

## CONTENTS

<b>Preface .....</b>	<b>VII</b>
<b>Scientific Programme .....</b>	<b>1</b>
<b>Author Listing.....</b>	<b>129</b>

### **LARGE SYSTEM SIMULATION**

#### **Application of a Decision Support System in Managing Timber Production in North of Iran**

Amirhooman Hemmasi ..... 5

#### **System Dynamics Modelling of a Nautical Tourist Business System (NTBS)**

Ante Munitić, Frane Mitrovic and Pančo Ristov ..... 9

#### **The Maintenance Management in the Highway Context: A System Dynamics Approach**

Enrico Briano, Claudia Caballini and Roberto Revetria..... 17

#### **System Dynamics Modelling of Material Flow of the Port Cargo System**

Ante Munitic, Josko Dvornik, Marko Tomasevic and Pančo Ristov ..... 24

### **COMPLEX SYSTEMS SIMULATION**

#### **Aircraft Control Strategies in a Distributed Cooperative Mission Simulation Environment**

Daniel Castro Silva, Ricardo Silva, Luis Paulo Reis and Eugénio Oliveira ..... 35

#### **The Mathematical Modeling on the Hybrid Computer Architecture for the Flight Simulator**

Peter Kvasnica and Igor Kvasnica..... 42

### **RISK MANAGEMENT AND ASSESSMENT SIMULATION**

#### **Digital Technologies for Forest Fire Suppression: An Applied Step in Means Management**

Yves Dumond..... 47

#### **A Web Decision Support System for Gas Pipeline Risk Assessment**

Andrzej Dietrich and Jakub Badowski ..... 52

# CONTENTS

## VERIFICATION AND OPTIMIZATION TOOLS

**Process Based management of Specific Grid Configurations: Verification of Changes**  
Irina Boyakhchyan, Armen Kostanyan, Vardan Matevosyan,  
Samvel Shoukourian and Anna Varosyan ..... 57

**Mobile Agent Optimization Analysis of Least Time Approach Versus V-Agent**  
Faiz Al-Shrouf, Mohammed Eshtay and Aiman Turani ..... 62

**Tool Based Analytical Support for practical Professional Soccer Training**  
Pedro Abreu, Vasco Vinhas, Luis Reis, Pedro Mendes and Júlio Garganta .... 68

## BUSINESS AND PRODUCT DEVELOPMENT

**A Description of Semi-automatic Creation of Requirements Specification from Business Activities**  
David Jezek, Svatopluk Stolfa, Ivo Vondrák and Jan Kozusznik ..... 77

**Transformation Management of Interdisciplinary Product Lifecycle Modelling and Application in ICT and VR Environments**  
Christian-Andreas Schumann, Stephan Kassel, Andreas Rutsch,  
Tobias Teich and Claudia Tittmann ..... 82

**An Approach for a Needs driven Definition of a Function-Oriented Representation in the Automotive Domain**  
Andreas Warkentin, Jürgen Gausemeier and Joachim Herbst ..... 87

**Joint Optimization of all Inspection Parameters for Multi-Stage Processes: Algorithm, Simulation and Test Set**  
Sofie Van Volsem..... 92

## COLLABORATIVE PROJECTS

**Modeling Global Product Development Projects – The Idea of the Product Collaboration Information Model**  
Reiner Anderl, Jochen Raßler and Diana Völz ..... 99

**Ontology Matching for Collaborative Engineering**  
Christophe Roche ..... 105

## CONTENTS

### **Identifying the Right Simulation Data for Project Scheduling**

Vrassidas Leopoulos, Panagiotis Gantiragas, Viktor Diamantas and

Konstantinos Kirytopoulos ..... 110

## **COSTING**

### **Minimising the Cost of Scheduling Maintenance Tasks on a Single Machine**

Maher Rebai, Imed Kacem and Kondo Adjallah..... 115

### **Cost Model for Parts Supply in Automotive Industry**

Veronique Limère and Hendrik Van Landeghem ..... 120