

UK Operational Research Society

Simulation Workshop 2018 (SW18)

19 – 21 March 2018

Ettington Chase Hotel, Stratford, Worcestershire, United Kingdom CV37 7NZ

SW18 Programme

All sessions will be in the Wordsworth Suite. Rooms 1 or 2

DAY 1 (Monday 19 March 2018)

11:00-12:00	Registration & Coffee (Lounge refreshment area)	
12:00-13:00	Lunch	
13:00-14:30	Tutorial 1a: Discrete-event Simulation (Room 1) Session Chair: Christine Currie Introduction to Discrete-Event Simulation: How It Works Stewart Robinson, (<i>Loughborough University, UK</i>)	Tutorial 1b: Hybrid Simulation (Room 2) Session Chair: Thomas Monks Introduction to Hybrid Simulation Modelling Sally Brailsford, (<i>University of Southampton, UK</i>)
14:30-15:00	Coffee Break	
15:00-16:30	Tutorial 2a: Verification and Validation (Room 1) Session Chair: Peer-Olaf Siebers Verification and Validation (V&V): Doing the Right Thing, It's All about Good Business Paul Glover and Alan Robinson, (<i>Defence Science and Technology Laboratory, UK</i>)	Tutorial 2b: Agent Based Simulation (Room 2) Session Chair: Duncan Robertson Agent-Based Models Tutorial Duncan Robertson, (<i>Loughborough University, UK</i>)
16:30-17:00	Coffee Break	
17:00-18:30	Tutorial 3a: Simheuristics (Room 1) Session Chair: Anastasia Anagnostou A Tutorial on Simheuristics: How Simulation can Efficiently Support	Tutorial 3b: System Dynamics (Room 2) Session Chair: Dandan Shi System Dynamics: A Multi Approach to Simulation Martin Kunc (<i>University of Warwick, UK</i>)

	<p>Metaheuristic Algorithms in Stochastic Optimization Angel Juan, Laura Calvet and Christine Currie (<i>Universitat Oberta de Catalunya, Spain and University of Southampton, UK</i>)</p>	
--	--	--

DAY 2 (Tuesday 20 March 2018)

08:30-09:00	Registration & Coffee (Lounge refreshment area)	
09:00-09:15	WELCOME (Room 1) Christine Currie and Thomas Monks, SW18 Chairs , (<i>Southampton University</i>) John Hopes FORS, President of The OR Society (<i>EY</i>)	
09:15-10:30	KEYNOTE (Room 1) Personal Reflections on the Evolution of Simulation over the Last 20 years. John Fowler (<i>Arizona State University</i>) Chair: Thomas Monks	
10:30-11:00	Coffee Break	
11:00-12:00	Session 1a: Discrete-event Simulation (Room 1) Session Chair: Lucy Morgan Identification of the Skills Required for Discrete Event Simulation Project Analysts Tábata Fernandes Pereira, José Arnaldo Barra Montevechi and Stewart Leslie Robinson, (<i>Federal University of Itajubá, Brazil and Loughborough University, UK</i>) An Application of Object-Functional Programming to Simulation Modelling for Defence Gareth Toomey, Paul Glover and Rick Ansell, (<i>Defence, Science & Technology Laboratory, UK</i>)	Session 1b: Simulation Modelling Practices (Room 2) Session Chair: Kathy Kotiadis Proposal of a Design Pattern for Embedding the Concept of Social Forces in Human Centric Simulation Models Peer-Olaf Siebers, Yufeng Deng, Jonathan Thaler, Holger Schnädelbach and Ender Özcan, (<i>Nottingham University, UK</i>) Input Model Uncertainty Assessment: A Study Within the Automotive Industry Panagiotis Ioannidis, Bhakti S. S. Onggo, Michael Higgins and John Ladbrook, (<i>Lancaster University, UK; Trinity Business School, UK and Ford Motor Company, UK</i>)

