Kin Man Academic Building
City University of Hong Kong
83 Tat Chee Avenue
Kowloon Tong

ABSTRACT

Operators heavily rely on network measurement to characterize traffic statistics for effective network management. However, network measurement remains a missing piece in today's enterprise and data center networks. On one hand, achieving timely and accurate network measurement is necessary; on the other hand, measurement tasks unavoidably add performance overhead to the packet processing pipeline. In this talk, I will present two novel sketch-based designs that enable space-efficient, high-performance, accurate, and practical network measurement at large scale. I will present SketchVisor, a framework that maintains high performance of general sketch-based measurement tasks by opportunistically offloading measurement to a fast path. Then I will present SketchLearn, an automated self-learning sketch design that requires limited configuration burdens from operators while maintaining high performance and high accuracy in network measurement.

BIOGRAPHY

Prof Patrick P. C. Lee is now an Associate Professor of the Department of Computer Science and Engineering at the Chinese University of Hong Kong. He now heads the Applied Distributed Systems Lab and is working very closely with a group of graduate students on different projects in networks and systems. His research interests are in various applied/systems topics including storage systems, distributed systems and networks, cloud computing, dependability, and security.

All are welcome!

In case of questions, please contact Dr Henry Xu at Tel: 3442 4840, E-mail: henry.xu@cityu.edu.hk, or visit the CS Departmental Seminar Web at http://www.cs.cityu.edu.hk/.