

## **Eurosim 2016 Proceedings**

### **List of accepted papers**

Esko Juuso. Recursive Data Analysis in Large Scale Complex Systems

Manzoor Ahmed Khan, Patrick Engelhard and Tobias Dörsch. SDNizing the Wireless LAN - A Practical Approach

Yukinori Suzuki. Perspectives on Industrial Optimization Based on Big Data Technology and Soft Computing through Image Coding

Yuchen Zhou, Ke Fang, Kaibin Zhao and Ping Ma. A Novel Credibility Quantification Method for Welch's Periodogram Analysis Result in Model Validation

Jesús Zambrano, Bengt Carlsson, Stefan Diehl and Emma Nehrenheim. A Simplified Model of an Activated Sludge Process with a Plug-Flow Reactor

Michal Gerža, František Schauer and Petr Dostál. Embedded Simulations in Real Remote Experiments for ISES e-Laboratory

Pekka Siirtola, Satu Tamminen, Eija Ferreira, Henna Tiensuu, Elina Prokkola and Juha Rönning. Recognizing Steel Plate Side Edge Shape Automatically Using Classification and Regression Models

Glaucio Ramos and Paulo Pereira. Fuzzy Clustering Algorithm Applied to the Radio Frequency Signals Prediction

W.C. Leite Filho and Julia Guimaraes. Identification Scheme for the Nonlinear Model of an Electro-Hydraulic Actuator

Riku-Pekka Nikula and Konsta Karioja. The Effect of Steel Leveler Parameters on Vibration Features

Mert Mökükcü, Philippe Fiani, Sylvain Chavanne, Lahsen Ait Taleb, Cristina Vlad, Emmanuel Godoy and Clément Fauvel. A New Concept of Functional Energetic Modelling and Simulation

Aarne Pohjonen, Vesa Kyllönen and Joni Paananen. Analytical Approximations and Simulation Tools for Water Cooling of Hot Rolled Steel Strip

Hiroyuki Kano and Hiroyuki Fujioka. Spline Trajectory Planning for Path with Piecewise Linear Boundaries

Kristian Thorsen, Geir Risvoll, Daniel M. Tveit, Peter Ruoff and Tormod Drengstig. Tuning of Physiological Controller Motifs

Jesús Zambrano, Oscar Samuelsson and Bengt Carlsson. Monitoring a Secondary Settler Using Gaussian Mixture Models

Asanthi Jinasena, Bernt Lie and Bjørn Glemmestad. Dynamic Model of an Ammonia Synthesis Reactor Based on Open Information

Monica Patrascu, Vlad Constantinescu and Andreea Ion. Controlling Emergency Vehicles in Urban Traffic with Genetic Algorithms

Galia Weidl, Anders L. Madsen, Viacheslav Tereshchenko, Wei Zhang, Stevens Wang and Dietmar Kasper. Situation Awareness and Early Recognition of Traffic Maneuvers

Antonio J. Gallego, Luis J. Yebra, Eduardo F. Camacho and Adolfo J. Sánchez. Mathematical Modeling of the Parabolic Trough Collector Field of the TCP-100 Research Plant

Luis J. Yebra, Sebastián Dormido, Luis E. Díez, Alberto R. Rocha, Lucía González, Eduardo Cerrajero and Silvia Padilla. Object-Oriented Dynamic Modelling of Gas Turbines for CSP Hybridisation

Xiaobing Shang, Ping Ma and Ming Yang. An Improved Kriging Model Based on Differential Evolution

Markku Ohenoja and Jani Tomperi. A Variogram-Based Tool for Variable Selection in a Wastewater Treatment Effluent Prediction

Zupančič Borut and Vintar Primož. OO Modelling and Control of a Laboratory Crane for the Purpose of Control Education

Christian Scheifele and Alexander Verl. Hardware-in-the-Loop Simulation for Machines Based on a Multi-Rate Approach

Moisés Villegas-Vallecillos and Luis J. Yebra. Mathematical Conditions in Heliostat Models for Deterministic Computation of Setpoints

Marcel Mueller, Abid Ali and Alfred Tareilus. Modelling and Simulation of a Paraglider Flight

