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- Simulation of Smart System in Civil Engineering
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#### **BioMedSim:**

- Mathematical Modelling in Biology, Biophysics and Biochemistry
- Mathematical Modelling in Immunology, Neuro-Physiology, Population Dynamics and Enzyme Kinetics
- Mathematical Models for Drug Administration
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- Signal and Image Processing Chains for Biological and Medical Applications with Emphasis on Diagnosis
- Bio-Mechanics and Artificial Organs, Study of Muscular Motion
- Models, Techniques and Simulation Tools to case Integrated Understanding of Living Organism Functions
- Knowledge Based Systems and Knowledge Driven Data Processing for Biological and Medical Applications with Emphasis on Aids to Explicit Diagnostic Process and Diagnosis Rule Formation
- Mathematical Models and Simulation Studies on Cancer and Screening Infectious Diseases
- Diverse





#### Session index

## **Regular Sessions (no special sessions)**

- Environment and Ecology
- Petri Nets
- Industrial Design
- Stochastic Systems / Discrete Event / Statistical Modelling
- Logistics
- Traffic / Transportation
- Communications
- Business
- Control Systems
- Complex Systems
- Web-Based and Distributed Systems
- Neural Networks and Fuzzy Systems
- Operation Research
- Organisational Processes
- Parallel Modelling and Processes
- Knowledge and Decision Support Systems
- Mathematical Methods in Simulation
- Industrial Processes
- Energy





#### **Invited Speakers**

Impact of data on simulation: from early practices to federated and agent-directed simulation

Author(s): T. Ören

Integration in water management: loose ends or knots

Author(s): H.G. Wind

J-L. de Kok

Scientific visualization of simulation results: new approaches between web-integration and virtual reality

Author(s): Thomas Ertl

Simulation with learning agents

Author(s): Erol Gelenbe

The evolution of computer technology and the art of simulation

Author(s): Eugene Shapiro

Unique features of the DAO data assimilation systms

Author(s): Ricardo Todling

Who needs validity? Perspectives from the field of management education and development

Author(s): Joseph Wolfe





## **Simulation in Air Traffic Management**

### Simulation and modeling techniques within the realm of air transportation systems

Author(s): George L. Donohue

Reza Holland

#### Simulation in CNS/ATM research

<u>Author(s):</u> Andres Zellweger

#### Simulation vs analytical models for the evaluation of an airport landside

Author(s): Giorgio Romanin Jacu

Giovanni Andreatta Lorenzo Brunetta

Luca Righi

Stochastic simulation techniques as related to innovation in commucations-navigation-surveillance and air traffic management (CNS/ATM)

Author(s): Gaspare Galati

Maurizio Naldi

Mauro Ferri





## **Transportation Network Simulation**

DY-Bus: A tool for the dynamic simulation of urban transit systems

Author(s): Luca Rosati

Umberto Crisalli

Schedule-based dynamic assignment models for public transport service

Author(s): Francesco Russo

Umberto Crisalli

Schedule-based dynamic transit path choice models: a general framework

Author(s): Agostino Nuzzolo





### Framework for Modelling in Integral Water Management

#### Data definitions in an open model system for 2DD hydrodynamic systems

<u>Author(s):</u> H.H. Ten Cate

M.R.T. Roest

S. Hummel

#### Developments of the open model system for comprehensive 2DD modelling of watersystems

*Author(s):* E. de Goede

G.K. Verboom

H.H. ten Cate

S. Hummel

Th. L. van Stijn

# Generic Framework Water: An open modelling system for efficient model linking in integrated water management – current status

Author(s): B. van Adrichem

M.W. Blind

P. Groenendijk

#### Simulation and control of river delta ecosystems application to Danube delta

*Author(s):* Florin Stanciulescu

#### The aral sea basin management model towards integrated water management

Author(s): Anatoli Sorokin

Diederik Waardenburg

Mahmud Ruziev

Marieke de Groen

Peter Kouwenhoven

#### Wadbos links wisdom to the Wadden sea

Author(s): C.L.M. van de Ven

T.T. Reijngoud





## **Bondgraphs Techniques**

#### An orfice flow model for laminar and turbulent conditions

Author(s): B. Barnard

J.U. Thoma W. Borutzky

#### Bond graphs junction structures and linear graphs

<u>Author(s):</u> Jean U. Thoma

Peter H. Roe

Wendong Wang

### Bondgraphs modelling from a simple transmission to electric batteries

Author(s): Jean U Thoma

### Physical causality versus computational causality in bond graphs

Author(s): David Parra

Juan José Ramos

Miquel Angel Piera





## **Simulating Organisational Processes**

Another way to a better way: simulation paradigms decision inferences, and public sector enterprises management

