Table of Contents

Preface ........................................................................................................................................... xvii

Section I
Distributed Agent Applications and Decision Support

Chapter I
Designing Multi-Agent Systems from Logic Specifications: A Case Study ................................. 1
Hong Lin, University of Houston—Downtown, USA

Chapter II
Multi-Agent Architecture for Knowledge-Driven Decision Support ........................................... 28
Rahul Singh, University of North Carolina at Greensboro, USA

Chapter III
A Decision Support System for Trust Formalization ................................................................. 47
Farid Meziane, University of Salford, UK
Samia Nefti, University of Salford, UK

Chapter IV
Using Misunderstanding and Discussion in Dialog as a Knowledge Acquisition or Enhancement Process ........................................................................................................................................ 65
Mehdi Yousfi-Monod, University of Montpellier, France
Violaine Prince, University of Montpellier, France

Chapter V
Improving E-Trade Auction Volume by Consortium ................................................................. 91
Sungchul Hong, Towson University, USA
Barin N. Nag, Towson University, USA
Dong-qing Yao, Towson University, USA
Chapter VI
Extending Loosely Coupled Federated Information Systems Using Agent Technology ............... 116
Manoj A. Thomas, Virginia Commonwealth University, USA
Victoria Y. Yoon, University of Maryland, Baltimore County, USA
Richard Redmond, Virginia Commonwealth University, USA

Chapter VII
Modeling Fault Tolerant and Secure Mobile Agent Execution in Distributed Systems ............. 132
H. Hamidi, Iran University of Science & Technology, Iran-Tehran
K. Mohammadi, Iran University of Science & Technology, Iran-Tehran

Section II
Search and Retrieval

Chapter VIII
Search Engine Performance Comparisons ................................................................. 148
Xiannong Meng, Bucknell University, USA
Song Xing, California State University—Los Angeles, USA

Chapter IX
A User-Centered Approach for Information Retrieval .................................................... 165
Antonio Picariello, Università di Napoli Federico II, Italy
Antonio M. Rinaldi, Università di Napoli Federico II, Italy

Chapter X
Classification and Retrieval of Images from Databases Using Rough Set Theory.................. 179
Aboul Ella Hassanien, Cairo University, Egypt
Jafar M. Ali, Kuwait University, Kuwait

Chapter XI
Supporting Text Retrieval by Typographical Term Weighting ............................................. 199
Lars Werner, University of Paderborn, Germany
Stefan Böttcher, University of Paderborn, Germany

Chapter XII
Web Mining by Automatically Organizing Web Pages into Categories .................................. 214
Ben Choi, Louisiana Tech University, USA
Zhongmei Yao, Louisiana Tech University, USA
Chapter XIII
Mining Matrix Pattern from Mobile Users ................................................................. 232
  John Goh, Monash University, Australia
  David Taniar, Monash University, Australia

Section III
Information Systems and Modeling

Chapter XIV
Conceptual Modeling of Events for Active Information Systems.......................... 261
  Salvatore T. March, Vanderbilt University, USA
  Gove N. Allen, Brigham Young University, USA

Chapter XV
Information Modeling and the Problem of Universals .............................................. 273
  John M. Artz, George Washington University, USA

Chapter XVI
Empirical Inference of Numerical Information into Causal Strategy Models by
Means of Artificial Intelligence .............................................................................. 290
  Christian Hillbrand, University of Liechtenstein, Principality of Liechtenstein

Chapter XVII
Improving Mobile Web Navigation Using N-Grams Prediction Models ....................... 314
  Yongjian Fu, Cleveland State University, USA
  Hironmoy Paul, Cleveland State University, USA
  Namita Shetty, Cleveland State University, USA

Section IV
Supply Chain Management

Chapter XVIII
Forecasting Supply Chain Demand Using Machine Learning Algorithms .................. 328
  Réal Carbonneau, Department of Management Sciences, HEC Montréal, Canada
  Rustam Vahidov, John Molson School of Business, Concordia University, Canada
  Kevin Laframboise, John Molson School of Business, Concordia University, Canada
Chapter XIX
Supporting Demand Supply Network Optimization with Petri Nets................................................................. 366
  Teemu Tynjala, Nokia Group, Finland

Compilation of References .......................................................................................................................... 384

About the Contributors .................................................................................................................................. 416

Index ......................................................................................................................................................... 423