

Table of Contents

Simulation Aids Long-Term Capacity Planning at a Plant Manufacturing Safes <i>Swapnil Landge and Edward J. Williams</i>	1
Efficient Modelling and Real-Time Optimisation of Stationary Systems: Application to an Evaporation Process <i>Carlos Gomez Palacin, Jose Luis Pitarch, and Cesar De Prada</i>	6
An Analytical Model to Evaluate the Response Capacity of Emergency Departments in Extreme Situations <i>Eva Bruballa, Manel Taboada, Alvaro Wong, Dolores Rexachs, and Emilio Luque</i>	12
Differentiated Service Queuing Disciplines in NS-3 <i>Robert Chang, Mahdi Rahimi, and Vahab Pournaghshband</i>	17
Simulation of the Influence of Increased Speed Limit and Densification of Stations on Travel Time Based on the Example of the First Metro Line in Warsaw <i>Marek Bauer</i>	24
Upgrade of the MovSim for Easy Traffic Network Modification <i>Andraz Omahen, Teo Kukuljan, Vida Vukasinovic, Peter Korosec, and Gregor Papa</i>	31
Evaluation Method for Appropriate Fleet Size of Forklifts at a Freight Station <i>Shunichi Tanaka</i>	37
Statistical Emulation Applied to a Very Large Data Set Generated by an Agent-based Model <i>Wim De Mulder, Bernhard Rengs, Geert Molenberghs, Thomas Fent, and Geert Verbeke</i>	43
Using Simulation Modeling to Create Transdisciplinary Process Models and to Build Basic PLM Tools to Support the Systems Engineering Lifecycle <i>Germano S. Kienbaum, Renato Fernandez, Alvaro A. Neto, and Elaino K. T. Silva</i>	49
Simulation Methodologies for the Numerical Analysis of High-Speed Dynamics <i>Arash Ramezani and Hendrik Rothe</i>	59
Modeling I/O System in HPC: An ABMS Approach <i>Diego Encinas, Marcelo Naiouf, Armando De Giusti, Sandra Mendez, Dolores Rexachs, and Emilio Luque</i>	67
Using a Generic Modular Mapping Framework for Simulation Model Composition <i>Philipp Helle and Wladimir Schamai</i>	72
Memory Constrained Iterative Phase Retrieval using GPGPU <i>Ladislav Mikes</i>	79

Resource Management and Optimization Efficiency Issues in a Simulation Software Package <i>Havatzelet Cohen, Daniel Khankin, Shlomo Mark, and Shaul Mordechai</i>	84
Analytical Modeling of Parametric Yield Considering Variations in Leakage Power and Performance of Nano-Scaled Integrated Circuits <i>Hossein Aghababa, Nima Mozaffari, and Behjat Forouzandeh</i>	89
Combining Finite Element and Multibody Modeling Techniques for Time-Efficient Simulation of Nonlinear Gear Dynamics <i>Jakub Korta, Antonio Palermo, Domenico Mundo, and Shadi Shweiki</i>	94
Alternative System Design Based on Reliability Analysis and Simulation <i>Merve Uzuner and Berna Dengiz</i>	100