Author(s): Desmond Saunder-Newton

Elizabeth Graddy

Cognitive capacity as competitive advantage: a simulation test

*Author(s):* Steve E. Phelan

Come together? The organizational dynamics of post-merger culturation integration

Author(s): Glenn R. Carroll

J. Richard Harrison

Exploration, exploitation, and the optimal level of organizational inertia

Author(s): Alessandro Lomi

Erik Larsen

Learning and emergent co-ordination in speculative markets: some properties of 'minority game' dynamics

Author(s): G. Bottazzi

G. Devetag

G Dosi

Organizational adaptation and loose coupling

Author(s): Jerker Denrell

Social influence and the generation of joint mental attitudes in multi-agent systems

Author(s): Nicholas R. Jennings

Pietro Panzarasa

The dynamics of inter-organizational ties during crisis: empirical evidence and computational analysis

*Author(s):* Z.hiang Lin

Understanding innovation networks through simulation

Author(s): Andreas Pyka

Nigel Gilbert

Petra Ahrweiler





### **Complex Societal Problems and the use of Simulation**

A decision science model of thinking processes for diagnosing mild distortions in one's relationship with self, others and the world

Author(s): Cathal M. Brugha

Decision support system in organizational processes: which kind of intelligence do we need to manage knowledge

Author(s): Iva Smit

Wim Smit

Simulation sciences in shaping the future. Challenges, tools, prospects and dangers

Author(s): Alexander Makarenko

The new economy: a study on some emerging characteristics

Author(s): Iva Smit

Jaap Hiddinga

Wim Smit

The validity of simulation to understand complex phenomena

<u>Author(s):</u> Cor Van Dijkum

Theory genesis with computer simulation: the phychological integration of resource use factors

Author(s): Wernher M. Brucks

Validation of the simulation models of complex societal problems for policy use

Author(s): Dorien J. De Tombe





# The Delft Cluster Research Program on Management of the Complexity of Sustainable Urban Infrastructure (Re)development

CIMSURE: A city management system for sustainable urban infrastructure (re)development

Author(s): F.H. Mischgofsky

P. Kuiper

#### Co-operative knowledge management for urban infrastructure redevelopment

Author(s): F.H. Mischgofsky

L.R. Nieuwenhuizen

P. Kuiper

#### **Deciding for sustainability**

Author(s): Ch.F. Hendriks

G.M. Sluimer

P.W.G. Bots

# From technological innovation to system innovation for (re)developing the urban infrastructure

Author(s): F.H. Mischgofsky

### GIS-based grids for decision making in urban planning

Author(s): A. Dullemond

# Integral risk management of the railway tunnel and underground site development in Delft

Author(s): H.J.A.M. Hergarden

J.J. van Meerten

P.E. de Winter

P.H. Waarts

#### Integrated municipal knowledge management a virtual townh@ll

Author(s): H. Bos

P. Severijnen

#### **SUREURO**: Sustainable refurbishment Europe

Author(s): K.H. Dekker





# The Delft Cluster Research Program on Management of the Complexity of Sustainable Urban Infrastructure (Re)development

VISI: a methodology to standarise communications in civil engineering

Author(s): Henk Schaap





### Simulation of Smart System in Civil Engineering

#### Aseismic control of multi-degree-of-freedom non-linear structures

Author(s): Alessandro Baratta

Ottavia Corbi

# Characterisation of shape memory alloys – Application to the retrofitting of brick masonry walls by the pseudo-dynamic method and numerical models

