INVITED SPEAKERS

KEYNOTE SPEAKERS
The Role of Modeling and Simulation in Coordination of Health Care
Bernard P. Zeigler

Framing the Foundations of Computing using Computer Simulation
Paul Fishwick

Modelling as a Way in Design of Novel Algorithms in Computational Intelligence
Helena Szczersicka

SIMULATION TOOLS AND PLATFORMS

FULL PAPERS
The Front Velocity Approach in the Modelling of Simulated Moving Bed Process (SMB)
Anderson Bihain, Antônio Silva Neto and Leônio Diógenes T. Câmara

Relationship between Simulink and Petri Nets
Debjyoti Bera, Kees van Hee and Henk Nijmeijer

A Novel Approach to Model Design and Tuning through Automatic Parameter Screening and Optimization - Theory and Application to a Helicopter Flight Simulator Case-study
Matteo Hessel, Francesco Borgatelli and Fabio Ortalli

An Effective Implementation of Agent's Complex Actions by Reusing Primitive Motions
Jun-Sung Choi and Jong-Hee Park

Artificial Intelligence Modelling Methodologies Applied to a Polymerization Process
Silvia Curteanu, Elena-Niculina Dragoi, Florin Leon and Cristina Butnariu

Enhanced Interior Gateway Routing Protocol for OMNeT++
Vladimir Veselý, Jan Bloudíček and Ondřej Ryšavý

SimuLTE – A Modular System-level Simulator for LTE/LTE-A Networks based on OMNeT++
Antonio Virdis, Giovanni Stea and Giovanni Nardini

A Holistic Approach to Railway Engineering Design using a Simulation Framework
Jesus Carretero, Carlos Gomez, Alberto Garcia and Felix Garcia-Carballeira

Extending the Software Tool TimeNET by Power Consumption Estimation of UML MARTE Models
Dmitriy Shorin and Armin Zimmermann

Numerical Investigation of Liquid Flow in Two-, Three- and Four-Stage Centrifugal Pumps
Nicolas La Roche-Carrier, Guyh Dituba Ngoma and Walid Ghie

SHORT PAPERS
Location Based Alteration of Simulation Models for Multi Screen VR Applications
Ralf Waspe and Juergen Rossmann

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Robust Estimation of Load Performance of DC Motor using Genetic Algorithm
Jong Kwang Lee, Byung Suk Park, Jonghui Han and Il-Je Cho

Scenario Development: A Model-Driven Engineering Perspective
Umut Durak, Okan Topçu, Robert Siegfried and Halit Oguztüzün

Model Integration Workflow for Keeping Models up to Date in a Research Simulator
Torsten Gerlach, Umut Durak and Jürgen Gotschlich

Virtual Bin Picking - A Generic Framework to Overcome the Bin Picking Complexity by the Use of a Virtual Environment
Adrian Schyja and Bernd Kuhlenkötter

Simplified Closed Form Numerical Approaches to Predict Natural Rubber Behavior under Sulfur Curing in Standard Rheometer Tests
Marco Brotto, Gabriele Milani and Federico Milani

Agent-based Modelling of Aircraft Boarding Methods
Serter iyigunlu, Clinton Fookes and Prasad Yarlagadda

Bing Wu, Xinping Yan, Yang Wang and Xiaoyang Wei

Reactive Embedded Device Driver Synthesis using Logical Timed Models
Julien Tanguy, Jean-Luc Béchennec, Mikaël Briday and Olivier H. Roux

Solving Critical Simulation Problems Under Emergency Conditions Using Volunteer Computing
Darkhan Akhmed-Zaki, Bolatzhan Kumalakov and Grzegorz Dobrowski

A Survey of Model-Driven Approaches Applied to DEVS - A Comparative Study of Metamodels and Transformations
Stéphane Garredu, Evelyne Vittori, Jean-François Santucci and Bastien Poggi

Developing Parallel, Discrete Event Simulations in Python - First Results and User Experiences with the SimX Library
Sunil Thulasidasan, Lukas Kroc and Stephan Eidenbenz

Analysis of Possible Exploitation for Long Reach Passive Optical Networks
Rastislav Róka

A Novel Sea Wave Simulation Test Environment Construct for Shipborne Weapons Systems
Chi He, Guangling Dong, Qiang Li, Mengying Ye and Hongqiang Wei

A High-level Petri Nets Approach for Multi-Objective Optimization in Pipeline Networks
Hela Kadri and Belhassen Zouari

On the Way to WSN Collaboration with Robots
Maria Charalampidou, Konstantinos Papakeips, Aristotelis Tsimtsios and Spyridon Mouroutsos

Numerical Backward Simulation Model with Case Branching Capability
Yukio Hiranaka, Houjin Sakaki, Kenta Ito, Toshihiro Taketa and Shinichi Miura

