Date & Time

10th Jan. 2018, 2PM-4PM

Place

東京大学　柏キャンパス　総合研究棟 4F 409b

The 4th floor of Kashiwa Research Complex (Sogo-Kenkyu-Tou) in Kashiwa Campus of the University of Tokyo

http://www.csis.u-tokyo.ac.jp/~t.kusakabe/

Speaker

Dr. Pieter J. Fourie (Future Cities Laboratory@Singapore, ETH Zurich)

http://www.fcl.ethz.ch/people/Researchers/PieterFourie.html

Title

Integrated urban design and simulation of autonomous vehicles in MATSim

Abstract

Integrated urban design and simulation of autonomous vehicles in MATSim

In land-scarce Singapore, population growth and the rising intensity of development have continued to put pressure on already limited land resources. Autonomous Vehicles (AV) have garnered a lot of interest in recent years as an emerging innovation that could potentially relieve some of this pressure. Driverless technology may facilitate more efficient use of road space by reducing the need for parking space, lowering traffic congestion, and reducing overall reliance on privately owned cars, eventually paving the way towards a "car-lite" future.

The Engaging Mobility team at Singapore-ETH Centre's Future Cities Laboratory (FCL), has embarked upon a collaborative research project with MIT SMART and the National University of Singapore (NUS) to evaluate the feasibility of AV policies and investigate their land and transport implications. The multi-disciplinary team explores innovative urban design and planning strategies for optimal AV integration, by developing multiple scenarios and examining their impacts and associated trade-offs.

The study focuses on the deployment of AVs in both greenfield and infill/brownfield study areas and the development of suitable urban design and AV operation schemes for implementation in both urban contexts.

In this presentation, Dr. Pieter Fourie from the Future Cities Laboratory will share initial insights from the study, focusing on how the group has begun to implement autonomous vehicles in the agent-based transport simulation platform, MATSim, and how they approach the various possible deployment strategies that are possible using AVs at local and regional scales.

Biography

Pieter Fourie is a senior researcher and project leader at the Engaging Mobility team of the Singapore ETH Centre's Future Cities Laboratory. He specializes in agent-based transport simulation, developing implementations of the multi-agent transport simulation (MATSim) for the past ten years.

He is a committee member off the MATSim open source project and holds a fellowship with the World Economic Forum's Global Future Council for Mobility.

Previously he developed integrated transport/land-use models for decision support to South African metropolitan planning authorities at the South African Council of Scientific and industrial Research (CSIR).