

**THE CONCORDIA INSTITUTE FOR INFORMATION SYSTEMS ENGINEERING  
IS PLEASED TO PRESENT THE FOLLOWING GUEST LECTURE IN  
OUR CIISE SEMINAR SERIES**

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**Ming Cao, M.A.Sc.**

Concordia Institute for Information Systems Engineering

**Privacy Protection for RFID Data**

*Abstract:* Radio Frequency Identification (RFID) is a technology of automatic object identification. Retailers and manufacturers have created compelling business cases for deploying RFID in their supply chains. Yet, the uniquely identifiable objects pose a privacy threat to individuals. In this seminar, we will discuss the privacy threats caused by publishing RFID data. Even if the explicit identifying information, such as name and social security number, has been removed from the published RFID data, an adversary may identify a target victim's record or infer her sensitive value by matching a priori known visited locations and timestamps. RFID data by default is high-dimensional and sparse, so applying traditional \$K\$-anonymity to RFID data suffers from the curse of high dimensionality, and would result in poor data usefulness. We define a new privacy model, develop an anonymization algorithm to accommodate special challenges on RFID data, and evaluate its performance in terms of data quality, efficiency, and scalability. To the best of our knowledge, this is the first work on anonymizing high-dimensional RFID data.

*Biography:* Ming Cao is currently pursuing his Master of Applied Science in Information Systems Security under the supervision of Dr. Benjamin Fung at Concordia University. In the past, he had internship at a computer security firm and implemented enterprise firewall solution for Canadian banks and government. His current research interests include RFID security, data mining, privacy preservation methods and technique.

**Thursday, October 23, 2008**

**16:00 – 17:00  
EV011.119**

***Refreshments will be served***  
**(1515 St. Catherine Street West)**