

LEE KUAN YEW CENTRE FOR INNOVATIVE CITIES

PRESENTS

BROWNBAG LUNCHTIME TALK

Modelling Cities as Complex Adaptive Systems: CitySIM – An Agent-Based System for Modelling and Simulating Cities

DATE AND TIME

26 June 2024,
1 - 2 pm

**A/P SOBAH ABBAS PETERSEN
& DR THIJS WILLEMS**

Lee Kuan Yew Centre for Innovative Cities

VENUE

Think Tank 22
Building 2, Level 3 (2.311)

SYNOPSIS - Cities are complex entities that consists of many interacting systems. Cities are expected to grow in size and diversity, face diminishing resources, climate decay, which all pose challenges to the governance of cities. We must find new and innovative ways of understanding and studying cities and their subsystems. The talk will discuss Complex Adaptive Systems as an approach to understand cities. It will then present an agent-based model of a city, CitySim, which focuses on how traffic in the city emerges as various entities within the city change.



A/P SOBAH ABBAS PETERSEN
Visiting Professor
Lee Kuan Yew Centre for
Innovative Cities

A/P SOBAH ABBAS PETERSEN is an Associate Professor at the Department of Computer Science, Norwegian University of Science and Technology, and a Senior Research Scientist at SINTEF Digital. Her current research focus includes urban ecosystems, interaction technologies for citizen engagement, data management and visualisation in smart and sustainable cities. She has explored the idea of Complex Adaptive Systems and applied Agent-based modelling to describe and understand cities as complex systems.



DR THIJS WILLEMS
Research Fellow
Lee Kuan Yew Centre for
Innovative Cities

DR THIJS WILLEMS is a Research Fellow at the Lee Kuan Yew Centre for Innovative Cities. His main research interests are in the Future of Work, the impact of AI on work and organizations, and Smart Cities. He primarily conducts qualitative, ethnographic fieldwork to understand these phenomena.



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