CSIE

CityU 香港城市大學 City University of Hong Kong

Safety, Reliability, and Disruption Management of High Speed Rail and Metro Systems

SEMINAR

Recent advancements in railway traffic planning and management

Date: 29 January 2019 (Tuesday)
Time: 10:30am to 12:00nn
Venue: P7311, 7/F, Yeung Kin Man Academic Building (YEUNG), City University of Hong Kong

Guest Speaker's profile

Nikola Bešinović is a Researcher at Department of Transport and Planning, Delft University of Technology, The Netherlands. His research develops analytics and optimization methodologies to promote efficient, reliable, and sustainable transportation systems. His main focus is on railway traffic management systems, where he proposes decision-making approaches to enhance railway operations, train scheduling and driver behaviour. He is also interested in new resilient transportation concepts, determining critical infrastructure and operations, and impacts of increased transport demand on further technological development of railway systems. Nikola received several scientific awards, including the Young Railway Operations Researcher Award from IAROR, the First Prize at the TRAVISIONS Young Researcher Competition, and the 3rd IEEE ITS Best Dissertation Award.

Abstract

Railway systems are commonly considered as backbones of national public transport systems. We experience a constant growing transport demand together with rising requirements for providing high-quality railway services to passengers and freight operators. Even more, the new demand increases the need for infrastructure maintenance and construction works, which induces a range of additional planning and traffic management challenges. Some of the questions that are becoming apparent are: First, are single objective models sufficient for solving todays challenges? Second, how to manage heavy congested railways during disruptions? Nikola will present the latest research on advanced mathematical models and approaches towards integrated multi-level and multi-objective timetable planning and timetable adjustments during maintenance possessions. He will also cover approaches for handling disruptions in urban railway networks including crowd management. We aim to find efficient and robust solutions which are at the same time operationally feasible and can be implemented in practice. Parts of this research have been co-developed together with the main Dutch railway companies ProRail and Netherlands Railways.

Enquiries: 3442 5894 **All are welcome**

The workshop is partly supported by a grant from the RGC of the HKSAR, China (Project No. [T32-101/15-R])