

Table of Contents

| | |
|---|----|
| Stochastic Simulation of Snow Cover <i>Marketa Prusova and Lucie Jurikovska</i> | 1 |
| The Lambda Chart: A Model of Design Abstraction and Exploration at System-Level <i>Falko Guderian and Gerhard Fettweis</i> | 7 |
| Increase of Robustness on Pre-optimized Production Plans Through Simulation-based Analysis and Evaluation <i>Christoph Laroque, Robin Delius, Jan-Hendrik Fischer, and Dennis Horstkaemper</i> | 13 |
| Fault-tolerant Distributed Discrete Event Simulator Based on a P2P Architecture <i>Jorge Luis Ramirez Ortiz and Ricardo Marcelin Jimenez</i> | 21 |
| Distributed Simulation of Dense Crowds <i>Sergei Gorlatch, Christoph Hemker, and Dominique Meilaender</i> | 27 |
| Distributed Simulation on a Many-Core Processor <i>Karthik Manian and Philip Wilsey</i> | 32 |
| Simulation of Particle Deposition in an Airplane Cabin Mockup <i>Miao Wang, Chao-Hsin Lin, and Qingyan Chen</i> | 38 |
| Traffic and Monotone Random Walk of Particles: Analytical and Simulation Results <i>Alexander Buslaev, Alexander Tatashev, and Andrew Yaroshenko</i> | 44 |
| Tunnel Simulator for Traffic Video Detection <i>Sofie Van Hoecke, Steven Verstockt, Koen Samyn, Mike Slembrouck, and Rik Van de Walle</i> | 49 |
| SUMO - Simulation of Urban MObility - an Overview <i>Michael Behrisch, Laura Bieker, Jakob Erdmann, and Daniel Krajzewicz</i> | 55 |
| Mechanisms Controlling the Sensitivity of Amperometric Biosensors in the Case of Substrate and Product Inhibition <i>Dainius Simelevicius and Romas Baronas</i> | 61 |
| A Generic Operational Simulation for Early Design Civil Unmanned Aerial Vehicles <i>Benjamin Schumann, Jim P. Scanlan, and Kenji Takeda</i> | 67 |
| Traceability Handling in Model-based Prediction of System Quality <i>Aida Omerovic and Ketil Stolen</i> | 71 |

| | |
|--|-----|
| A Simulation-Based Innovation Forecasting Approach Combining the Bass Diffusion Model, the Discrete Choice Model and System Dynamics: An Application in the German Market for Electric Cars <i>Luis Antonio Santa-Eulalia, Donald Neumann, and Jo?rg Klasen</i> | 81 |
| Plaque Lesion Classification Fuzzy Model Based on Various Color Models <i>Yuslinda Wati Mohamad Yusof, Hadzli Hashim, Khairul Anam Sulaiman, Suhaila Subahir, Noor Ezan Abdullah, and Fairul Nazmie Osman</i> | 88 |
| A Multi-Layer Constraint and Decision Support System for Construction Operation <i>Amir Elmahdi, Hong Ha Le, and Hans-Joachim Bargstaedt</i> | 94 |
| Agent-based simulation validation: A case study in demographic simulation <i>Cristina Montanola-Sales, Bhakti S. S. Onggo, and Josep Casanovas-Garcia</i> | 101 |
| Analysis and Simulation of Power Law Distribution of File Types in File Sharing Systems <i>Yuya Dan and Takehiro Moriya</i> | 108 |
| Simulation hypotheses <i>Pau Fonseca i Casas</i> | 114 |
| SimARC: An Ontology-driven Behavioural Model of Alcohol Abuse <i>Francois Lamy, Pascal Perez, Alison Ritter, and Michael Livingston</i> | 120 |
| Agent-Based Model (ABM) Validation Considerations <i>Philip Cooley and Eric Solano</i> | 126 |
| Detailed Input data Source for Construction Process Simulation <i>Jurgen Melzner, Sebastian Hollermann, and Hans-Joachim Bargstadt</i> | 132 |
| Energy Simulation Supporting the Building Design Process <i>Marco Massetti and Stefano Paolo Corgnati</i> | 136 |
| Simulating Counterinsurgency and Coalition Strategies <i>David Arney and Kristin Arney</i> | 142 |
| Simulation of Bacterial Self-Organization in Circular Container Along Contact Line as Detected by Bioluminescence Imaging <i>Romas Baronas</i> | 148 |
| Applying Simulation and Mathematical Programming on a Business Case Analysis for Setting up a Spare Part Logistics in the Construction Supply Industry <i>Wilhelm Dangelmaier, Christoph Laroque, Robin Delius, and Jenny Streichhan</i> | 154 |

| | |
|--|-----|
| Integrating Current State and Future State Value Stream Mapping with Discrete Event Simulation: A Lean Distribution Case Study <i>Amr Mahfouz, John Crowe, and Amr Arisha</i> | 161 |
| Review of Spatial Simulation Tools for Geographic Information Systems <i>Luis de Sousa and Alberto da Silva</i> | 169 |
| Towards Internet Scale Simulation <i>Anthony McGregor</i> | 175 |
| Simulation and Sustainability <i>Andi H. Widok and Volker Wohlgemuth</i> | 182 |
| Towards a SDL-DEVS Simulator <i>Pau Fonseca i Casas and Josep Casanovas</i> | 188 |