香港科技大學
THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

土木及環境工程學系
DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

Jointly Organized with
**The Hong Kong Society for Transportation Studies**

SEMINAR

# THE JOURNEY TO MORE RESPONSIVE TRANSPORTATION NETWORK PLANNING VIA ENHANCED SOCIAL METRICS AND AUTOMATED MODELLING: CONVERGENCE OF PERVASIVE DATA, MACHINE LEARNING AND EQUITY


## Speaker
## Professor S. Travis Waller
Chair of Transport Modelling and Simulation
The Technical University of Dresden, Germany



## Abstract
In this talk, Travis explores his past, present and future collaborative work on modelling and simulation of complex transportation networks with particular emphasis of emerging technology and the inclusion of social values. In particular he notes applications that have emphasized inherent system characteristics (e.g., dynamic assignment, adaptive equilibrium, strategic equilibrium), ethical quantification (e.g., environmental justice, equity, resilience) and emerging technology for planning tools (e.g., automation, decision-support). Critically, he stresses the need to maintain certain key concepts of traditional transport planning (e.g., demand/supply equilibration) even while we make massive overhauls in replacing many aspects of our professions processes with machine learning approaches.


## Biography
Steven “Travis” Waller is the Lighthouse Professor and Chair of Transport Modelling and Simulation at the Technical University of Dresden, Germany, as well as Honorary Professor at the Australian National University (ANU) and the University of New South Wales (UNSW). Until his relocation to Germany in March 2022 he was Head of the School of Civil and Environmental Engineering at UNSW Sydney with previous roles at UNSW including Deputy Dean of Research (Faculty of Engineering), Founding and Executive Director of the Research Centre for Integrated Transport Innovation (rCITI) and the Advisian (and Evans & Peck) Chair of Transport Innovation. He began his tenure-track career at the University of Illinois at Urbana-Champaign in 2001 and, subsequently, at the University of Texas at Austin (where he was promoted to Associate Professor with tenure in 2007 and full Professor in 2011). He has received numerous accolades, including MIT’s Top 100 Innovators under 35, the U.S. NSF CAREER award, the TRB Pyke Johnson Award, the TRB Fred Burggraf Award and being named a Fellow of Engineers Australia. He has published more than 250 peer-reviewed scientific journal papers, supervised 43 completed PhD students and conducted over 60 funded research projects for 40 global sponsors.

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**Tuesday**

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**Civil Engineering Conference Room**
**Room 3574 (Lift 27/28)**

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