Simulation and Modeling: Current Technologies and Applications

Table of Contents

Preface ........................................................................................................................................ vi

Chapter I
Methodologies and Approaches in Discrete Event Simulation ........................................ 1
   Evon M. O. Abu-Taieh, The Arab Academy for Banking and Financial Sciences, Jordan
   Asim Abdel Rahman El Sheikh, The Arab Academy for Banking and Financial Sciences, Jordan

Chapter II
Distributed Simulation in Industry .......................................................................................... 36
   Roberto Revetria, Università degli Studi di Genova, Italy
   Roberto Mosca, Università degli Studi di Genova, Italy

Chapter III
Object-Oriented Modeling and Simulation of Optical Burst Switched Mesh Networks .................................................................................................................. 99
   Joel J. P. C. Rodrigues, University of Beira Interior, Portugal
   Mário M. Freire, University of Beira Interior, Portugal

Chapter IV
Using Natural Language Modeling for Business Simulation ............................................. 119
   Peter Bollen, University of Maastricht, The Netherlands

Chapter V
Relay Race Methodology (RRM): An Enhanced Life Cycle for Simulation System Development ............................................................................................................. 156
   Evon M. O. Abu-Taieh, The Arab Academy for Banking and Financial Sciences, Jordan
   Asim Abdel Rahman El Sheikh, The Arab Academy for Banking and Financial Sciences, Jordan
   Jeihan Abu Tayeh, Ministry of Planning, Jordan
Chapter VI
Information Feedback Approach for the Simulation of Service Quality in the Inter-Object Communications .................................................................175
R. Manjunath, UVCE, Bangalore, India

Chapter VII
Model-Based Simulation to Examine Command and Control Issues with Remotely Operated Vehicles .................................................................199
Sasanka Prabhala, Wright State University, Ohio, USA
Subhashini Ganapathy, Wright State University, Ohio, USA
S. Narayanan, Wright State University, Ohio, USA
Jennie J. Gallimore, Wright State University, Ohio, USA
Raymond R. Hill, Wright State University, Ohio, USA

Chapter VIII
Simulation Modeling as a Decision-Making Aid in Economic Evaluation for Randomized Clinical Trials ......................................................................219
Tillal Eldabi, Brunel University, UK
Robert D. Macredie, Brunel University, UK
Ray J. Paul, Brunel University, UK

Chapter IX
Intelligent Simulation Framework for Integrated Production System ........244
Abid Al Ajeeli, University of Bahrain, Bahrain

Chapter X
Simulation and Modelling of Knowledge-Mining Architectures Using Recurrent Hybrid Nets .................................................................266
David Al-Dabass, Nottingham Trent University, UK

Chapter XI
Simulating Theory-of-Constraint Problem with a Novel Fuzzy Compromise Linear Programming Model .................................................................307
Arijit Bhattacharya, The Patent Office, Boudhik Sampada Bhawan, India
Pandian Vasant, Universiti Teknologi Petronas, Malaysia
Sani Susanto, Parahyangan Catholic University, Indonesia

Chapter XII
Business Process Reengineering in the Automotive Area by Simulator-Based Design ............................................................................................337
Torbjörn Alm, Linköping University, Sweden
Jens Alfredson, Saab AB, Aerosystems, Sweden
Kjell Ohlsson, Linköping University, Sweden
Chapter XIII
The Role of Simulation in Business Process Reengineering.................................359
  Firas M. Alkhaldi, Arab Academy for Banking and Financial Sciences,
  Jordan
  Mohammad Olaimat, Arab Academy for Banking and Financial Sciences,
  Jordan
  Abdullah Abdali Rashed, Saba University, Yemen

Chapter XIV
Virtual Reality and Augmented Reality Applied to Simulation Visualization ....391
  Claudio Kirner, Methodist University of Piracicaba, Brazil
  Tereza G. Kirner, Methodist University of Piracicaba, Brazil

Chapter XV
Emotional Agent Modeling (EMAM).................................................................420
  Khulood Abu Maria, Arab Academy of Business and Financial Services,
  Jordan
  Raed Abu Zitar, Philadelphia University, Jordan

About the Contributors .........................................................................................443

Index ......................................................................................................................451