PhD Student Position Available

Modelling of Critical Infrastructures for Resilience Analysis of High-Density Urban Systems

A PhD student position (under full scholarship) is available at Nanyang Technological University, Singapore, for a project to study the interdependencies of critical infrastructure (such as power generation/distribution, water supply and transport) within high density urban systems (from city to district level), with the aim of assessing and improving its resilience in response to shocks and disruption. High density urban systems present severe societal risks when exposed to man-made and/or natural hazards, particularly with the aggregation of infrastructure assets and integration of their critical functions. The scope of the research may include the modelling and parameterization of the system resilience using economic (input/output) data as well as network, spatial and/or temporal characteristics. This project is part of Phase 2 of the Future Resilient Systems research programme (https://frs.ethz.ch/), a collaboration between Nanyang Technological University, National University of Singapore, Singapore Management University and ETH Zurich. The student will have opportunities to interact and work with fellow researchers from these four institutions housed under the Singapore-ETH Centre in Singapore. The candidate should preferably have a good class degree in engineering or science with good programming skills, and interest/experience in numerical analysis, network theory and geographic information systems (GIS) will be advantageous.

Interested candidates should email their CV detailing relevant skills/experiences to Kang Tai (mktai@ntu.edu.sg).

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Kang TAI

Associate Professor

School of Mechanical and Aerospace Engineering

Nanyang Technological University, Singapore

50 Nanyang Avenue

Singapore 639798

mktai@ntu.edu.sg

http://www.ntu.edu.sg/home/mktai/

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