



Call for Participation

NUSS Guild House, Kent Ridge, Singapore

<http://www.asiasim2019.org>

AsiaSim (Asia Simulation Conference), 19th in the series, is an annual international conference organized by the Federation of Asia Simulation Societies (ASIASIM) whose current member societies are China Simulation Federation (CSF), Japanese Society for Simulation Technology (JSST), Korea Society for Simulation (KSS), Society for Simulation and Gaming of Singapore (SSAGsg) and Malaysian Simulation Society (MSS). The Federation of Asia Simulation Societies (ASIASIM) was set up to promote the advancement of modelling and simulation in industry, research and development in Asia and beyond. The AsiaSim conference is an international forum for disseminating recent advances in modeling, simulation and gaming. AsiaSim provides a meeting place for simulation researchers and practitioners in all disciplines in academic, industry, government, military sectors among others to share leading developments and advances in systems simulation.

We welcome you to tropical Singapore, a dynamic city rich in contrast and colour where you will find a harmonious blend of culture, cuisine, arts and architecture. Located in the heart of fascinating South East Asia, Singapore continues to embrace tradition and modernity today. We are proud to be the host of AsiaSim 2019 and welcome you to our city.

The technical program will comprise keynote speeches, technical sessions, vendor exhibits (to be confirmed), and industry visits. The venue of the conference will be at the [*NUSS Guild House, Kent Ridge*](#), which is situated within the NUS campus.

Keynote Speakers



[David M. Nicol](#)

Franklin W. Woeltge Professor of ECE
University of Illinois, Urbana-Champaign

Director, Information Trust Institute
Director, Advanced Digital Sciences Center
Director, Critical Infrastructure Resilience Institute

Keynote Title: The Challenges of Repeatability and Fidelity of Cyber-Physical Digital Twins

Abstract

A digital twin of a cyber-physical system is a simulation whose execution mimics the behavior of both the physical and cyber components of the system. While the idea of co-joining or federating simulations has been considered for quite a long time, the rise in interest of cyber-physical systems, coupled with increased computational power has brought the idea to the forefront under the labeling of 'digital twin'. Uses include exploration of how cyber malfeasance might negatively impact the physical system, how the physical system may react to unusual inputs or boundary conditions, whether a particular control applied to the system will push it into a region of unsafe behavior. Fidelity of digital twins is clearly a desirable attribute, as is repeatability. In the former case we want confidence that the digital twin faithfully (enough) captures the behavior of interest, in the latter case we need to be able to understand, by replaying the simulation, how a particular behavior observed in the simulation came to occur. This talk focuses on the challenges of repeatability and fidelity in a cyber-physical digital twin, when that twin combines classical simulation with emulation of executing software.

2nd Keynote Speaker To Be Confirmed

Conference Dinner @ [S.E.A. Aquarium, Resorts World Sentosa](#)



Conference Chairs

- Gary TAN, National University of Singapore (gtan@comp.nus.edu.sg)
- Axel LEHMANN, Bundeswehr University Munich (axel.lehmann@unibw.de)

Program Chairs

- Yong Meng TEO, National University of Singapore (teoym@comp.nus.edu.sg)
- Wentong CAI, Nanyang Technological University, Singapore (aswtcai@ntu.edu.sg)

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Organisers

- National University of Singapore, Singapore
- Nanyang Technological University, Singapore
- Society of Simulation and Gaming of Singapore

For any enquiries, please send email to: asiasim2019@ssagsg.org

