



MSSANZ Digest

This digest will update MSSANZ members on the upcoming MODSIM 2019 congress or Society matters, as well as provide links to further information on scholarship or employment opportunities provided by our members. The digest will be emailed to the MSSANZ mailing list once per week, or less frequently during quiet times. Past digests are now accessible from <http://www.mssanz.org.au/weekly.html>.

1. MODSIM 2019 News

A reminder that it is getting close to your last chance to grab the early bird price for your registration for the 23rd International Congress on Modelling and Simulation (MODSIM2019), which will be held at the National Convention Centre in Canberra from 1 to 6 December 2019. The early bird registration rate closes at midnight Australian Eastern Standard Time on Tuesday, 10 September 2019.

Reasons to register:

- Hear from internationally renowned researchers including our outstanding Plenary Speakers
- Hear about the latest developments in the research and practice of modeling and simulation, covering 11 streams and 90 sessions.
- Participate in tours and field trips.
- Join us for the Conference Dinner to be held at the National Convention Centre, in the heart of Canberra CBD.
- Engage with poster presenters and hear about the latest discoveries in the field.
- Attend conference workshops (more yet to be announced)
- Network and interact with colleagues, friends and future collaborators

Email queries to modsim2019@mssanz.org.au

2. Society Noticeboard

Scholarship or Employment Opportunities

- Singapore University of Technology and Design (SUTD), Postdoctoral Research Position focusing on “data-driven solutions for securing Water Distribution Systems” (Position commences 1 October 2019). For further information see the attached pdf.

Society Awards

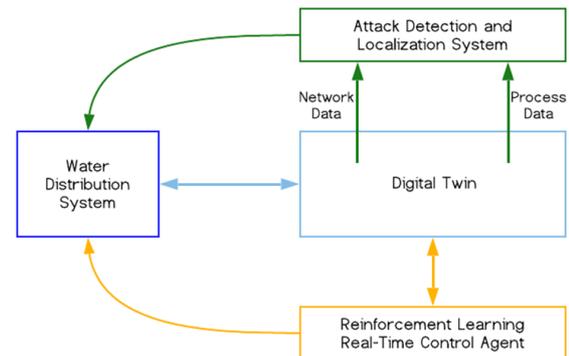
A sincere thank you to those of you who nominated other members of MSSANZ for either the 2019 Biennial Medallist or 2019 Early Career Research Excellence awards.

The Singapore University of Technology and Design (SUTD), in collaboration with Delft University of Technology and CISPA Helmholtz Center for Information Security, offers

One Postdoctoral Research Position focusing on “data-driven solutions for securing Water Distribution Systems”

The overarching goal of the project is to improve the cyber-physical security of water distribution systems through the design and implementation of simulation models and advanced data analytics. In particular, the project aims to:

- Overcome the lack of network and process data describing water distribution systems by developing digital twins (i.e., digital replicas of both physical assets and communication/control devices);
- Improve the accuracy of attack detection algorithms by harnessing the information contained in both network and process data;
- Facilitate and automate timely attack responses with the aid of (Deep) Reinforcement Learning agents.



The Postdoctoral researcher will be expected to engage in multiple project themes, with special emphasis on the attack response strategies. Additionally, he/she will be expected to assist in the supervision of graduate students and undergraduate research assistants. However, he/she will not have formal teaching responsibilities. The candidate must be comfortable with both team and independent work, and possess a proven record of scientific excellence, personal initiative, and proficiency in communicating scientific findings in journals and at professional meetings. Excellent command of English is essential.

The position will be located within the Pillar of Engineering Systems Design at SUTD. The successful applicant will be offered a 2-year position and will collaborate with another Postdoc tasked with the development of the digital twin and detection algorithms. The team will be supervised by Dr. Stefano Galelli (SUTD), Dr. Riccardo Taormina (TU Delft), and Dr. Nils Tippenhauer (CISPA Helmholtz Center for Information Security).

Required qualifications:

- PhD in Civil/Environmental Engineering, Electrical/Systems Engineering, Information Technology, Applied Mathematics or equivalent disciplines;
- Research experience in either one of the following areas:
 - Modelling, optimization, and control of water infrastructure;
 - Control of cyber-physical systems;
 - (Deep) Reinforcement Learning.
- Excellent skills in programming (preferably Python). Competence in high-performance computing, cloud computing, and GPU programming (e.g., TensorFlow) is a plus.

The position is available starting October 1, 2019. Attractive working conditions include a competitive compensation and funding for international conferences. Applications will be evaluated until a suitable candidate is selected. Interested candidates should send a 1 page letter on why they are motivated, CV, and a list of publications to stefano_galelli@sutd.edu.sg and r.taormina@tudelft.nl.