# Conference Programme

<table>
<thead>
<tr>
<th>Time</th>
<th>30 Oct, Wed</th>
<th>31 Oct, Thu</th>
<th>1 Nov, Fri</th>
</tr>
</thead>
<tbody>
<tr>
<td>0830-0845</td>
<td>Registration</td>
<td>Registration</td>
<td>-</td>
</tr>
<tr>
<td>0845-0900</td>
<td>Opening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0900-1000</td>
<td><strong>Keynote 1:</strong> The Challenges of Repeatability and Fidelity of Cyber-Physical Digital Twins</td>
<td><strong>Keynote 2:</strong> Blockchain Safety and Smart Contract Simulation</td>
<td><strong>Session 7:</strong> Short Paper Session I</td>
</tr>
<tr>
<td>1000-1030</td>
<td>Tea/Coffee Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1030-1200</td>
<td><strong>Session 1:</strong> Best Paper Nominees</td>
<td><strong>Session 4:</strong> Simulation Applications: Blockchain, Deep Learning and Cloud</td>
<td><strong>Session 8:</strong> Short Paper Session II &amp; Closing/AsiaSim2020</td>
</tr>
<tr>
<td>1200-1330</td>
<td>Lunch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1330-1530</td>
<td><strong>Session 2:</strong> Simulation &amp; Modeling Methodology</td>
<td><strong>Session 5:</strong> Simulation &amp; Visualization</td>
<td>Industry Visit (1400-1600)</td>
</tr>
<tr>
<td>1530-1600</td>
<td>Tea/Coffee Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1600-1730</td>
<td><strong>Session 3:</strong> Numerical &amp; Monte Carlo Simulation</td>
<td><strong>Session 6:</strong> Simulation Applications</td>
<td></td>
</tr>
<tr>
<td>1800-2200</td>
<td>Cocktail Reception (1800-1930)</td>
<td>Conference Dinner (1900-2200)</td>
<td></td>
</tr>
</tbody>
</table>

Opening and Keynotes: Dalvey, Evans Room  
AsiaSim sessions: Dalvey Room  
WAMS, Strategos: Evans Room  
Exhibition/Demos: Cluny Room  
Breaks, Lunches, Cocktail reception: Foyer  

(floor plan of conference area is on next page)
AsiaSim 2019 Venue:
NUSS Kent Ridge Guild House
Level 2

AsiaSim 2019 Floor Plan

Cluny  Dalvey  Evans

Foyer

Reception desk
Wednesday, 30th October

0830-0845  Registration

0845-0900  Opening

0900-1000  **Keynote 1: The Challenges of Repeatability and Fidelity of Cyber-Physical Digital Twins**, David M. Nicol, Franklin W. Woeltge Professor of ECE, University of Illinois, Urbana-Champaign, USA

Chair: Wentong Cai

1000-1030  Tea/Coffee Break

1030-1200  **Session 1: Best Paper Nominees**

Chair: Axel Lehmann


*On Evaluating Rust as a Programming Language for the Future of Massive Agent-based Simulations*, Alessia Antelmi, Gennaro Cordasco, Matteo D’Auria, Daniele De Vinco, Alberto Negro, and Carmine Spagnuolo

*Conv-LSTM: Pedestrian Trajectory Prediction in Crowded Scenarios*, Kai Chen, Xiao Song, and Hang Yu

1200-1330  Lunch

1330-1530  **Session 2: Simulation and Modeling Methodology**

Chair: Georgios Theodoropoulos

*A Framework for Joint Simulation of Distributed FMUs*, Hang Ji, Junhua Zhou, Luan Tao, Xiao Song, Guoqiang Shi, Chao Ruan, Tingyu Lin and Xiang Zhai

*Interactive Modeling Environment based on the System Entity Structure and Model Base*, Hanwool Kim and Changbeom Choi

*A Generic Maturity Model for Verification and Validation of Modeling and Simulation Applications*, Zhongshi Wang and Axel Lehmann

1530-1600  Tea/Coffee Break
**Session 3: Numerical and Monte Carlo Simulation**
Chair: Lin Zhang

*Non-local Fokker-Planck Equation of Imperfect Impulsive Interventions and its Effectively Super-convergent Numerical Discretization*, Hidekazu Yoshioka, Yuta Yaegashi, Motoh Tsujimura and Masayuki Fujihara

*Force Tracking Control of Nonlinear Active Suspension System with Hydraulic Actuator Dynamic*, Erliana Samsuria, Yahaya Md Sam and Fazilah Hassan.

