6th International Workshop on Agent-Based Modelling of Urban Systems

ABMUS 2022

Tuesday, May 10th

Trust, Transparency & Translation

Workshop organising committee:
Minh Kieu
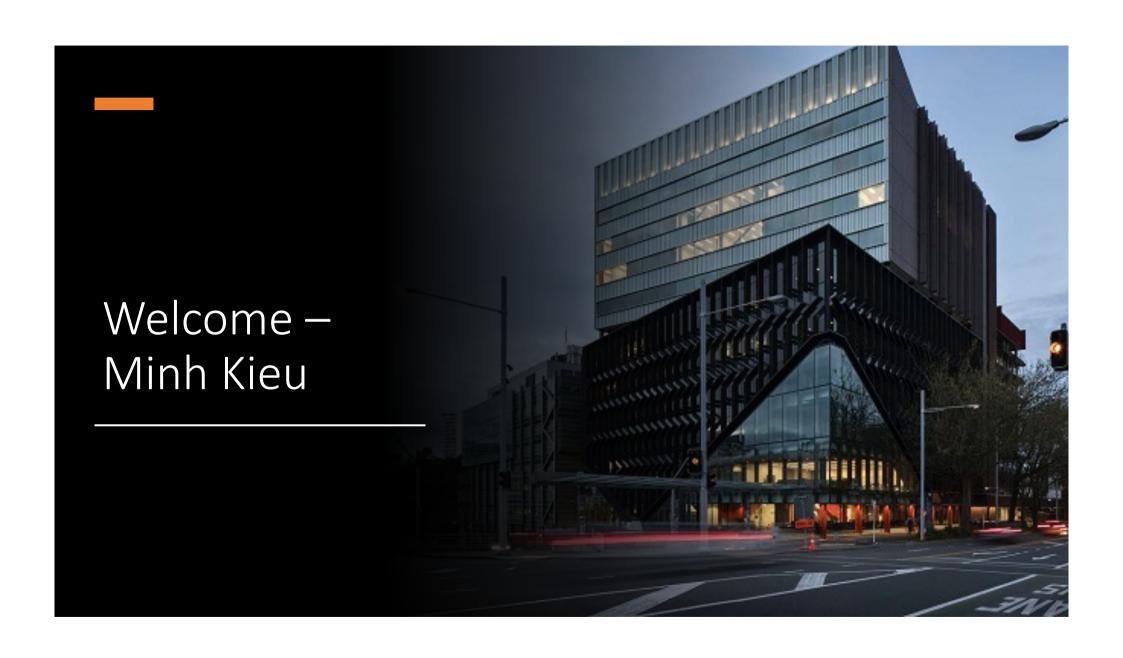Alison Heppenstall
Nick Malleson
Koen van Dam
Jiaqi Ge
Jason Thompson

Additional reviewers:
Rajith Vidanaarachchi

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2022

MAY 9 - 13   AUCKLAND, NZ

Schedule

- 20:00 – 20:05 – Welcome – Minh Kieu
- 20:05 – 20:50 – Keynote Presentation – Professor Frank Dignum
- 20:50 – 21:50 – Session 1 – Methodology
- 21:50 – 22:00 – Break
- 22:00 – 23:00 – Session 2 – Urban development
- 23:00 – 24:00 – Session 3 – Transport
- 00:00 – 00:10 – Wrap-up and closing remarks