12:00-13:00	Lunch (Lounge refreshment area)	
13:00-14:30	<p>Session 2a Healthcare (Room 1) Session Chair: Navonil Mustafee</p> <p>Right Hospital- Right Time: A Business Analytics Framework for Analysing Urgent Care/A&A Wait Time Data Navonil Mustafee, John H. Powell and Alison Harper, (<i>University of Exeter, UK</i>)</p> <p>Bed.P.A.C: A Simulation Model for the Planning of Hospital Beds and Workforce Tracey England, Tom Stephenson, Paul Harper, John Boulton, Claire Cordeaux and Edward Ostle, (<i>Cardiff University, SIMUL8 Corporation and ABCi UK</i>)</p> <p>Effective Provision of Critical Care Services: a Simulation Model Dandan Shi, Christine S.M. Currie and Honora K. Smith, (<i>University of Southampton, UK</i>)</p>	<p>Session 2b Simulation Modelling Applications (Room 2) Session Chair: Michael Higgins</p> <p>Deterministic Simulation and Graphical Representation of Powered Material Handling Vehicle Movements to Enhance Pedestrian Safety Michael Higgins, Gaurav Khalwadekar and John Ladbroke, (<i>Ford Motor Company, UK and Caresoft Global, UK</i>)</p> <p>Airline Disruption Recovery Using Symbiotic Simulation and Multi-fidelity Modelling Luke Rhodes-Leader, Bhakti Stephan Onggo, David J. Worthington and Barry L. Nelson, (<i>Lancaster University and Trinity Business School, UK</i>)</p> <p>Modelling Refugees Escaping Violent Events: A Feasibility Study from an Input Data Perspective Nga Ting Chan, Diana Suleimenova, David Bell and Derek Groen, (<i>Brunel University London, UK</i>)</p>
14:30-15:00	Poster Plenary (Room 1) Session Chair: Tom Boness	
15:00-15:30	Coffee Break and Poster Session	
15:30-16:30	<p>Panel Session I (Room 1) Session Chair: Kathy Kotiadis</p> <p>Discussing the challenges of stakeholder involvement and how to overcome them Panellists: Sally Brailsford, Antuela Tako, Stewart Robinson, C Philipps</p>	
16:30-17:30	<p>Session 3a: Simulation Modelling Practices (Room 1) Session Chair: Anastasia Anagnostou</p> <p>An Agile Approach to Building Living Business Models with System Dynamics</p>	<p>Session 3b: Simulation Modelling Methodology (Room 2) Session Chair: Christine Currie</p> <p>Towards a Unifying Conceptual Representation of Hybrid Simulation and Hybrid Systems Modelling</p>

	<p>Kim Warren, (<i>Strategy Dynamics Ltd, UK</i>)</p> <p>Craftbrew: Towards a Low-Cost Brewery Management System with Cloud-Based Simulation and Delivery Route Optimization</p> <p>Anastasia Anagnostou, Simon J. E. Taylor, David Bell, Shane Kite and Gary Pattison, (<i>Brunel University London and Saker Solutions UK</i>)</p>	<p>Navonil Mustafee and John Powell, (<i>University of Exeter, UK</i>)</p> <p>A Bootstrap Approach to Multiple Comparison Control</p> <p>Christine Currie, Thomas Monks and Marion Penn, (<i>University of Southampton, UK</i>)</p>
17:30-18:00	Simulation SIG General Meeting	
	Free time – 45 minutes	
18:45-19:30	Drinks Reception (Lounge refreshment area)	
19:30-21:00	Gala Dinner	

DAY 3 (Wednesday 21 March 2018)

08:45-10:00	<p>KEYNOTE (Room 1)</p> <p>Visual Presentation of Simulation Results</p> <p>Russell C.H. Cheng, (<i>University of Southampton, UK</i>)</p> <p>Chair: Christine Currie</p>	
10:00-10:30	Coffee Break	
10:30-11:30	<p>Session 4a: Simulation Modelling Methodology (Room 1)</p> <p>Session Chair: Thomas Monks</p> <p>Conceptual Modelling for Simulation: A Ten Year Review Stewart Robinson, (<i>Loughborough University, UK</i>)</p> <p>The Simulation Reproducibility Crisis. Can Reporting Guidelines Help?</p> <p>Thomas Monks and Christine Currie, (<i>University of Southampton, UK</i>)</p>	<p>Session 4b: Education (Room 2) Session Chair: Diana Suleimenova</p> <p>Can we Learn from Wrong Simulation Models? A Preliminary Experimental Study on User Learning</p> <p>Naoum Tsiptsias, Antuela Tako and Stewart Robinson, (<i>Loughborough University, UK</i>)</p> <p>Simulating Classroom Lessons: An Agent-Based Attempt</p> <p>Fred Ingram and Roger Brooks, (<i>Lancaster University, UK</i>)</p>

11:30-12:30	<p>Panel Session II ((Room 1) Session Chair: Peer Olaf Siebers</p> <p>Model Development Strategies: From A Copy/Paste Mentality to Truly Innovative Approaches Panellists: Peer Olaf Siebers, Antuela Tako, Dave Buxton, Tom Monks and Kim Warren</p>
12:30-13:30	Lunch
13:30-15:00	<p>Session 5: Healthcare ((Room 1) Session Chair: Marion Penn</p> <p>Designing and Redeveloping Generic Models in Healthcare Marion Penn, Thomas Monks, Anna Kazmierska and Mohamed Alkoheji, <i>(NIHR CLAHRC Wessex, University of Southampton and Southampton Business School, University of Southampton UK)</i></p> <p>Using Discrete Event Simulation to Improve Operational Performance in Endoscopy Units Richard Guerrero-Ludueña, <i>(University of Southampton, UK)</i></p> <p>Building Capability in Healthcare Modelling Within Aneurin Bevan University Health Board Tracey England, Tom Smith, Paul Harper, John Boulton, Emma-Jayne Lewis and Iestyn Davies, <i>(Cardiff University, Aneurin Bevan University Health Board and ABCi, UK)</i></p>
15:00	Close and Coffee