10th International Workshop on Harbor, Maritime and Multimodal Logistics Modeling and Simulation

(HMS 2008)

Held at the International Mediterranean and Latin American Modeling Multiconference

Amantea, Italy
17 – 19 September 2008

Editors:

Agostino Bruzzone
Francesco Longo
Yuri Merkuriev

Giovanni Mirabelli
Miquel Angel Piera

Index

Logistics and Manufacturing

SIMULATION-BASED ANALYSIS OF A CONCRETE ARMOUR UNITS MANUFACTURING PLANT FOR THE CONSTRUCTION OF A RUBBLE MOUND BREAKWATER, David del Rio Vilas, Diego Crespo Pereira, Adolfo Lamas Rodriguez, Alejandro Garcia del Valle 1

IDENTITY-BASED, ITEM-CENTRIC TRACKING PLATFORM FOR LOGISTICS APPLICATIONS, Elisabeth Ilie-Zudor, Marcell Szatmári, Zsolt Kemény, Dávid Karnok, László Monostori 10

BUSINESS SIMULATION GAME FOR TEACHING MULTI-ECHelon SUPPLY CHAIN MANAGEMENT, Yuri Merkuryev, Jonas Hatem, Galina Merkuryeva, Jana Bikovska 20

EXPERIENCES FROM THE APPLICATION OF HLA-BASED DISTRIBUTED SIMULATIONS IN THE PRODUCTION OF VEHICLES, Michael Raab, Thomas Schulze, Steffen Straßburger 29

MOST AND MTM FOR WORK METHODS OPTIMIZATION: A REAL CASE STUDY BASED ON MODELING & SIMULATION, Antonio Cimino, Francesco Longo, Giovanni Mirabelli, Enrico Papoff 35

SUPPLY CHAIN DESIGN: A CASE STUDY ON THE ADDITION OF NEW POTENTIAL CUSTOMERS, Duilio Curcio, Francesco Longo, Giovanni Mirabelli, Enrico Papoff 42

TOTAL PROCESS SIMULATION IN SHIPBUILDING: SIMULATION AIDED HULL ASSEMBLY PLANNING, Jeroen Kaarsemaker, Ubald Nienhuis 49

ALTERNATIVE LINE DELIVERY STRATEGIES SUPPORT A FORKLIFT FREE TRANSITION IN A HIGH PRODUCT VARIETY ENVIRONMENT, Johannes Cottyn, Tim Govaert, Hendrik Van Landeghem 55

WAREHOUSE LOGISTICS REVISITED: A CRITICAL ANALYSIS, Istvan Molnar, Gyorgy Lipovszki 61

Automation Effects and Advanced Container Handling Technologies at Seaport Container Terminals

OPTIMISING ADVANCED CONTAINER HANDLING TECHNOLOGIES VIA DISTRIBUTED SIMULATION/EMULATION, Horst-Dieter Kassl, Tobias Puchert, Holger Schütt 67

LAYOUT OPTIMIZATION OF CONTAINER Terminals USING MATHEMATICAL PROGRAMMING AND SIMULATION, Jörg Wiese, Natalia Kliewer, Leena Suhl 72

DEGREE OF COOPERATIVENESS OF Terminals AND THE EFFECT ON THE BARGE HANDLING PROCESS, A.M. Douma, P.C. Schuur, R.G.M. Jagerman 81

THE CORRIDOR METHOD - A GENERAL SOLUTION CONCEPT WITH APPLICATION TO THE BLOCKS RELOCATION PROBLEM, Marco Caserta, Stefan Voß, Moshe Sniedovich 89

DECISIVE INCREASE OF CAPACITY AND THROUGHPUT BY USING ADVANCED PLANNING AND REAL-TIME OPTIMIZATION ALGORITHMS, Udo Niessen, Eva Savelsberg, Ulrich Dorndorf 94
Modeling and Simulation in Logistics, Traffic and Transportation

ROUTING AND SCHEDULING OF PARCEL TANKERS: A NOVEL SOLUTION APPROACH, Hong Choon Oh, Iftekhar A. Karimi 98

MARITIME CHEMICAL LOGISTICS: IMPORTANCE OF OPTIMIZATION MODELING AND RESEARCH OPPORTUNITIES, Hong Choon Oh, Iftekhar A. Karimi 104

FRAMEWORK FOR SIMULATING LNG PORTS, Piero Silva, Adrien Leleu, Edwin Valentin 110

CAPACITY PLANNING ANALYSIS FOR SERVICE STEEL PRODUCTS HARBOUR, Cristiano Gonçalves Borges, José Almeida Simões, Luiz Augusto Franzese, Daniel Pablo Paz 118

LOGISTICS AND TRANSPORTATION WITHIN THE RETAIL SECTOR: SENSITIVITY ANALYSIS ON THE DISTRIBUTION SYSTEMS, Antonio Cimino, Duilio Curcio, Francesco Longo, Giovanni Mirabelli 123

EVALUATION OF OPERATION COST IN LINER SHIPPING: A DISCRETE-EVENT SIMULATION APPROACH, Aldo McLean, William Biles 129

MULTI-SCENARIO POLICIES FOR MARITIME REPOSITIONING PROBLEMS UNDER DATA SHORTAGE, Theodor Gabriel Crainic, Massimo Di Francesco, Paola Zuddas 134

