Distinguished Lecture Series on Data Analytics and Artificial Intelligence

Prof. Christian S. Jensen

Obel Professor
Department of Computer Science
Aalborg University, Denmark

10 April 2018 (Tuesday) 4:30 - 5:30 p.m.
RRS905, Sir Run Run Shaw Building, Ho Sin Hang Campus, HKBU

Enabling High-Quality and Efficient Vehicle Routing using Massive Trajectory Data

Abstract

Important societal processes are increasingly being digitalized. Vehicular transportation is one such process. In the US alone, 112 million people commute by car out of a population of 325 million. The increasing availability of vehicle trajectory data enables the capture of vehicular transportation at an unprecedented level of detail. The speaker argues that in this new setting, the traditional vehicle routing paradigm, Dijkstra's paradigm, where a road network is modeled as a graph and weights are assigned to edges, is obsolete. Instead, new and data-intensive paradigms that thrive on data are called for. The talk will cover several such paradigms, including a path-based paradigm, an on-the-fly paradigm, and a cost-oblivious paradigm. These paradigms present new challenges and opportunities to research in routing. The talk will cover ongoing research in relation to these paradigms.

Biography

Christian S. Jensen is Obel Professor of Computer Science at Aalborg University, Denmark, and he was recently with Aarhus University for three years and spent a one-year sabbatical at Google Inc., Mountain View. His research concerns data management and data-intensive systems, and its focus is on temporal and spatio-temporal data management. Christian is an ACM and an IEEE Fellow, and he is a member of Academia Europaea, the Royal Danish Academy of Sciences and Letters, and the Danish Academy of Technical Sciences. He has received several national and international awards for his research. He is Editor-in-Chief of ACM Transactions on Database Systems.

Enquiry

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