*Interval Estimation of Range of Motion after Total Hip Arthroplasty Applying Monte-Carlo Simulation*, Gisun Jung, Young Kim, Jongyou Choi, Younghan Song, Sunwoo Jang, Yun Bae Kim and Jinsoo Park

**1800-1930**  
*Cocktail Reception*
**Thursday, 31st October**

0830-0900 Registration

0900-1000 **Keynote 2: Blockchain Safety and Smart Contract Simulation**, Jun Furuse, CEO, Dai Lambda, Inc, Scientific Director, Tezos Japan. Chair: Yong Meng Teo

1000-1030 Tea/Coffee Break

1030-1200 **Session 4: Simulation Applications: Blockchain, Deep Learning and Cloud**
Chair: Satoshi Tanaka

*Agent-based Simulation of Blockchains*, Edoardo Rosa, Gabriele D’Angelo and Stefano Ferretti

*Robot Arm Control Method of Moving below Object Based on Deep Reinforcement Learning*, Heyu Li, Liqin Guo, Guoqiang Shi, Yingying Xiao, Bi Zeng, Tingyu Lin and Zhengxuan Jia

*Distributed 3D Printing Services in Cloud Manufacturing: A Non-cooperative Game-theory-based Selection Method*, Sicheng Liu, Ying Liu and Lin Zhang

1200-1330 Lunch

1330-1530 **Session 5: Simulation and Visualization**
Chair: Yun Bae Kim

*Visual Guide to Improving Depth Perception in See-Through Visualization of Laser-Scanned 3D Point Clouds*, Kyouma Nishimura, Liang Li, Kyoko Hasegawa, Atsushi Okamoto, Yuichi Sakano and Satoshi Tanaka

*Realizing Uniformity of 3D Point Clouds based on Improved Poisson-Disk Sampling*, Yuto Sakae, Yukihiro Noda, Liang Li, Kyoko Hasegawa, Satoshi Nakada and Satoshi Tanaka

*Effect of Multiple Iso-surfaces in Depth Perception in Transparent Stereoscopic Visualizations*, Daimon Aoi, Kyoko Hasegawa, Liang Li, Yuichi Sakano and Satoshi Tanaka

*3D Transparent Visualization of Relief-type Cultural Heritage Assets based on Depth Reconstruction of Old Monocular Photos*, Jiao Pan, Liang Li, Hiroshi Yamaguchi, Kyoko Hasegawa, Fadjar I. Thufail, Bramantara and Satoshi Tanaka

1530-1600 Tea/Coffee Break
1600-1730  **Session 6: Simulation Applications**  
Chair: Gabriele D'Angelo

*Tolerance Coefficient based Improvement of Pedestrian Social Force Model*, Ruiping Wang, Xiao Song, Junhua Zhou and Xu Li

*Capturing Human Movements for Simulation Environment*, Chengxin Wang, Muhammad Shalihin Bin Othman and Gary Tan

*Simulation Model Selection Method based on Semantic Search in Cloud Environment*, Siqi Xiong, Feng Zhu, Yiping Yao and Wenjie Tang

1900-2200  **Conference Dinner @ S.E.A. Aquarium, Resorts World Sentosa**
Friday, 1st November

0900-1000  **Session 7: Short Paper Session I**  
Chair: Liang Li

*Research on New Generation of Multi-domain Unified Modeling Language for Complex Products, Lin Zhang, Li-Yuanjun Lai and Fei Ye*

*An Improved Grey Relational Analysis Method for Model Validation, Ke Fang, Yuchen Zhou and Ju Huo*

*Resource Optimisation in New Hospital Central Kitchen Design – A Discrete Event Simulation Approach, Kian Ann Chan, Mack Jia Jia Pan, Beng Tee Chua, Xiu Ming Hu, and Malcolm Yoke Hean Low*

1000-1030  Tea/Coffee Break

1030-1110  **Session 8: Short Paper Session II**  
Chair: Gary Tan

*Prototype Development of the Real-time Quadrotor UAV Simulation in Litmus-RT, Muhammad Faris Fathoni, Yong-Il Jo and Kyong-Hoon Kim*

*Research on the Secondary Development Method of Finite Element Analysis Module of SIEMENS NX, Lin Wang, Zhiqiang Li, Chenli Deng, and Jialiang Sun*

1110-1130  Closing & AsiaSim 2020

1200-1330  Lunch

1400-1600  Industry Visit
Getting to NUSS Kent Ridge Guild House

APPENDIX 1: VENUE ACCESS
From Ayer Rajah Expressway (AYE), exit and go onto Clementi Road towards NUS. Turn left into NUS Entrance B and turn right onto Kent Ridge Drive at the first junction. NUSS Kent Ridge Guild House (KRGH) is located along Kent Ridge Drive.

LOCAL DELEGATES DRIVING TO KRGH

<table>
<thead>
<tr>
<th>Day of Week</th>
<th>Operation Hours</th>
<th>Charges (per minute)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday to Friday</td>
<td>0830 - 1930</td>
<td>0.0214</td>
</tr>
<tr>
<td>Saturday</td>
<td>0830 - 1700</td>
<td>0.0214</td>
</tr>
</tbody>
</table>

Free parking at all other times

Car park coupons for parking at NUS Car Park 15 are available at $3.60 (up to 4 hours parking) and $4.80 (all-day parking) from our reception counter, Monday to Friday, Saturday before 5pm.

Enjoy free parking on Saturday after 5pm, Sunday and public holidays! NUS Carpark 15 is conveniently located just across the road from KRGH.

SHUTTLE BUS A1 TRAVEL ROUTE
Kent Ridge MRT Station → NUH → LT 29 → University Hall → Opposite Staff Club → Yusof Ishak House → Central Library → LT 13 → AS 5 (Stop to alight)

Map of Kent Ridge Guild House | 9 Kent Ridge Drive | Singapore 119241

Visit the following website for the direction guide to NUSS Kent Ridge Guild House using public transport.
http://www.pathwaze.org/guides/nusskr/