AN OBJECT-ORIENTED PROGRAMMING APPROACH FOR A GIS DATA-DRIVEN SIMULATION MODEL OF TRAFFIC ON THE PANAMA CANAL, Daniel Sasso, William Biles 139

SCATTER SEARCH OPTIMIZATION OF AN INLAND WATERWAY TRANSPORTATION SYSTEM, Nicholas Anderson, Gerald Evans 146

REENGINEERING PORT PROCESSES THROUGH SIMULATION SUPPORT, Francesco Ciliberti, Giuseppe Sciannameo, Barbara Scozzi 150

COGNITIVE MIMO SONAR BASED ROBUST TARGET DETECTION FOR HARBOUR AND MARITIME SURVEILLANCE APPLICATIONS, Albert Ortiz, Wenhua Li, Genshe Chen, Xiaokun Li, Mo Wei, Li Bai 160

MARINE TRAFFIC: DESIGNING A COLLABORATIVE INTERACTIVE VESSEL TRAFFIC INFORMATION SYSTEM, Dimitrios Lekkas, Spyros Vosinakis, Charalambos Alifferis, John Darzentas 167

INTELLIGENTS AGENTS IN LOGISTICS: SOME TRENDS AND SOLUTIONS, Janis Grundspenkis 174

Intermodal Terminals Optimization and Simulation

SEQUENTIAL ORDERING PROBLEMS FOR CRANE SCHEDULING IN PORT TERMINALS, Roberto Montemanni, Andrea Rizzoli, Derek Smith, Luca Maria Gambardella 180

INTEGRATED DESIGN PROCESS OF MARITIME TERMINALS ASSISTED BY SIMULATION MODELS, Cristiano Marinacci, Andrea Quattrini, Stefano Ricci 190

ADVANCED HANDLING OF STEEL PRODUCTS IN SEAPORTS USING MAGNET SYSTEMS, Bernd Scholz-Reiter, Uwe Hinrichs, Jan Topi Tervo 202

THE SHIP STOWAGE PLANNING PROBLEM, M. Flavia Monaco, Marcello Sammarra 208
ASSIGNMENT AND DEPLOYMENT OF QUAY CRANES AT A MARITIME CONTAINER TERMINAL, Pasquale Legato, Daniel Gullì, Roberto Trunfio

Logistics Modeling and Simulation

RFID FOR AUTOMATING ACCOUNTING PROCESSES IN LOG CABIN CONSTRUCTION, Valdis Pornieks, Egils Ginters, Gunars Grundstoks

INVESTIGATION OF ACCIDENT AND NOISE INTENSITY ON LATVIAN ROADS USING SCAN STATISTICS, Vladimirs Jansons, Vitalis Jurenoks, Konstantins Didenko

NONLINEAR MODELS FOR CRUDE OIL SCHEDULING ON PORTS, Fabio Fagundez, João Lauro Facó, Adilson Xavier

A QUANTITATIVE FRAMEWORK TO ASSESS CAPABILITY TRADEOFFS OF THE TRANSFORMABLE-CRAFT WITHIN THE SEABASING CONCEPT, Stefanos Koullias, Janel Nixon, Dimitri Mavris

Multimodal transports: Hinterland Terminals

CONROCAPS- MODELLING INTERMODAL TERMINALS TO CALCULATE THEIR CAPACITY, Susanne Ficke, Holger Schütt

A RISK ASSESSMENT APPROACH FOR INLAND CONTAINER TERMINALS, Manfred Gronalt, Hans Häuslmayer, Werner Jammernegg, Edith Schindlbacher, Monika Weishäupl

SHIP-TO-SHORE GANTRY CRANE SIMULATOR DESIGN: CRANE OPERATOR PERFORMANCE ANALYSIS AND ASSESSMENT TOOL OF CAGLIARI UNIVERSITY, Agostino Bruzzone, Paolo Fadda, Gianfranco Fancello, Enrico Bocca, Giammarco D’Errico, Alberto Tremori

ASSESSING PERFORMANCE INDICATORS FOR INLAND TERMINALS, Manfred Gronalt, Martin Posset, Thouraya Benna

Container Terminals

LOAD CARRIER MANAGEMENT ON RO-RO TERMINALS, Bernd Scholz-Reiter, Felix Böse, Michael Teucke, Anne Virnich

CONTRIBUTION TO A FULLY AUTOMATIC CONTAINER TERMINAL AS PART OF THE LOGISTICS FACTORY OF THE FUTURE, Wolfgang Echelmeyer, Alice Kirchheim

OPTIMIZING YARD ASSIGNMENT AT AN AUTOMOTIVE TRANSSHIPMENT TERMINAL, Luigi Moccia, Gregorio Sorrentino

A DECISION SUPPORT SYSTEM FOR PLANNING MAINTENANCE PROCESSES IN A TRANSSHIPMENT CONTAINER TERMINAL, Gianfranco Fancello, Marco Naseddu, Andrea Ferrari, Paolo Fadda

HUMAN RESOURCES DAILY ALLOCATION IN A TRANSSHIPMENT CONTAINER TERMINAL, Paolo Fadda, Gianfranco Fancello, Marco Pisano, Paola Zuddas

Author’s Index

Author's Index

301