

DISTINGUISHED LECTURE SERIES 2024/25

TEMPORAL AND SPATIO-TEMPORAL DATA MANAGEMENT AND ANALYTICS

8 AUG 2025 (FRI)

3:00 – 4:00 PM (HKT)

Dr. & Mrs. Hung Hin-shiu Lecture Theatre (SCM012),
Baptist University Road Campus, HKBU

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Abstract:

I examine my research stream from when I started several decades ago and up until today. In a world focused on administrative data and desktop computing, I first worked on temporal databases, considering aspects such as query language design, indexing, and query processing. Then, when around year 2000, we saw the emergence of a mobile revolution, I transitioned to spatio-temporal databases, covering again indexing and query processing, as well as other topics such as privacy. A decade later, geo-social services were taking off, and geo-tagged text content was beginning to proliferate. That prompted work on spatio-textual indexing and query processing to support spatial keyword querying. More recently, we have witnessed an increased digitalization of key societal processes, including transportation in smart cities. Thus, I started working a decade ago on foundations for applications of vehicle trajectory data, most prominently in relation to vehicle routing.

In the talk, I will cover some of the key topics I have worked on by means of examples, I will explain why I worked on those topics, I will examine the impact of the research, and I will present general observations. I hope this will prompt the participants to reflect on their research streams, past and future.

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