CONFERENCE PROGRAM

Wednesday October 23

Wednesday 17.00 - 19.00
Room: D+E
Welcome Party

Wednesday 18.00 - 18:45
Room: D+E
Prof. Bernd Schmidt speaks on the occasion of Prof. Krug's 65th birthday

Modelling of Human Behaviour: The PECS Reference Model
Bernd Schmidt .......................................................................................................................13
CONFERENCE PROGRAM

Thursday October 24

Thursday 10.00 - 10.30
Room: A+B
Opening and Keynote Lecture Prof. Jay Lee (Plenary Session)
Session chair: Wilfried Krug

Web-enabled and Tether-Free Augmented Modeling and Simulation Technologies for Next-Generation Product Design, Manufacturing, and Service
Jay Lee...................................................................................................................................5

Thursday 10.30 - 11.00
Break

Thursday 11.00 - 13.00
Room: A
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Session chair:

Multi-Objective Optimisation of Food Refluent Treatment Plant Design Parameters Through Designed Simulation with Significant Experimental Error
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Spectral Analysis for Confidence Interval Estimation under Multiple Replications in Parallel
Gregory C. Ewing, Krzysztof Pawlikowski and Donald McNickle........................................52

Initial Transient Period Detection using Parallel Replications
Falko Bause and Mirko Eickhoff...........................................................................................85

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Session chair:

Document Workflow Optimization
H.M. Dortmans, L.J. Somers .................................................................................................161

GSIM: a discrete simulator for manufacturing based on activities and systems interaction
M.J. Oliveros, C. Rudiez, F. Torres, C. Galé..............................................................................166
Towards an E-government Lab
Marijn Janssen and Corné Versteegt.................................................................177

Simulation and Knowledge Management: Separated but Inseparable?
Vlatka Hlupic, Alexander Verbraeck, Gert-Jan de Vreede.........................................193

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Session chair:

Simulation Tool for Managing a Non-Automated Distribution Warehouse
C. Galé, M.J. Oliveros and G. Silván ..............................................................................266

Warehouse Layout Design: Minimizing Travel Time With a Genetic and Simulative
Approach - Methodology and Case Study
Filippo Queirolo, Flavio Tonelli, Maurizio Schenone, Paolo Nan and Ivan Zunino........271

Reverse Time Simulation In Production Line Redesign
Jaap A. Ottjes and Gabriel Lodewijks, Kees Meeusen and Wouter O. Hubert van
Blijenburgh ..................................................................................................................216

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FEM Simulation for Design and Evaluation of an Eddy Current Microsensor
Heri Iswahjudi and Hans H. Gatzen .............................................................................201

How Simulation Can Help in a Process Control Model
Franck Théroude and Christian Braesch and Alain Haurat ........................................206

Requirements to a Physical design Support Tool for Microsystem Technology
Andreas Wagener, Jens Popp, Kai Hahn and Rainer Brück ..........................................211

Using Simulation to Evaluate Expansion Plans of a Manufacturing Plant of Lacteal
Products
Enrique Arjona, Graciela Bueno, Ricardo Perez-Romero and Said Infante......................226

Thursday 13.00 - 14.00
Lunch
Thursday 14.00 - 15.00  
Room: A+B  
Plenary Paper Krug/Wiedemann (Plenary Session)  
Session chair:  
Guidelines for Application Service Providing in the Area of Web-based Simulation and Optimization  
Thomas Wiedemann, Wilfried Krug

Thursday 15.00 - 15.30  
Break

Thursday 15.30 - 17.00  
Room: A  
Agent based simulation  
Session chair:  
Distribution of Agent Based Simulation with Colored Ant Algorithm  
Cyrille Bertelle, Antoine Dutot, Frédéric Guinand and Damien Olivier

Multi Agent Model to Control Production System  
Mahmoud Tchikou and Eric Gouardères

Thursday 15.30 - 17.00  
Room: B  
Session Simulation In Business, Economy and Finance (2)  
Session chair:  
Interchange Flows between Mobile Telephone Networks: asymmetry and discrimination  
Francesca Di Pillo, Livio Cricelli, Nathan Levialdi