Author(s): D. Tirelli

F. Bono

V. Renda

#### **Concurrent fuzzy chip controllers**

Author(s): F. Casciati

G. Torelli

L. Faravelli

R. Rossi

#### Disturbance attenuation for a flexible piezoactuated beam

Author(s): Giovanni Caruso

Laura Menini

Sergio Galeani

#### Dynamic response improvement of elastic-plastic structures reinforced by SMA elaments

Author(s): Ottavia Corbi

#### Optimal TLD vibration control of structures using cone-shaped liquid reservoirs

Author(s): Alessandro De Stefano

F. Casciati

Mitsuhiro Soga

Takayoshi Aoki

#### Thermo-mechanical behavior of a shape-memory alloy beam in the superelastic range

Author(s): Elio Sacco

Ferdinando Auricchio





### Modelling and Simulation of Large-Scale and Complex Structures

#### Modeling and simulation of composite laminates

Author(s): Elio Sacco

Ferdinando Auricchio

# Modelling and numerical methods for frictional contact problems algorithms and applications

Author(s): Frédéric Lebon

### Modelling micro and macro failure surface of media with microstructure

Author(s): G. Crici

R. Luciano

#### Numerical simulation of damaged cohesive interfaces in layered plates

Author(s): Domenico Bruno

Fabrizio Greco

# Numerical simulation of multiple delaminations in composite laminates under mixed-mode deformations

Author(s): Paolo Lonetti

Raffaele Zinno

#### Numerical simulation of wind loads on long-span bridges

Author(s): Guiseppe Vairo





## **Business Process Simulation**

## UML based business systems modelling and simulation

Author(s): Boris Shishkov Joseph Barjis





## **Model Solving Software in the Internet Era**

### An ontological approach in quality assessment of modelling and simulation

Author(s): Huub Scholten

### Challenges to model solving software in the internet area

Author(s): Adri J.Beulens

Huub Scholten

### Modelling and simulation of spatial processes

Author(s): Arend Ligtenberg

Arnold K. Bregt Ron van Lammeren

T. van de Wal

### The smart approach to modelling and simulation

Author(s): Huub Scholten

Mark R. Kramer





# Modelling and Simulation Environments for Design, Planning and Operation of Globally Distributed Enterprises

A manufacturing system engineering moderator identifying conflicts in the design of distributed manufacturing systems

Author(s): Jennifer A. Harding

Keith Popplewell

#### A preliminary information model for a supply chain simulation

<u>Author(s):</u> Charles McLean

Shigeki Umeda

Y. Tina Lee

#### Design agent system for collaborative design process in manufacturing systems

Author(s): Eiji Arai

Fumiko Kubota

Masaru Nakano

Yoshiyuki Yura

### Modelling and simulation for globally distributed enterprises

Author(s): Frank-Walter Jaekel

German Garcia de Gurtubai

Markus Rabe





### **Tutorial**

Experimental design for sensitivity analysis simulation models

Author(s): Jack P.C. Kleijnen

Mathematical-heuristic modelling and its application in high complexity systems simulation

Author(s): Florin Stanciulescu

New advances combining optimization and simulation

*Author(s):* Glover

The arena product family: towards successful deployment of simulation throughout organizations

<u>Author(s):</u> Martin te Lintelo





#### **Scientific Exhibition / Poster**

# A performance evaluation of the evolutionary algorithms for determining the K most vital arcs in the shortest path problem

Author(s): Ho Yeon Chung

Yeo Keun Kim

#### A simulation program for teaching basic principles of physiologic control

Author(s): C.J. Snijders

G.A. Hoek van Dijke

J. Storm

#### Algorithmic description of the biological activity of a solid tumour in VIVO

Author(s): D.D. Dionysiou

G. Pissakas

G.S. Stamatakos

K.S. Nikita

N.A. Mouravliansky

N.K. Uzunoglu

P.C. Georgolopoulou

# An analytical solution to a multiple source problem of a non-buoyant pollutant with removal mechanism

Author(s): A.K. Shukla

M. Agarwal

#### Dynamical models of heterogeneous populations

Author(s): Georgy P. Karev

## Forming and bifurcations of travelling waves in some general population models wit auto-hemotaxis

Author(s): F. Berezovsky

Georgy P. Karev

# Forming the bifurcations of travelling waves in some general population models with auto-hemotaxis

Author(s): F. Berezovsky

Georgy P. Karev





#### **Scientific Exhibition / Poster**

# Identification of combined patient pharmacokinetics and pharmacodynamics using Neural Networks

Author(s): Hannes Kerschner

Martin Kozek

# Mathematical modelling and numerical simulation of space-dependent multispecies interactions

Author(s): C. Rossi

J.F.C.A. Meyer

R.C. Sossae

S. Loiselle

# Methodology to assess the transmission coefficients of the interaction between aids and tuberculosis diseases

Author(s): Alejandro B. Engel

Hyun Mo Yang

Siliva Martorano Raimundo

### Real time adaptive note and swaras recognition using HMM and neural networks

Author(s): Arun Varadarajan

Charu Sheila

N. Venkateswaran

S. Hariram

S. Krishna





### Mathematical Modelling in Biology, Biophysics and Biochemistry

# A numerical approach to the 3D-reconstructions of the human thorax and the solution to the inverse problem of electrocariography