Adam Viktorin, Roman Senkerik and Michal Pluhacek. Simulating the Effect of Adaptivity on Randomization

Bernt Lie, Sudeep Bajracharya, Alachew Mengist, Lena Buffoni, Arun Kumar, Martin Sjölund, Adeel Asghar, Adrian Pop and Peter Fritzson. API for Accessing OpenModelica Models From Python

Juho Alatalo, Toni Liedes and Mika Pylvänäinen. Simulation Model of a Piston Type Hydro-Pneumatic Accumulator

Mika Pylvänäinen and Toni Liedes. Reliable Detection of a Variance Increase in a Critical Process Variable

Juliana Keiko Sagawa and Michael Freitag. A Simulation Model for the Closed-Loop Control of a Multi-Workstation Production System

Juhani Heilala, Paula Järvinen, Pekka Siltanen, Jari Montonen, Markku Hentula and Mikael Haag. Interactive Visual Analytics of Production Data - Predictive Manufacturing

Roberto Ribeiro, Rodney Saldanha and Carlos Andrey Maia. Modeling and Portfolio Optimization of Stochastic Discrete-Event System Through Markovian Approximation: An Open-Pit Mine Study

Marko Radanovic and Miquel Angel Piera Eroles. A Causal Model for Air Traffic Analysis Considering Induced Collision Scenarios

Henri Kumpulainen and Bernt Åkesson. Simulating the Effect of a Class of Sensor Fuzed Munitions for Artillery on a Multiple Target Element System

Mark Schillinger, Benedikt Ortelt, Benjamin Hartmann, Jens Schreiter, Mona Meister, Duy Nguyen-Tuong and Oliver Nelles. Safe Active Learning of a High Pressure Fuel Supply System

Mikko Harju, Kai Virtanen and Jirka Poropudas. Simulation Metamodeling Using Dynamic Bayesian Networks with Multiple Time Scales

Teemu Sihvonen, Jouni Savolainen and Matti Tähtinen. Modelling and Simulation of PtG Plant Start-Ups and Shutdowns

Xavier Llamas and Lars Eriksson. A Model of a Marine Two-Stroke Diesel Engine with EGR for Low Load Simulation

Daniel Rippel, Michael Lütjen and Michael Freitag. Domain-Specific Modelling of Micro Manufacturing Processes for the Design of Alternative Process Chains

Shobhana Singh, Kim Sørensen and Thomas Condra. Parametric CFD Analysis to Study the Influence of Fin Geometry on the Performance of a Fin and Tube Heat Exchanger

Mika Liukkonen, Ekaterina Nikolskaya, Jukka Selin and Yrjö Hiltunen. Water Content Analysis of Sludge Using NMR Relaxation Data and Independent Component Analysis

Vito Logar. Modelling and Simulation of the Electric Arc Furnace Processes

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Erik Dahlquist, Syed Muhammad Raza Naqvi, Eva Thorin, Jinyue Yan, Konstantinos Kyprianidis and Philip Hartwell. Modeling of Wood Gasification in an Atmospheric CFB Plant

Erik Dahlquist, Syed Muhammad Raza Naqvi, Eva Thorin, Jinyue Yan, Konstantinos Kyprianidis and Philip Hartwell. Modeling of Black Liquor Gasification

Ales Sink and Gasper Music. Fuzzy Modelling of Air Preparation Stage in an Industrial Exhaust Air Treatment Process

Antoine Abche, Boutros Kass Hanna, Lena Younes, Nour Hijazi, Elie Inaty and Elie Karam. Transmission of Medical Images Over Multi-Core Optical Fiber Using CDMA: Effect of Spatial Signature Patterns

Gorazd Karer. Modelling of Target-Controlled Infusion of Propofol for Depth-of-Anaesthesia Simulation in Matlab-Simulink

Ludmila Vesjolaja, Ambrose Ugwu, Arash Abbasi, Emmanuel Okoye and Britt M. E. Moldestad. Simulation of CO<sub>2</sub> for Enhanced Oil Recovery

