Table of Contents

Preface..................................................................................................................................................xiv

Section 1
Algorithms and Infrastructures

Chapter 1
Efficient Execution of Dataflows on Parallel and Heterogeneous Environments .........................1
  George Teodoro, Emory University, USA

Chapter 2
Interference Aware Resource Allocation in Relay Enhanced Broadband Wireless Access Networks.............................................................................................................................................18
  Preetha Thulasiraman, Naval Postgraduate School, USA

Chapter 3
Deadlock Prevention with Wormhole Routing: Irregular Topology .................................................47
  Lev Levitin, Boston University, USA
  Mark Karpovsky, Boston University, USA
  Mehmet Mustafa, Boston University, USA

Chapter 4
Deadlock Prevention with Wormhole Routing: Regular Topology ................................................74
  Mark Karpovsky, Boston University, USA
  Lev Levitin, Boston University, USA
  Mehmet Mustafa, Boston University, USA

Chapter 5
Self-Stabilizing Graph Coloring Algorithms .......................................................................................96
  Shing-Tsaan Huang, National Central University, Taiwan
  Chi-Hung Tzeng, National Tsing Hua University, Taiwan
  Jehn-Ruey Jiang, National Central University, Taiwan
Chapter 6
Distributed Service Programming and Interoperability .................................................. 111
José C. Delgado, Instituto Superior Técnico, Technical University of Lisbon, Portugal

Chapter 7
Specifying Business-Level Protocols for Web Services Based Collaborative Processes .......... 137
W. L. Yeung, Lingnan University, Hong Kong

Section 2
Cloud Computing

Chapter 8
Cloud Computing and Enterprise Migration Strategies ................................................. 156
Rosiah Ho, Lingnan University, Hong Kong

Chapter 9
Virtualization and Cloud Computing: Business Models in the Virtual Cloud .................. 176
Chaka Chaka, Tshwane University of Technology, South Africa

Chapter 10
Ad-Hoc Parallel Data Processing on Pay-As-You-Go Clouds with Nephele ..................... 191
Daniel Warneke, Technische Universität Berlin, Germany

Section 3
Applications of Distributed Computing

Chapter 11
Social Web Services Research Roadmap: Present and Future ..................................... 220
Zakaria Maamar, Zayed University, Dubai, UAE
Jamal Bentahar, Concordia Institute for Information Systems Engineering, Canada
Noura Faci, Université Lyon 1, France
Philippe Thiran, Namur University, Belgium

Chapter 12
On the Dissemination of IEEE 802.11p Warning Messages in Distributed Vehicular Urban Networks .......................................................... 234
Enrique Costa-Montenegro, University of Vigo, Spain
Ana M. Peleteiro, University of Vigo, Spain
Juan C. Burguillo, University of Vigo, Spain
Javier Vales-Alonso, Technical University of Cartagena, Spain
Ana Belén Barragán-Martínez, Centro Universitario de la Defensa, Escuela Naval Militar de Marín, Spain
Chapter 13
Adding Personalization and Social Features to a Context-Aware Application for Mobile Tourism .......................................................... 253
Ana Belén Barragáns-Martínez, Centro Universitario de la Defensa, Escuela Naval Militar de Marín, Spain
Enrique Costa-Montenegro, University of Vigo, Spain

Chapter 14
New Directions in Social Question Answering .................................................. 266
Mohan John Blooma, RMIT International University, Vietnam
Jayan Chirayath Kurian, RMIT International University, Vietnam

Chapter 15
Workflow Validation Framework in Collaborative Engineering Environments .............. 285
Wikan Danar Sunindyo, CDL-Flex, ISIS, Vienna University of Technology, Austria & STEI-ITB, Indonesia
Thomas Moser, CDL-Flex, ISIS, Vienna University of Technology, Austria
Dietmar Winkler, CDL-Flex, ISIS, Vienna University of Technology, Austria
Richard Mordinyi, CDL-Flex, ISIS, Vienna University of Technology, Austria
Stefan Biffl, CDL-Flex, ISIS, Vienna University of Technology, Austria

Chapter 16
Impact Analysis of Web Services Substitution on Configurable Compositions .................. 300
Salahdine Hachimi, Université Lyon 1, France
Noura Faci, Université Lyon 1, France
Zakaria Maamar, Zayed University, UAE

Compilation of References ........................................................................ 314

About the Contributors ................................................................................ 343

Index ........................................................................................................ 350