Author(s): Alexandru M. Morega

Daniel Mocanu Mihaela Morega

#### Application of labview for simulation of ECG-genesis

Author(s): Fr. J. Pasveer

R.P. van Wijk van Brievingh

#### Calcium dynamics in cardiac myocytes: a model for drugs effect description

*Author(s):* Catherine Pavoine

Françoise Rocaries Françoise Pecker

**Hubert Lorino** 

Marisol Delgado

René Natowicz

Yskandar Hamam

# Computational modelling as a tool to bridge the gap between animals and human in cochlear implant research

Author(s): J.H.M. Frijns

J.J. Briaire

### Effect of noise on block-oriented identification of the physiological propofol model

<u>Author(s):</u> Martin Ozek

Nada Jovanovi\_

#### Kinetic models of fungal biomass growth and cellulose biodegradation

Author(s): M. Petre

M. Sularia

#### Mathematical models of bone remodelling and numerical simulations on CAD Systems

Author(s): Shinnosuke Oharu

Takashi Takata

Yoshinori Matsuura





## Mathematical Modelling in Biology, Biophysics and Biochemistry

### Modelling physiological functions: parallels with distributed computing

<u>Author(s):</u> Christophe Lecerf

Marc Bui

### Sleep apnea syndrome identification using hidden Markov models

Author(s): Daniel Isabey

Frédéric Lofaso Rdouane Fodil Tarik Al-Ani

Yskandar Hamam

### Structured aggregation in simplified biological cell systems using probability amplitudes

Author(s): Bardo E.J. Bodmann

José Carlos M. Mombach





# Mathematical Modelling in Immunology, Neuro-Physiology, Population Dynamics and Enzyme Kinetics

### A plain cellular automata for the simulation of the immune system

Author(s): G. Nicosia

S. Motta

### The effects of an apoptosis mechanism on the immune response

Author(s): F. Castiglione

G. Nicosia

L. Zammataro

S. Motta

# Using automatic differentiation for the minimal P-norm solution of the biomagnetic inverse problem

Author(s): Christian H. Bischof

H. Martin Bücker

Roland Beucker





## **Mathematical Models for Drug Administration**

## Modelling drug delivery systems using finite element analysis

Author(s): A.M. Healy

K.M. Gallagher

L. Crane

L.G. McCarthy

M. Crane

N.J. Hurley

O.I. Corrigan





## **Modelling and Design of Control and Assistance Devices**

### Intra-aortic balloon control with a genetically optimised control system

Author(s): Jacques LeFèvre

Marisol Delgado

Vanessa Diaz-Zuccarini

# Modelling of an arteriovenous fraft-to-vein anastomosis under steady transitional flow conditions

Author(s): Chris Bertram

Francis Loth

Hisham Bassiouny

Nurullah Arslan





### Signal and Image Processing Chains for Biological and Medical Applications with Emphasis on Diagnosis

# Healthcare simulation model specification featuring multi-stage neural network rule extraction

Author(s): Alwyn Goh

Kok Meng Hoe

Syed Sibte Raza Abidi

#### IERAPSI-a surgical planning and training simulation system

Author(s): Ad Emmen

Leslie Versweyveld

Nigel W. John

### The analysis of heart sounds for symptom detection and machine-aided diagnosis

Author(s): Nancy E. Reed

Peter Fritzson

Todd R. Reed

### The biometric sensors: metrological evaluation and different implications

Author(s): F. Gaeta

M. Savastano





### Bio-Mechanics and Artificial Organs, Study of Muscular Motion

#### Modelling and identification of sphincter system for prosthesis development

Author(s): François Rocaries

Michel Bouchoucha Yskandar Hamam

# Motion analysis system for identification of 3D human locomotion kinematics data and accuracy testing

Author(s): Vladan Papi\_

Vlasta Zanchi

# Predicting of transcription factor binding sites damaged/appeared due to point mutations by simulating the mutation alterations in pattern of DNA binding to nuclear proteins

