# Table of Contents

Preface ........................................................................................................................................... xvi

Acknowledgment .......................................................................................................................... xxviii

## Section 1

**Web Systems Innovations**

**Chapter 1**
**ART-Improving Execution Time for Flash Applications** ............................................................. 1

* Ming Ying, University of Alberta, Canada  
  James Miller, University of Alberta, Canada

**Chapter 2**
**FTT: A System to Refactor Traditional Forms into Ajax-Enabled Forms** .................................. 23

* Ming Ying, University of Alberta, Canada  
  James Miller, University of Alberta, Canada

**Chapter 3**
**Automated Ranking of Relaxing Query Results Based on XML Structure and Content Preferences** ........................................................................................................................................ 44

* Wei Yan, Northeastern University, China  
  Li Yan, Northeastern University, China  
  Z. M. Ma, Northeastern University, China

**Chapter 4**
**Enabling Intelligence in Web-Based Collaborative Knowledge Management System** ............ 63

* Krissada Maleewong, Shinawatra University, Thailand  
  Chutiporn Anutariya, Shinawatra University, Thailand  
  Vilas Wuwongse, Asian Institute Technology, Thailand

**Chapter 5**
**An Adaptive System for Retrieval and Composition of Learning Objects** ....................... 83

* Burasakorn Yoosooka, Asian Institute of Technology, Thailand  
  Vilas Wuwongse, Asian Institute of Technology, Thailand
Chapter 6
Integrating Semantic Web and Software Agents: Exchanging RIF and BDI Rules ................. 102
Yiwei Gong, Delft University of Technology, The Netherlands
Sietse Overbeek, Delft University of Technology, The Netherlands
Marijn Janssen, Delft University of Technology, The Netherlands

Chapter 7
Implementing Background Net with Knowware System for Personalized Keyword Support .......... 120
Yuan Chen, Macau University of Science and Technology, China
Liya Ding, Macau University of Science and Technology, China
Sio-Long Lo, Macau University of Science and Technology, China
Dickson K. W. Chiu, Dickson Computer Systems, Hong Kong

Chapter 8
Developing Rich Internet Applications as Social Sites on the Semantic Web: A Model-Driven Approach ................................................................. 134
Jesús M. Hermida, University of Alicante, Spain
Santiago Meliá, University of Alicante, Spain
Andrés Montoyo, University of Alicante, Spain
Jaime Gómez, University of Alicante, Spain

Section 2
Web Services Innovations

Chapter 9
Flexible Provenance Tracing .................................................................................................................. 157
Liwei Wang, Wuhan University, China
Henning Koehler, The University of Queensland, Australia
Ke Deng, The University of Queensland, Australia
Xiaofang Zhou, The University of Queensland, Australia
Shazia Sadiq, The University of Queensland, Australia

Chapter 10
A Service Bus Architecture for Application Integration in the Planning and Production Phases of a Product Lifecycle ................................................................................................... 176
Jorge Minguez, University of Stuttgart, Germany
Stefan Silcher, University of Stuttgart, Germany
Philipp Riffelmacher, University of Stuttgart, Germany
Bernhard Mitschang, University of Stuttgart, Germany

Chapter 11
A Service-Oriented User Interface for the Next Generation Web ................................................... 192
Shiping Chen, CSIRO ICT Centre, Australia
Surya Nepal, CSIRO ICT Centre, Australia
Chapter 12
Service Oriented Enterprise and Contracted Profit Sharing .............................................................. 209
Ali Habibi Badrabadi, K. N. Toosi University of Technology, Iran
Mohammad Jafar Tarokh, K. N. Toosi University of Technology, Iran
Shahriar Mohammadi, K. N. Toosi University of Technology, Iran

Chapter 13
Dynamic Business Collaborations Through Contract Services ................................................................. 228
Surya Nepal, CSIRO ICT Centre, Australia
Shiping Chen, CSIRO ICT Centre, Australia

Chapter 14
Enforcing ASTD Access-Control Policies with WS-BPEL Processes in SOA Environments ........ 252
Michel Embe Jiague, Université de Sherbrooke, Canada, and
Université Paris-Est Créteil Val-de-Marne, France
Marc Frappier, Université de Sherbrooke, Canada
Frédéric Gervais, Université Paris-Est Créteil Val-de-Marne, France
Régine Laleau, Université Paris-Est Créteil Val-de-Marne, France
Richard St-Denis, Université de Sherbrooke, Canada

Chapter 15
Governance of Cross-Organizational Healthcare Document Exchange through Watermarking Services and Alerts .......................................................... 274
Dickson K. W. Chiu, Dickson Computer Systems, Hong Kong
Yuexuan Wang, Tsinghua University, China
Patrick C. K. Hung, University of Ontario Institute of Technology, Canada
Vivying S. Y. Cheng, Hong Kong University of Science and Technology, Hong Kong
Kai-Kin Chan, Hong Kong Baptist University, Hong Kong
Eleanna Kafeza, Athens University of Economics and Business, Greece
Wei-Feng Tung, Fu-Jen Catholic University, Taiwan
Yi Zhuang, Zhejiang Gongshang University, China
Nan Jiang, Hangzhou No. 1 People’s Hospital, China

Section 3
Mobile Innovations

Chapter 16
Segmentation Matters: An Exploratory Study of Mobile Service Users ........................................ 301
Anna Sell, Åbo Akademi University, Finland
Pirkko Walden, Åbo Akademi University, Finland
Christer Carlsson, Åbo Akademi University, Finland
Chapter 17
Facilitating Biodefense Research with Mobile-Cloud Computing .................................................... 318
   Jingyu Zhang, University of Sydney, Australia
   Jinhui Yao, University of Sydney and CSIRO, Australia
   Shiping Chen, CSIRO, Australia
   David Levy, University of Sydney, Australia

Chapter 18
Towards a Framework for Weaving Social Networks Into Mobile Commerce .............................. 333
   Zakaria Maamar, Zayed University, UAE
   Noura Faci, Université Lyon 1, France
   Soraya Kouadri Mostéfaoui, The Open University, U.K
   Fahim Akhter, King Saud University, Saudi Arabia

Chapter 19
RFID Enabled Vehicular Network for Ubiquitous Travel Query .................................................... 348
   Tianle Zhang, Beijing University of Posts and Telecommunications, China
   Chunlu Wang, Beijing University of Posts and Telecommunications, China
   Zongwei Luo, The University of Hong Kong, China
   Shuihua Han, Xiamen University, China
   Mengyuan Dong, Xiamen University, China

Chapter 20
Enhancing ERP System with RFID: Logistic Process Integration and Exception Handling ........... 364
   Dickson K. W. Chiu, Dickson Computer Systems and The Hong Kong Polytechnic University, Hong Kong
   Kai-Pan Mark, City University of Hong Kong and Chinese University of Hong Kong, Hong Kong
   Eleanna Kafeza, Athens University of Economics & Business, Greece
   Tat-Pui Wong, The Hong Kong Polytechnic University, Hong Kong

Compilation of References .................................................................................................................. 380

About the Contributors ....................................................................................................................... 411

Index .................................................................................................................................................. 420