Welcome –
Minh Kieu

Keynote Presentation – Frank Dignum

Introduction – Jason Thompson, The University of Melbourne
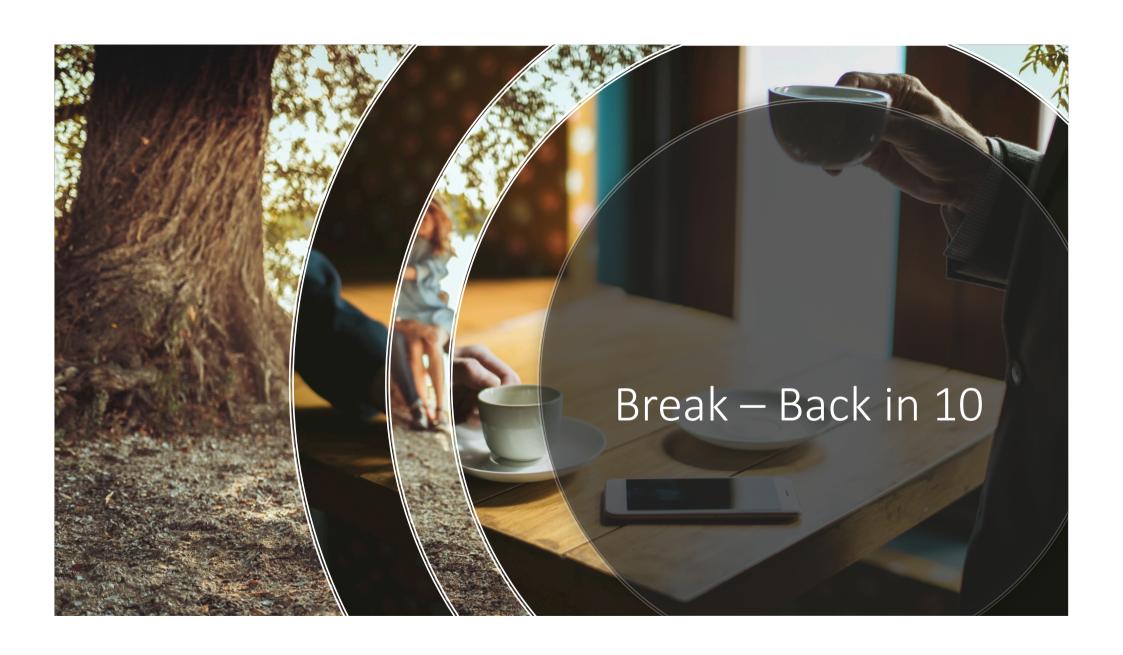
Session 1: Methodology
Chair: Nick Malleson

Presentation 1: Minh Kieu, Iris Meredith and Andrea Raith. *Synthetic generation of individual transport data: the case of Smart Card data*

Presentation 2: Liu Yang and Koen van Dam. *Data-driven agent-based model development to support human-centric TOD design*

Presentation 3: Rajith Vidanaarachchi, Jason Thompson, Branislava Godic and Rod McClure. *AgentsX.jl — An Extended Julia Framework for Exploring Urban and Social Systems*

Presentation 4: Gayani Senanayake and Minh Kieu. *Simulating civil emergency evacuation with Inverse Generative Social Science*

Break – Back in 10

Session 2: Urban development
Chair: Rajith Vidanaarachchi

Presentation 1: Erik Wiegel and Neil Yorke-Smith. *No Hope for First-Time Buyers? Towards Agent-Based Market Analysis of Urban Housing Balance*

Presentation 2: Sabine Timpf and Marie-Rose Degg. *Agent-Based Modelling of People's Behaviour in Public Parks*

Presentation 3: Emily West, Rembrandt Koppelaar, Aitziber Egusquiza Ortega, Angela Santangelo and Eleonora Melandri. *An agent-based model of greening a city for reducing pluvial flooding at a cultural heritage site*

Presentation 4: Henri Meeß, Jeremias Gerner, Daniel Hein, Stefanie Schmidtner and Gordon Elger. *Real World Traffic Optimization by Reinforcement Learning: A Concept*

Session 3: Transport
Chair: Jiaqi Ge

Presentation 1: Ilya Turchaninov, Koen van Dam, Gonzalo Bustos Turu and Salvador Acha. *Transport electrification and fast-charging expansion: A case study in Alaska*

Presentation 2: Yulin Zhang, William Macke, Jiaxun Cui, Daniel Urieli and Peter Stone. *Learning a Robust Multiagent Driving Policy for Traffic Congestion Reduction*

Presentation 3: Yi Cheng Ong, Nicos Protopapas, Vahid Yazdanpanah, Enrico H. Gerding and Sebastian Stein. *Preference-Aware Dynamic Ridesharing*

Presentation 4: Yifeng Zhang, Mehul Damani and Guillaume Sartoretti. *Multi-Agent Traffic Signal Control via Distributed RL with Spatial and Temporal Feature Extraction*

Closing remarks – Alison Heppenstall / Koen van Dam