A Data Rich Money Market Model - Agent-based Modelling for Financial Stability
Paul Devine and Rahul Savani

Parallel Simulation of Dynamic Communication Processes on the Base of Probability Time Automata
Henryk Piech, Grzegorz Grodzki and Aleksandra Ptak

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Research on Movement Rules of Soil Particles during EPB Machine Tunneling with Spoke Cutterhead
Wu Li, Chen Long and Ju Ernan

Tsunami Evacuation Simulation - Case Studies for Tsunami Mitigation at Indonesia, Thailand and Japan
E. Mas, S. Koshimura, F. Imamura, A. Suppasri, A. Muhari and B. Adriano

Environment for Hybrid Simulation of Information Security Solutions for Grid and Cloud-systems
Valeriy Vasenin, Vladimir Roganov and Andrey Zenzinov

2D Hair Strands Generation Based on Template Matching
Chao Sun, Fatemeh Cheraghchi and Won-Sook Lee

Speed up of Co-Simulation by a Heuristic Time Warp Mechanism
Christian Bartelt, Karina Rehfeldt and Stefan H.A. Wittek

Separated Computation of the Whole Jet Engine Workflow
Leonid Shabliy, Alexander Krivcov and Oleg Baturin

Quantile Estimation When Applying Conditional Monte Carlo
Marvin K. Nakayama

Preservation of Non-uniform Memory Architecture Characteristics when Going from a Nested OpenMP to a Hybrid MPI/OpenMP Approach
M. Ali Rostami and H. Martin Bücker

SimLuator: A Multi-Core CPU Simulator with Dynamic Language Lua
John Ye, Songyuan Li, Tianzou Chen, Minghui Wu and Li Liu

An Ontology-Driven Framework to Support Scenario Representation in a 3D Operator Training Simulator
Flávio Torres Filho and Maria de Fátima Queiroz Vieira

FORMAL METHODS

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Sensitivity Estimation by Monte-Carlo Simulation Using Likelihood Ratio Method with Fixed-Sample-Path Principle
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A Necessary Test for Fixed-Priority Real-Time Multiprocessor Systems based on Lazy-adversary Simulation
Romulo Silva de Oliveira, Andreu Carminati and Renan Starke

Markov Chain Monte Carlo for Risk Measures
Yuya Suzuki and Thorbjörn Gudmundsson

A Simulation Model for Risk Management Support in IT Outsourcing
Tarcio Bezerra, Seth Bullock and Antao Moura

Modeling Neutron Dynamics in Nuclear Reactor using Fractional-order Point Reactor Kinetics Model with Adiabatic Temperature Feedback
Vishwesh Vyawahare and P. S. V. Nataraj
Model Predictive Control for Fractional-order System - A Modeling and Approximation Based Analysis
Mandar Joshi, Vishwesh Vyawahare and Mukesh Patil

System Reactivity Components in Cellular Manufacturing Subjected to Frequent Unavailability of Physical and Human Resources
Sameh Saad and Carlos R. Gómez

Modeling & Simulation Framework for the Inclusion of Simulation Objectives by Abstraction
Sangeeth saagar Ponnusamy, Vincent Albert and Patrice Thebault

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Decision Support Tool for Group Job-shop Scheduling Problems
Yuri Mauergauz

Modeling of an Agent System to Support the Management of Cooperating and Rival Resources for Business Workflows
Ágnes Werner-Stark, Tibor Dulai and Gyula Ábrahám

About Convergence for Finite-difference Equations of Incompressible Fluid with Boundary Conditions by Woods Formulas
Darkhan Akhmed-Zaki, Nargozy Danaev and Farida Amenova

Complementarity between Simulation and Formal Verification - Transformation of PROMELA Models into FDDEVS Models: Application to a Case Study
Aznam Yacoub, Maamar Hamri and Claudia Frydman

Actuator Fault Detection for a Diesel Engine using Observer Method based
F. Sallem, B. Dahhou, Z. Li and A. Kamoun

Hierarchical Fuzzy Inductive Reasoning Classifier
Solmaz Bagherpour, Angela Nebot and Francisco Mugica

Optimization Strategies for Tuning the Parameters of Radial Basis Functions Network Models
Gancho Vachkov, Nikolinka Christova and Magdalena Valova

Generation of Numbers with the Distribution Close to Uniform with the Use of Chaotic Maps
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Event Log Knowledge as a Complementary Simulation Model Construction Input
Niels Martin, Benoit Depaire and An Caris

A Simulation Fidelity Assessment Framework
Sangeeth saagar Ponnusamy, Vincent Albert and Patrice Thebault

COMPLEX SYSTEMS MODELING AND SIMULATION

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Multi-Agent Intention Recognition using Logical Hidden Semi-Markov Models
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