

# RESEARCH SEMINAR

JOINTLY ORGANIZED BY:

DEPARTMENT OF GEOGRAPHY & RESOURCE MANAGEMENT

URBAN STUDIES PROGRAMME

## Panama Canal Drought and Supply Chain Disruptions in Asia-US Trade: Evidence from Micro-Level Trade Shipments and Vessel Trajectory Data

05th February 2026 (Thu)  
4:30 – 6:00 pm (UTC+8)  
Rm 221, Chen Kou Bun Building, CUHK

Global chokepoints such as the Panama Canal propagate drought shocks into supply chains, yet disruptions to shipments remain poorly investigated. We examine the impact of supply chain disruptions induced by the 2022–2023 Panama Canal drought on Asia-US trade flows. We fuse Automatic Identification System vessel trajectories with US Customs Bills-of-Lading, matching 95% of 29.6 million 2022–23 filings to 48 million hourly vessel positions. Difference-in-differences and event study analysis results present that canal voyages of containerized shipments took 133.8 hours longer, spent 33.6 hours more stopped, and sailed 2.3 kilometers per hour slower, with route distance unchanged, and these disruptions more than reversed normal-time efficiency gains. Shipment times for metallic raw materials and light manufacturing shipments increased markedly, and there was no significant effect for food products. The results provide a robust foundation for valuing delay-induced opportunity costs and designing resilient trade-facilitation policies for export-oriented economies in Asia.



### Paul Jung

Assistant Professor

Department of Logistics and Maritime Studies, Faculty of Business, The Hong Kong Polytechnic University

Paul H. Jung is an Assistant Professor at The Hong Kong Polytechnic University. As a geographer, he examines the geography of global trade and transportation, focusing on how mobility, infrastructure, and disruptions reshape spatial interaction across and within cities, regions, and global trade corridors. His research integrates GIScience approaches, including spatiotemporal modelling and movement analytics, to link large-scale AIS vessel tracking with micro-level trade and administrative data. He maps evolving geographies of accessibility, freight flows, port-hinterland relations, and supply-chain resilience. He is an active member of the international geography community, serving as Editor of Papers in Regional Science, Guest Editor for the Journal of Transport Geography, and Chair of the AAG Transportation Geography Specialty Group.

For future seminars, scan  
<https://www.grm.cuhk.edu.hk/en/news/seminars/>



Department of Geography  
and Resource Management  
地理與資源管理學系

中大城研

Urban Studies Programme  
THE CHINESE UNIVERSITY OF HONG KONG