

DEPARTMENT OF COMPUTER SCIENCE

PhD Degree Oral Presentation

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Time:	21 Aug 2015 (Friday) 9:30 am – 11:30 am (35 mins presentation and 15 mins Q & A)
Venue:	RRS 732, Sir Run Run Shaw Bldg., HSH Campus

“Query Authentication in Data Outsourcing and Integration Service”

Abstract

Owing to the explosive growth of data driven by e-commerce, social media, and mobile apps, data outsourcing and integration have become two popular Internet services. These services involve one or more data owners (DOs), many requesting clients, and a service provider (SP). The DOs outsource/synchronize their data to the SP, and the SP will provide query services to the requesting clients on behalf of DOs. However, as a third-party server, the SP might alter (leave out or forge) the outsourced/integrated data and query results, intentionally or not. To address this trustworthy issue, the SP is expected to deliver their services in an authenticatable manner, so that the correctness of the service results can be verified by the clients. Unfortunately, existing work on query authentication cannot preserve the privacy of the data being queried. Furthermore, almost all previous studies assume only a single data source/owner, while data integration services usually combine data from multiple sources. In this dissertation, we take the first step to study the authentication of location-based queries with confidentiality and investigate authenticated online data integration services. Cost models, security analysis, and experimental results consistently show the effectiveness and robustness of our proposed schemes under various system settings and query workloads.

***** ALL INTERESTED ARE WELCOME *****