Author(s): Elena Gorshkova

Galina Orlova

Gennady Vasiliev

Julia Ponomarenko

Mikhail Ponomarenko

Oleg Fokin

Sergey Lavruyshev

Tatyana Merkulova

Zoya Levashova





# Models, Techniques and Simulation Tools to case Integrated Understanding of Living Organism Functions

## A fractal-discrete scheme for lung sound spectral modelling

Author(s): A.L. Cechin

Bardo E.J. Bodmann L.P.L. de Oliveira

# Model based identification and control of patient parameters during the hemodialysis treatment

Author(s): P. Wabel

R. Issermann

U. Moissl

### Simulation of atrium electrical activity

Author(s): Nico Kuijpers

Peter Hilbers





Knowledge Based Systems and Knowledge Driven Data Processing for Biological and Medical Applications with Emphasis on Aids to Explicit Diagnostic Process and Diagnosis Rule Formation

Blood gases values prognosis based on confidence interval prediction

Author(s): Ryszard Tadeusiewicz

Wieslaw Wajjs





# Mathematical Models and Simulation Studies on Cancer and Screening Infectious Diseases

### Deterministic modeling of the chromatin organization in human cell nuclei

*Author(s):* Eva Bartova

Jan Voracek

Markus Mannio Michal Kozubek

## Estimating parameters of a microsimulation model for breast cancer using the score function method

Author(s): Gerrit J. van Oortmarssen

Nanda Piersma Sita Y.G.L. Tan

### Role of decreased cell adhesion in tumor morphology: a simulation study

Author(s): Adriana N. dos Reis

José C.M. Mombach

Marcelo Walter





#### **Diverse**

### Ab-initio studies concerning adenosin – 5' – triphosphate (ATP).II

Author(s): Alexandrina Donescu

D. Lerner

F. Hartescu

Josette Weinberg

V.Em. Sahini

## Medical applications of geant4 simulation toolkit

Author(s): A. Solano

F. Foppiano

F. Marchetto

M.G. Pia

P. Nieminen

S. Agostinelli

S. Chauvie

S. Garelli

V. Rolando

# Simulating a patient undergoing anaesthesia for controller development and educational purposes

Author(s): Adolf H. Glattfelder

Alex M. Zbinden

Christian W. Frei

Daniel Leibundgut

David Hausheer

Konrad S. Stadler

Raimundo Sierra

Simulation of mortality dynamics for mammalian populations exposed to radiation

Author(s): O.A. Smirnova





## **Environment and Ecology**

Dynamic ecosystem management games: a simulation approach

Author(s): Marco a. Janssen

Ecological models of red tide plankton and computer simulation

Author(s): Mineo Yamaguchi

Shinnosuke Oharu Yoshio Taniguchi

Multi agent simulation of the behavioural dynamics behind the innovation diffusion of 'green' products

Author(s): Marco A. Janssen

Wander Jager





#### **Petri Nets**

#### A type of Petri Net based on speech act theory for modelling social systems

Author(s): Jan L.G. Dietz

Joseph Barjis

### Analysis and simulation modelling of glycolitic pathway using Petri Net

Author(s): Isaac Barjis

Isan Barjis

Joseph Barjis

### Coloured petri nets for simulation F.M.S. model maintenance

Author(s): Antoni Guasch

Miquel Angel Piera

# Performance evaluation based on statecharts specification using Markov chains ad SMPL simulation

Author(s): C.R. Lisboa Francês

M.J. Santana

N.L. Vijaykumar

R.H. Carlucci Santana

S.V de Carvalho

V. Abdurahiman

### Workflow modelling and simulation using semantic analysis and Petri Nets

Author(s): Jan L.G. Dietz

Joseph Barjis

Kecheng Liu

Samuel Chong





## **Industrial Design**

### Optimal control of a quarter vehicle with semi-active suspension

Author(s): Arben Çela

Yskandar Hamam

### Research on tools suit for collaborative virtual prototyping engineering

Author(s): Bo Hu Li

Chun Lai Quan

Guang Leng Xiong

Wen Hai Zhu

Xu Dong Chai





### Stochastic Systems / Discrete Event / Statistical Modelling

#### An analysis of clustered categorical data - Application in dental health

Author(s): Asis Kr. Chattopadhyay

Kalyan Das

#### Applied multiresponse metamodelling for queuing network simulation experiments

Author(s): Constantine Lazos

Eleftherios Angelis Panajotis Katsaros

# $\label{lem:condition} \textbf{Random fragmentation of molecular cloud and initial mass function} - \textbf{A Monte Carlo simulation study}$

