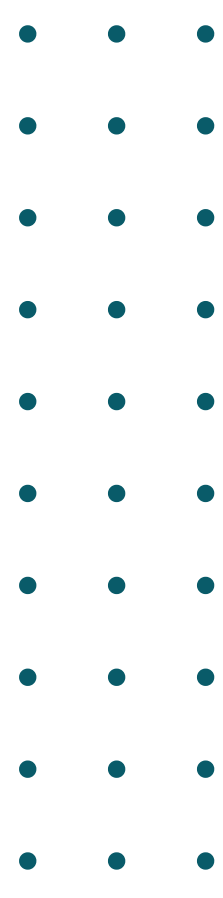


Applying Systems Engineering in Singapore Integrated Transport & Energy Model (SITEM) and Advancing Singapore's Maritime AI Research

The Singapore Integrated Transport & Energy Model (SITEM) is the first high-fidelity, island-wide simulation of EVs in Singapore. Developed as a collaboration between A*STAR's Institute of High Performance Computing (IHPC) and TUMCREATE Ltd, SITEM integrates multiple aspects of mobility, energy and charging behaviour modelling to deliver insights on how Singapore could efficiently deploy and manage infrastructure for EV charging. These insights have resulted in significant savings on infrastructure upgrades and allowed public agencies to enhance overall charging experience of EV drivers.

In this talk, I will also share the journey of the Maritime AI Research Programme led by IHPC in collaboration with agency and industry partners. I will highlight a few key technologies developed and trialled under the programme, and the lessons we learned on research translation.



 16 January, 2026 (Fri)

 10:30 am - 11:30 am

 YEUNG-P7520

Dr. Qin Zheng is the Director of the Systems Science Department at the A*STAR Institute of High Performance Computing (IHPC), Singapore. The department has three capability groups: Complex Systems, Multi-Scale Optimisation, and Energy Systems. Key projects of the department include the Maritime AI Research Programme and “Singapore Integrated Transport & Energy Model (SITEM)” on vehicle electrification, which received Singapore's Ministry of Trade & Industry (MTI) Firefly Borderless (Silver) Award 2022.

Dr. Qin Zheng has research interests in urban mobility, maritime, agent-based simulation, and system of systems modelling. He served on the Editorial Board of IEEE Transactions on Parallel and Distributed Systems (TPDS) and was the Program Committee Chair of the 24th IEEE International Conference on Parallel and Distributed Systems (ICPADS) 2018.



Speaker

Dr. Qin Zheng

Director of the Systems Science Department
A*STAR Institute of High Performance Computing (IHPC), Singapore

All are welcome