Data Fusion for Trend Identification in Large Retail Businesses Using Fuzzy Techniques  
Alessandra Orsoni, Sarah Viazzi, Marina Massei, Chiara Briano, Matteo Brandolini

Use of Simulation to Determine Cashier Staffing Policy at a Retail Checkout  
Edward J. Williams, Mohamed Karaki and Craig Lammers

Thursday 15.30 - 17.00  
Room: C  
Session Port simulation  
Session chair:  
Simulate designs of container terminals in 15 minutes  
Edwin Valentin, Igor Mayer, Wieke Bockstael-Blok
Simulation of Operation of a Medium Sized Seaport. Case study: Port of Gdansk
Andrzej Dzielski, Krzysztof Amborski and Przemyslaw Kowalczuk, Jerzy
Sukiennik and Artur Pawlowski .................................................................313

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A Simulation Architecture for Complex Design Projects
Hans P.M. Veeke, Jaap A. Ottjes, Alexander Verbraeck and Yvo Saanen .............221

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Session chair:

A New Paradigm for the Numerical Simulation of Stochastic Petri Nets with General
Firing Times
Graham Horton .................................................................................................129

Numerical Simulation of the Blockage Effect in Wind-Tunnels
Marek Maciejewski, Wojciech Osmólski .........................................................338
# CONFERENCE PROGRAM

## Friday October 25

### Friday 08.30 - 09.15

**Room: A+B**  
Plenary Paper Peter-Wolfgang Graeber (Plenary Session)  
**Session chair:**  
Operational Systems for Water Management under Extreme Climatic Conditions  
Peter-Wolfgang Graeber  

### Friday 09.15 - 09.30

Small Break

### Friday 09.30 - 11.00

**Room: A**  
**Component based simulation**  
**Session chair:**  
Adjusting Dynamically the Resolution in Discrete Simulations  
Wilhelm Dangelmaier, Markus Fahrenholz and Bengt Mueck  

An Integrated Object Model as a World of Model Components for an Activity Based Network Based Simulation Approach  
Gert Zülch and Jörg Fischer

Dynamic Clustering for Auto-Organized Structures in Complex Fluid Flows  
Cyrille Bertelle, Véronique Jay, Sylvain Lerebourg, Damien Olivier and Pierrick Tranouez

### Friday 09.30 - 11.00

**Room: B**  
**Workshop Simulation In The Textile Industry (1)**  
**Session chair:**  
Modeling Friction for Yarn Fabric Simulation Application to Bending Hysteresis  
C. Ngo Ngoc, P. Bruniaux and J.M. Castelain

Nep Balance in Cotton During Processing it into a Yarn  
Iwona Frydrych and Malgorzata Matusiak

Textile Items Classification for Sales Forecasting  
Sébastien Thomassey, Michel Happiette and Jean Marie Castelain
**Friday 09.30 - 11.00**  
**Room: C**  
**Session Supply chain simulation**  
**Session chair:**

FR MO 0930-1100  
A Method for Modelling and Evaluating Supply Chain Performance Using Fuzzy Sets  
I. Elmahi, C. Thirion, A. Hamzaoui, J.L. Sculfort ................................................................. 261

Supply Chain Relationship Structures as Scenarios for Simulation  
Muriati Mukhtar, Awaluddin Mohamed Shaharoun and Mohd Shariff Nabi Baksh .......... 276

Formal Modelling of Supply Chain: An Incremental Approach using Petri Nets  
Rik Van Landeghem and Carmen-Veronica Bobeanu .......................................................... 323

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**Friday 09.30 - 11.00**  
**Room: D**  
**Special Session Climatic Conditions and Water Pollution**  
**Session chair:**

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Willibald Loiskandl, Sabine Klepsch .................................................................................. 477

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Patrick Herb and Peter-Wolfgang Graeber ........................................................................ 482