Author(s): Asis Kr. Chattopadhyay

B. Basu

T. Kanjilal

#### Some problems concerning the numerical simulation of hybrid control systems

Author(s): Florin Stanciulescu

Virginia Ecaterina Oltean





### Logistics

#### A framework for the modelling and simulation of logistic networks

Author(s): F. Bause

H. Beilner

M. Völker

Look-ahead strategies for real time adaptive control of multi-product multi-server bulk service processes-rule construction and results

Author(s): D.J. van der Zee

### Modelling & simulation for customer satisfaction in retail warehouse management

Author(s): Agostino G. Bruzzone

Angela Coppa

Francesco Spirito

Roberto Mosca

Simone Simeoni

Using risk-discounted return-on-investment as a measure of operational performance in inventory decisions

Author(s): John Betts

Robert B.Johnston





#### **Traffic / Transportation**

A tool set for evaluating and controlling traffic simulation

Author(s): András Jávor

Gábor Szücs

A UML-based modelling approach for analysing travel behaviour

Author(s): Christophe Claramunt

Marius Theriault

Artificial intelligence techniques for freeway traffic flow forecasting

Author(s): Giovanni Huisken

Realtime interactive animated simulation experiments with straddle carrier drivers

Author(s): Theo H.W. Horstmeier

Transport infrastructure planning: modelling of socio-economic feasibility risks

<u>Author(s):</u> Steen Leleur

Vectation: modelling and simulation of controlling passive motions in virtual reality

Author(s): Ulrich Kramer





#### **Communications**

#### A simulation study of location-aided routing protocols for mobile ad-hoc networks

Author(s): C.S. Ahluwalia

G. Theodoropoulos

# A simulation system for base station allocation in mobile communication networks using queuing model

Author(s): Leonard Barolli

Takako Yamada Yukio Takahashi

#### **Error modelling for TCP simulations**

Author(s): Hussein Badr

Kostas Pentikousis

# Simulation on the integer capacity planning under uncertain demand problem in telecommunication networks

Author(s): Abdel Lisser

Gérad Plateau

Nelson Maculan

Rafael Andrade





#### **Business**

#### Agent-based simulation platform for evaluating management concepts

<u>Author(s):</u> Heinz Ulrich

Jens Henoch

# Computer simulation for portfolio selection models with transaction costs and initial holdings

Author(s): Constanta Zoie R\_dulescu

Marius R\_dulescu Sorin R\_dulescu

Kinetic transformation graphs: extending the stock flow models of system dynamics with quasi-bond graphs notations – applications in managed systems

Author(s): Jacques LeFèvre

#### Matrix modelling method for discrete dynamic business simulation

*Author(s)*: Eric Melse

Tjeu Blommaert

# Modelling of the modern business intelligence analytical function based on stochastic simulation

Author(s): Tomislav Kosic

Vilko Ziljak

Vladimir Simovic





#### **Control Systems**

# Design of a framework for hardware-in-the-loop simulations and its application to a model helicopter

Author(s): Marco A.A. Sanvido

Walter Schaufelberger

#### Modelling and identification of varying parameters in eye-hand human dynamics

Author(s): Mikulá\_ Alexik

#### Real time system for processes simulation and optimization

<u>Author(s):</u> Florin Hartescu

# Simulation and control system design of thermal conditions in building using active and passive resources

Author(s): Ale\_Krainer

Borut Zupanic

Igor krjanc

Maja Atanasijevic

## Smoothing fast ferry vertical motions: a simulation environment for the control analysis

Author(s): B. de Andres

J.M. de la Cruz

J.M. Giron-Sierra

Segundo Esteban

#### Usage of real time hybrid simulation for verification of control algorithms

Author(s): Mikulá Alexik





## **Complex Systems**

#### An object oriented framework for functional distributed simulation

Author(s): Antonino Mazzeo

Guido Rotondi Nicola Mazzocca

Rocco Aversa

Simulation complex systems as sustainable organization by transparent sensitivity models

