

SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

Faculty of Engineering

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Area: Communications and Networks

Host: Emeritus Prof Lawrence Wong Wai Choong

TOPIC	:	Location Privacy Preservation and Location-based Service Quality Tradeoff Framework Against Benign and Malicious Adversaries
SPEAKER	:	Ms Feng Tianyi Graduate student, ECE Dept, NUS
DATE	:	Friday, 24 July 2020
TIME	:	10.00AM to 10.30AM
WEBINAR	:	Join Zoom Meeting https://nus-sg.zoom.us/j/98945100795?pwd=dDJGRGxwcGNNdFJ4NG9uQmZFbHJyZz09 Meeting ID: 989 4510 0795 Password: 196990

ABSTRACT

The widespread use of location-based services brings convenience to people, but privacy concerns should be taken seriously. We propose a differential privacy framework to preserve users' location privacy and provide location-based services. We propose the metrics of location privacy, service quality and differential privacy to introduce a location privacy preserving mechanism, which can help users find the tradeoff or optimal strategy between location privacy and service quality. Meanwhile, two adversary models with different intentions are designed to infer users' true locations. Since the purposes and the prior knowledge of the benign adversary and the malicious adversary are different, we discuss and propose different adversarial algorithms for these two adversaries.

BIOGRAPHY

Tianyi Feng received the B.Eng. degree from the Beijing University of Posts and Telecommunications, Beijing, China, in 2017. She is currently pursuing the Ph.D. degree with the Department of Electrical and Computer Engineering, National University of Singapore, Singapore. Her current research interests include indoor localization, location privacy preservation, and wireless sensor network.

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