

Table of Contents

Numerical Simulation and Analysis of Enzyme-Catalysed Substrate Conversion in a Microbioreactor <i>Linas Petkevicius and Romas Baronas</i>	1
Simulation Improves Material Handling in General Assembly <i>Julio Perez, Gabriel Carreno, Ozge Civit, and Edward J. Williams</i>	7
Enhancing Formal Proofs of Network Protocols for Transport Systems using Discrete Event Simulation <i>Emna Chebbi, Patrick Sondi, and Eric Ramat</i>	14
Seeking Rare Events in a Simulated System using Risk Distances <i>Volker Gollucke and Axel Hahn</i>	16
Derivation of a New Method for Derivative Estimation by Linear Combinations <i>Simon Genser and Martin Benedikt</i>	23
Using VIRL to Improve the Scale-out of Large Virtual Network Testbeds in Higher Education <i>Sven Reissmann, Sebastian Rieger, and Christian Pape</i>	29
A Framework for Simulation Validation & Verification Method Selection <i>Bill Rounge, Sebastiaan Meijer, and Alexander Verbraeck</i>	35
A New Approach to Modelling Fiber-Reinforced Plastics for Hydrocode Analysis - Experimental Model Validation of Composite Materials Under Ballistic Impact <i>Arash Ramezani and Hendrik Rothe</i>	41
Hybrid Modeling Approach to Investigate the Impact of Boarding Patients on Unit Performance <i>Leila Keshkar, Wael Rashwan, Waleed Abo-Hamad, and Amr Arisha</i>	51
Internet of Things Simulation Tools: Proposing Educational Components <i>Majid Bayani, Alberto Segura, Jeffrie Saenz, and Brayan Mora</i>	57
Future Tasks of Lightweight-Polymer Combat Helmets <i>Henrik Seeber, Arash Ramezani, and Hendrik Rothe</i>	64
Verification of the Theoretical Feasibility of Shock Wave Attenuation by Means of a Second Transient Medium for Protecting Vehicles Against Blasts <i>Burghard Hillig, Arash Ramezani, and Hendrik Rothe</i>	68
A Coupled CFD-FEM Analysis to Simulate Blast Effects on High Security Vehicles Using Modern Hydrocodes <i>Arash Ramezani, Burghard Hillig, and Hendrik Rothe</i>	74