# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td></td>
<td>xvi</td>
</tr>
<tr>
<td>Section 1</td>
<td>Ontology, Semantics, and Web Services</td>
<td></td>
</tr>
<tr>
<td>Chapter 1</td>
<td>How Culture May Influence Ontology Co-Design: A Qualitative Study</td>
<td>Linda Anticoli, Università di Udine, Italy, Elio Toppiano, Università di Udine, Italy</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>The Medical Semantic Web: Opportunities and Issues</td>
<td>Mohammad Ali H. Eljinini, Isra University, Jordan</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>WSMO and WSMX Support to the Semantic Web Services Technology</td>
<td>Mariam Abed Mostafa Abed, German University in Cairo, Egypt</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>A Generic QoS Model for Web Services Design</td>
<td>Wan Nurhayati Wan Ab. Rahman, Universiti Putra Malaysia, Malaysia, Farid Meziane, University of Salford, UK</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Quality-of-Service Based Web Service Composition and Execution Framework</td>
<td>Bassam Al-Shargabi, Al-Isra University, Jordan, Osama Al-haj Hassan, Al-Isra University, Jordan, Alia Sabri, Applied Science University, Jordan, Asim El Sheikh, Arab Academy for Banking and Financial Sciences, Jordan</td>
</tr>
</tbody>
</table>
Section 2
Searching and Mining of Web Information

Chapter 6
Probabilistic Models for Social Media Mining ................................................................. 95
Flora S. Tsai, Nanyang Technological University, Singapore

Chapter 7
A Novel Architecture for Deep Web Crawler ..................................................................... 106
Dilip Kumar Sharma, Shobhit University, India
A. K. Sharma, YMCA University of Science and Technology, India

Chapter 8
Using Watermarking Techniques to Prove Rightful Ownership of Web Images .................. 130
Abdallah Al-Tahan Al-Nu’aimi, Isra University, Jordan

Chapter 9
Searching and Generating Authoring Information: A Hybrid Approach ............................ 142
Faisal Alkhateeb, Yarmouk University, Jordan
Amal Alzubi, Yarmouk University, Jordan
Iyad Abu Doush, Yarmouk University, Jordan
Shadi Aljawarneh, Isra University, Jordan
Eslam Al Maghayreh, Yarmouk University, Jordan

Chapter 10
A Unified Approach to Uncertainty-Aware Ubiquitous Localization of Mobile Users ........ 158
Petr Aksenov, Hasselt University, Belgium
Kris Luyten, Hasselt University, Belgium
Karin Coninx, Hasselt University, Belgium

Section 3
Web-Based Applications

Chapter 11
Towards a Flexible and Adaptable Modeling of Business Processes ............................... 174
Khadhir Bekki, Ibn Khaldoune University, Algeria
Hafida Belachir, Boudiaf University, Algeria

Chapter 12
An Experimental Study for the Effect of Stop Words Elimination for Arabic Text Classification Algorithms .................................................................................................................. 184
Bassam Al-Shargabi, Isra University, Jordan
Fekry Olayah, Isra University, Jordan
Waseem AL-Romimah, University of Science and Technology, Yemen
Chapter 13
Productivity Evaluation of Self-Adaptive Software Model Driven Architecture

Basel Magableh, Trinity College Dublin, Ireland
Stephen Barrett, Trinity College Dublin, Ireland

Chapter 14
Design and Operation of a Cell Phone-Based Community Hazard Information Sharing System

Mayayuki Shinohara, Kanagawa Institute of Technology, Japan
Akira Hattori, Kanagawa Institute of Technology, Japan
Shigenori Ioroi, Kanagawa Institute of Technology, Japan
Hiroshi Tanaka, Kanagawa Institute of Technology, Japan
Haruo Hayami, Kanagawa Institute of Technology, Japan
Hidekazu Fujioka, Morinosato 4-Chrome Association in Atsugi City, Japan
Yuichi Harada, Morinosato 4-Chrome Association in Atsugi City, Japan

Section 4
Web Engineering Network and Communication Platforms

Chapter 15
Improved Algorithm for Error Correction

Wael Toghuj, Isra University, Jordan
Ghazi Alkhatib, Princess Sumaya University for Technology, Jordan

Chapter 16
PECA: Power Efficient Clustering Algorithm for Wireless Sensor Networks

Maytham Safar, Kuwait University, Kuwait
Hasan Al-Hamadi, Kuwait National Petroleum Company, Kuwait
Dariush Ebrahimi, Kuwait University, Kuwait

Chapter 17
Relay Selection in Distributed Transmission Based on the Golden Code Using ML and Sphere Decoding in Wireless Networks

Lu Ge, Loughborough University, UK
Gaojie J. Chen, Loughborough University, UK
Jonathon. A. Chambers, Loughborough University, UK

Chapter 18
Convergence Aspects of Autonomic Cooperative Networks

Michał Wódczak, Telcordia Technologies, Poland
Chapter 19
Development of a Novel Compressed Index-Query Web Search Engine Model ............................ 275

Hussein Al-Bahadili, Petra University, Jordan
Saif Al-Saab, University of Banking & Financial Sciences, Jordan

Compilation of References .................................................................................................................. 294

About the Contributors .................................................................................................................... 315

Index................................................................................................................................................... 322