Tamás Kökényesi and István Varjasi. Validation Method for Hardware-in-the-Loop Simulation Models

Khim Chhantyal, Minh Hoang, Håkon Viumdal and Saba Mylvaganam. Dynamic Artificial Neural Network (DANN) MATLAB Toolbox for Time Series Analysis and Prediction

Emmanuel Okoye and Britt M. E. Moldestad. Simulation of heavy oil production using Inflow Control Devices

Anders Andersson and Lena Buffoni. Powertrain Model Assessment for Different Driving Tasks through Requirement Verification

Nathan Zimmerman, Konstantinos Kyprianidis and Carl-Fredrik Lindberg. Agglomeration Detection in Circulating Fluidized Bed Boilers Using Refuse Derived Fuels

Lars Øi and Birendra Rai. Simulation of Glycol Processes for CO<sub>2</sub> Dehydration

Shun Hattori. Interpolating Lost Spatio-Temporal Data by Web Sensors

Kristoffer Ekberg and Lars Eriksson. The Effect of Pressure Losses on Measured Compressor Efficiency

Juhani Nissilä and Esko Juuso. Extracting Vibration Severity Time Histories From Epicyclic Gearboxes

Nansen Chen and Mizar Chang. From Low-Cost High-Speed Channel Design, Simulation, to Rapid Time-to-Market

Petri Heinonen and Esko K. Juuso. Development of a Genetic Algorithms Optimization Algorithm for a Nutritional Guidance Application

Mauno Rönkkö, Okko Kauhanen, Jari Koskiaho, Niina Kotamäki, Teemu Näykki, Markku Ohenoja, Esko Juuso, Maija Ojanen, Petri Koponen and Ville Kotovirta. Monitoring Suspended Solids and Total Phosphorus in Finnish Rivers

Eric Halbach, Aarne Halme and Ville Kyrki. Investigation of Robotic Material Loading Strategies Using an Earthmoving Simulator

Mio Suzuki. Application of Musical Expression Generation System to Learning Support of Musical Representation

Anton Novikov, Mikhail Rybkov, Yury Shornikov and Lyudmila Knaub. Solving Stiff Systems of ODEs by Explicit Methods with Conformed Stability Domains

Juan Ignacio Latorre-Biel, Emilio Jimenez-Macias, Juan Carlos Saenz-Diez and Eduardo Martinez-Camara. Transformation of Petri net models by matrix operations

Naohiko Hanajima, Taiki Kaneko, Hidekazu Kajiwara and Yoshinori Fujihira. Static Stability of Double-Spiral Mobile Robot Over Rough Terrain

Patricio Guerrero, Laurent Dumas, Mai K. Nguyen and Serge Cohen. Modelling of a New Compton Imaging Modality for an In-Depth Characterisation of Flat Heritage Objects

Robert Lis. Voltage Stability Assessment of the Polish Power Transmission System

Tuomas Messo, Jussi Sihvo, Tomi Roinila, Tommi Reinikka and Roni Luhtala. Hardware-in-the-loop emulation of three-phase grid impedance for characterizing impedance-based instability

Filip Fedorik, Raimo Hännilä and Antti Haapala. Study of Different Climate and Boundary Conditions on Hygro-Thermal Properties of Timber-Framed Envelope

Alexander Shchekaturov, Ilya Kubenskiy, Konstantin Timofeev and Nikita Chernetsov. Method to Develop Functional Software for NPP APCS Using Model-Oriented Approach in SimInTech

Tomohiro Yoshikawa. A Search Method with User's Preference Direction Using Reference Lines

Aicha Aguezoul. Multi-Sourcing and Quantity Allocation under Transportation Policies

Francesco Casella and Stefano Trabucchi. Object-Oriented Modelling and Simulation of a Molten-Salt Once-Through Steam Generator for Solar Applications Using Open-Source Tools

Ari Jääskeläinen, Risto Rissanen, Asmo Jakorinne, Anssi Suhonen, Tero Kuhmonen, Tero Reijonen, Eero Antikainen, Anneli Heitto and Elias Hakalehto. How Does Modern Process Automation Understand the Principles of Microbiology and Nature

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