Table of Contents

Keynotes	
Discrete Huygens' Modelling and Simulation for Wave Propagation Yukio Kagawa	1
Some Focusing Points in Development of Modern Modeling and Simulation Technology	12
Modeling and Simulation Methodology - I	
Research of Collaborative Modeling/Simulation Supporting Environment Based on Grid	23
Ni Li, Hongtao Zheng, Lijuan Xu, and Xiao-Yuan Peng	
Using Capacity Simulation for Quality Goal Setting	31
Application of Central Composite Design to Simulation Experiment	40
Manufacturing	
A Study on the Machine Loading Problem Considering Machine-Breakdown in Flexible Manufacturing Systems	50
Performance Analysis of Alternative Designs for a Vehicle Disassembly System Using Simulation Modeling	59
Layout of Virtual Flexible Manufacturing System and Machining Simulation	68
A Simulation-Based Investment Justification for an Advanced Manufacturing Technology with Real Options	77
Aerospace – I	
Space Missile Simulation on Distributed System	86



Jong Sik Lee

A Portability Study on Implementation Technologies by Comparing a Railway Simulator and an Aircraft FTD
Forward-Backward Time Varying Forgetting Factor Kalman Filter Based Landing Angle Estimation Algorithm for UAV (Unmanned Aerial Vehicle) Autolanding Modelling
A Computational Method for the Performance Modeling and Design of a Ducted Fan System
Military Simulation
HLA-Based Object-Oriented Modeling/Simulation for Military System 122 Tae-Dong Lee, Seung-Hun Yoo, and Chang-Sung Jeong
Research on Construction and Interoperability of Complex Distributed Simulation System
A Flexible and Efficient Scheme for Interest Management in HLA 141 Changhoon Park, Koichi Hirota, Michitaka Hirose, and Heedong Ko
Advanced M&S Framework Based on Autonomous Web Service in Korea: Intelligent-XMSF Approach
Medical Simulation – I
ECG Based Patient Recognition Model for Smart Healthcare Systems 159 Tae Seon Kim and Chul Hong Min
Three-Dimensional Brain CT-DSA Using Rigid Registration and Bone Masking for Early Diagnosis and Treatment Planning
Embedded Healthcare System for Senior Residents Using Internet Multimedia HomeServer and Telephone
self-CD: Interactive Self-collision Detection for Deformable Body Simulation Using GPUs

General Applications – I

On the Passive Vibration Damping by Piezoelectric Transducers with Inductive Loading
Path Sensitization and Sub-circuit Partition of CUT Using t-Distribution for Pseudo-exhaustive Testing
Computer Simulation of Photoelastic Fringe Patterns for Stress Analysis 214 Tae Hyun Baek and Myung Soo Kim
Development of a Power Plant Simulation Tool with Component Expansibility Based on Object Oriented Modeling 222 Sang-Gyu Jeon and Gihun Son
Fast Reconstruction of 3D Terrain Model from Contour Lines on 2D Maps
Network – I
Contention Free Scheme for Asymmetrical Traffic Load in IEEE 802.11x Wireless LAN
Performance Analysis of the Dynamic Reservation Multiple Access Protocol in the Broadband Wireless Access System 250 KwangOh Cho and JongKyu Lee
Energy Efficient MAC Protocol with Reducing Redundant Packet Mechanism in Wireless Sensor Networks
A Performance Analysis of Binary Exponential Backoff Algorithm in the Random Access Packet Networks
e-Business
Modeling of the b-Cart Based Agent System in B2B EC
Modelling of Two-Level Negotiation in Hierarchical Hypergame Framework

х

A Personalized Product Recommender for Web Retailers
Simulating the Effectiveness of Using Association Rules for Recommendation Systems
Numerical Simulation
Intuitive Control of Dynamic Simulation Using Improved Implicit Constraint Enforcement
Air Consumption of Pneumatic Servo Table System
Empirical Analysis for Individual Behavior of Impatient Customers in a Call Center
Modeling and Simulation Methodology – II
FSMI: MDR-Based Metadata Interoperability Framework for Sharing XML Documents
Simulation-Based Web Service Composition: Framework and Performance Analysis
Research and Development on AST-RTI
HLA Simulation Using Data Compensation Model
Traffic Simulation
Modeling and Simulation of Red Light Running Violation at Urban Intersections

Improved Processor Synchronization for Multi-processor Traffic Simulator
Evaluation of Advanced Signal Control Systems with Sensing Technology by Simulation
Proposal and Evaluation of a System Which Aims Reduction in Unexpected Collision at Non-signal Intersection
Network – II
Dynamic Channel Reservation Scheme for Mobility Prediction Handover in Future Mobile Communication Networks
A Novel Mobility Prediction Algorithm Based on User Movement History in Wireless Networks
Performance Evaluation of Threshold Scheme for Mobility Management in IP Based Networks
Effect Analysis of the Soft Handoff Scheme on the CDMA System Performance
Aerospace – II
Derivation of Flight Characteristics Data of Small Airplanes Using Design Software and Their Validation by Subjective Tests
KOMPSAT-2 S/W Simulator
The Robust Flight Control of an UAV Using MIMO QFT: GA-Based Automatic Loop-Shaping Method

Network - III

	Table of Contents	XIII
Meeting Due Dates by Reserving Partial Capacity in Seung J. Noh, Suk-Chul Rim, and Heesang Lee	MTO Firms	. 568
Virtual Reality		
Design a PC-CAVE Environment Using the Parallel Rendering Approach		. 578
VENUS: The Online Game Simulator Using Massively Yung Woo Jung, Bum-Hyun Lim, Kwang-Hyun Sin IlKyu Park, Jae Yong Chung, and Jihong Lee	=	. 589
Error Metric for Perceptual Features Preservation in Polygonal Surface Simplification		. 597
Modeling and Simulation of Digital Scene Image Synt Using Image Intensified CCD Under Different Weather in Scene Matching Simulation System	ers	. 607
Network - IV		
Performance Comparison of Various Web Cluster Arc Eunmi Choi, Yoojin Lim, and Dugki Min	hitectures	. 617
Simulating Session Distribution Algorithms for Switch with Multiple Outputs Having Finite Size Queues Jaehong Shim, Gihyun Jung, and Kyunghee Choi		. 625
An Efficient Bridging Support Mechanism Using the in the RPR-Based Metro Ethernet		. 635
Simulating Cyber-intrusion Using Ordered UML Mod Eung Ki Park, Joo Beom Yun, and Hoh Peter In	del-Based Scenarios .	. 643
Medical Simulation – II		
Automatic Global Matching of Temporal Chest MDC for Computer-Aided Diagnosis		. 652

XIV Table of Contents

High Quality Volume Rendering for Large Medical Datasets Using GPUs
Visualization of Tooth for 3-D Simulation
Analysis of Facial Configuration from Realistic 3D Face Reconstruction of Young Korean Men
Engineering Applications
Finite Element Modeling of Magneto-superelastic Behavior of Ferromagnetic Shape Memory Alloy Helical Springs
LSTAFF: System Software for Large Block Flash Memory
On the Repair of Memory Cells with Spare Rows and Columns for Yield Improvement
Effective Digital IO Pin Modeling Methodology Based on IBIS Model 721 Won-Ok Kwon and Kyoung Park
Author Index