*Author(s):* Frederic Vester

Toolbox for analysis and presentation of real multivariable systems

Author(s): Borut Zupanic

Maja Atanasijevic

Rihard Karba

Validating complex construction simulation models using 3D visualiztion

Author(s): Julio C. Martinez

Vineet R. Kamat





## Web-Based and Distributed Systems

## Epoch scheduling in a distributed system

Author(s): Helen D. Karatza

## Simulation of communities of nodes in a wide area distributed systems

Author(s): Gilbert Babin

Herwig Unger

Peter Kropf

Saiho Yuen





## **Neural Networks and Fuzzy Systems**

# "An ""intelligent"" procedure for fuzzy identification of dynamic and non-linear systems"

Author(s): A.M. Luciano

M. Sacchettino

M. Savastano

#### Developing a neural network model with scarce data

*Author(s):* Davorka \_el

Nadja Hvala

Rihard Karba

Sre ko Milani

Stanko Strm nik

#### Fuzzy modelling of depth of anaesthesia using a hierarchical structure

**Author(s):** Jiann-Shing Shieh

Shou-Zen Fan

Wen-Long Shi

#### The interpretation of Neural Networks in the simulation of physical systems

Author(s): Adelmo Luis Cechin

Antonio Souto

Luiz Paolo Luna de Oliveira





## **Operation Research**

Continuous solutions in flexible manufacturing scenarios using parametric inference

Author(s): Arthur T. Gómez

Bardo E.J. Bodmann

The application of system simulation and linear programming in determining the optimal resource assignment of the wholesale flower market in Taiwan

Author(s): Nien-Ching Lin

Tzong-Ru Lee





## **Organisational Processes**

Collecting data for simulation of IT service management processes

<u>Author(s):</u> Wouter de Jong

Design of human resource planning system for agriculture-based industries: the comparison between Japan and Indonesia

Author(s): Didik Purwadi





#### **Parallel Modelling and Processes**

#### A cellular automata model of fish-aggregating-devices performance

<u>Author(s):</u> Fabio Badalamenti

Giovanni D'Anna Maria Piscitelli

Salvatore DiGregorio

#### A massively parallel simulation method for solving 2D distributed parameter systems

Author(s): L. Dekker

S.W. Brok

#### A parallel simulation method for solving non stationary flow dynamics

Author(s): S.W. Brok

# Approaches to organization of stochastic optimal functioning of large-scale distributed computer systems

<u>Author(s):</u> Victor G. Khoroshevsky

Simulation of parallel switching structures for reconfigurable computer systems and high-speed networks

Author(s): Ivan Plander





## **Knowledge and Decision Support Systems**

#### A teamwork test-bed for a decision support system

Author(s): Brahim Chaib-draa

Peter Kropf

Sébastian Paquet

Applying data envelopment analysis and intelligent agents in a constructive simulation system to evaluate behavior of commanders and brigade/battalion units

Author(s): Sergio Eduardo Quijada

#### Integral simulation approach to decision assessment in enterprises

Author(s): Andrej Kraba

Igor Bernik

Miroljub Kjaji\_

Robert Leskovar

#### PML: an object-oriented modelling language for physics knowledge representation

Author(s): David Alsina

Juan José Ramos

Miquel Angel Piera

#### Retrieving parameterized simulation models from a database

Author(s): Csaba Attila Boer

Henk de Swaan Arons





#### **Mathematical Methods in Simulation**

# A modelica-based language for object-oriented modelling with partial differential equations

Author(s): Levon Salmadi

Peter Fritzson

#### Flexible finite volumes for tracer transport in coastal regions

Author(s): F. Naifar

P. Wilders

S. van der Baan

## Modification of flow fields to recover the property of divergence freedom in transport solvers

Author(s): K. Dekker

#### On the limits of a linear approach in power sytems' modelling and simulation

<u>Author(s):</u> Carmen Golovanov

Mihaela Albu

P. Postolache





## **Industrial Processes**

Adequate modelling as a prereqisite for successful resource simulation activities in the paper industry

Author(s): John Fogelholm

## Modelling the devolatization of polyamid-6 in wiped film evaporators

<u>Author(s):</u> Christina Schmidt

Ralf Gesthuisen

**Tobias Scharf** 





## Energy

Simulation of an unknown reaction scheme: Wood pyrolysis

<u>Author(s):</u> Mehmet A. Hastaoglu

Mohamed Abdulkarim