Department of Civil & Environmental Engineering
College of Design and Engineering

Centre of Excellence in Modelling and Simulation for Next Generation Ports
Industrial Systems Engineering and Management
College of Design and Engineering

You are cordially invited to a Hybrid Seminar Jointly Organized by

Centre for Transportation Research of Department of Civil and Environmental Engineering
Centre of Excellence in Modelling and Simulation for Next Generation Ports, National University of Singapore

The impact of the pandemic on trans-Pacific trade lane schedule stability

By

Michael Bell, Professor of Ports and Maritime Logistics,Institute of Transport and Logistics Studies,
The University of Sydney Business School

Date: 3 August Wednesday 2022
Time: 3 pm – 5 pm

On site	Via Zoom
Venue: LT1, NUS, 5 Engineering Drive 2, Singapore 117579 Map: https://map.nus.edu.sg/	Meeting ID: 834 6277 3680 Passcode: cee

Click here or scan QR code to register to join us on site or via zoom.

The link is also available at https://nus-sg.zoom.us/meeting/register/tZcpceuvqTgsEtSS-_IRGNwTcmFAnVcSdACQ

After registering, you will receive a confirmation email.

Please note there are no PDU points for this seminar.

Michael Bell
Professor of Ports and Maritime Logistics
Institute of Transport and Logistics Studies
The University of Sydney Business School

Abstract

The trans-Pacific trade lane experienced severe port congestion in 2021 and continuing into 2022. While the pandemic diverted consumer spending in the US away from services toward containerised products, the effects of quarantining on port productivity was the more significant factor behind the port congestion. After reviewing the data, a simple model is presented to illustrate how, as port productivity falls, schedules become unstable leading to growing congestion. A necessary and sufficient condition for schedule stability is derived. This suggests that to retain schedule stability, the rate at which containers are loaded and unloaded should be at least four times faster than the rate at which containers arrive at either end of the trade lane, everything else being equal. The model is then extended to illustrate the impact on ports of limited shipping capacity. The presentation culminates with a prognosis for global container shipping.

About the speaker

Michael Bell is the Professor of Ports and Maritime Logistics in the Institute of Transport and Logistics at the University of Sydney Business School since 2012. Prior to this, he was for 10 years the Professor of Transport Operations at Imperial College London where he established the Port Operations Research and Technology Centre. He graduated from Cambridge University with a BA in Economics then obtained an MSc in Transportation and a PhD on Freight Distribution from Leeds University. His research and teaching interests span ports and maritime logistics, city logistics, transport network modelling, traffic engineering, and intelligent transport systems. Michael is the co-founder of the International Symposium on Transport Network Resilience (INSTR) in 2001 and is currently the convenor of its International Scientific Committee. He also serves on the International Advisory Committee of the International Symposium on Transport and Traffic Theory (ISTTT) and was its convenor from 2009 to 2015. Michael is the author of many papers and books (including *Transportation Network Analysis*, published in 1997). For 17 years he was an Associate Editor of *Transportation Research B*, the leading transport theory journal, and is now an Associate Editor of *Transportmetrica A*.

Map of LT1: 5 Engineering Drive 2, Singapore 117579