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Albrecht Gnauck

Modelling of heat exchange in boreholes for quantification of radial fluid flow  
Martin Schreck

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**Friday 09.30 - 11.00**  
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**Session chair:**

Simulation of the Production Chain by Use of an XML-based Job Definition Format  
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Wayne Hignett and Richard Zobel ....................................................................................... 370
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Session chair:

Interoperability Compliance Validation of HLA Federations Based on Coloured Petri Nets
Stéphanie Combettes, Alexandre Nketsa ................................................................. 124

Interoperating COTS Simulation Modelling Packages: A Call for the Standardisation of Entity Representation in the High Level Architecture Object Model Template
Simon J. E. Taylor ........................................................................................................ 145

Manufacturing Simulation using BSP Time Warp with Variable Numbers of Processors
Malcolm Yoke Hean Low .......................................................................................... 137

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Petr Ursíni .................................................................................................................... 450

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M. Casetta, V. Koncar ............................................................................................... 453

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Session chair:

The Integration of the Supervision in the MES Environment Within the Framework of the Extended Enterprise.
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Simulation-based Analysis of the Bullwhip Effect under Different Information Sharing Strategies
Y. Merkuryev, J. Petuhova, R. Van Landeghem and S. Vansteenkiste ..................... 294
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**Session chair:**

- Optimal Control and Design of Complex Systems by Simulation and Genetic Algorithms  
  Peter Köchel and Ulf Nieländer .......................................................... 413

- Solution of Feedback Regulation Problems by Application of Network Optimization Algorithms  
  Andrzej Karbowski ........................................................................... 418

- Simulation and Optimization in Manufacturing, Organization and Logistics  
  W. Krug, Th. Wiedemann, J. Liebelt, B. Baumbach .................................. 423

- Performance Improvements of Industrial Processes using Online Optimisation  
  Karsten Schulze

Friday 11:30 - 13:00  
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**Session Simulation in Collaborative product engineering**  
**Session chair:**

- Virtual Environment for Collaborative Design on Hard Tissue Implants  
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- Product Manufacturing Information (PMI) in 3D Models: A Basis for Collaborative Engineering in Product Creation Process (PCP)  
  Patrick Andre and Roberto Sorito ...................................................... 348

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**Session chair:**

- Structural Identifiability of Bond Graph Models  
  B. Decotte, G.Dauphin-Tanguy .............................................................. 98
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M.C. Schrijver, E.J.H. Kerckhoffs, P.J. Water, K.D. Saman, .......................................................... 103

Adaptive Behavior for Prisoner Dilemma Strategies Based on Automata with Multiplicities
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X.Legrand, P.Bruniaux and J.M. Castelain .......................................................... 459

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Yung-Hsin Wang and Yao-Chung Lu ................................................................................... 406

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Small Break

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Invited Speaker VW (Plenary Session)  
Session chair:  

The Transparent Factory and its Role on Volkswagens Way in the Luxury Sector of the Car Market  
Christian Clausen, Sales Director Volkswagen Transparent Factory, Dresden, Germany

Friday 17.00  
Visit to the VW Transparent Manufactury

Friday 19.00  
Conference Banquet Dorint Hotel, Dresden
CONFERENCE PROGRAM

Saturday October 26

Saturday 09:00 – 10:00
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Plenary Paper Plenary Paper Richard N. Zobel (Plenary Session)
Session chair:

Simulation for Security Provision, Attack Assessment and Profiling for Distributed Simulation
Richard N. Zobel .......................................................................................................................... 19

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MODELITH: A Framework enabling Tool Independent Modeling and Simulation
Jonas Larsson, Björn Johansson, Petter Krus, Magnus Sethson .............................................. 62

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<td>Simulation of Varying the Power Load of an Industrial Plant for Choice of an Economic Rate of Energy</td>
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<td>Implementing MPI Based Portable Parallel Discrete Event Simulation Support in the OMNET++ Framework</td>
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<td>A Fast and Efficient Model of an MPEG-4 Video Traffic Based on Phase Space Linearised Decomposition</td>
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