Preface

The constantly changing landscape of Web-Based Services makes it challenging for experts and practitioners to stay informed of the field’s most up-to-date research. That is why Information Science Reference is pleased to offer this three-volume reference collection that will empower students, researchers, and academicians with a strong understanding of critical issues within Web-Based Services by providing both broad and detailed perspectives on cutting-edge theories and developments. This reference is designed to act as a single reference source on conceptual, methodological, technical, and managerial issues, as well as provide insight into emerging trends and future opportunities within the discipline.

Web-Based Services: Concepts, Methodologies, Tools and Applications is organized into eight distinct sections that provide comprehensive coverage of important topics. The sections are:

1. Fundamental Concepts and Theories;
2. Development and Design Methodologies;
3. Tools and Technologies;
4. Utilization and Application;
5. Organizational and Social Implications;
6. Managerial Impact;
7. Critical Issues; and

The following paragraphs provide a summary of what to expect from this invaluable reference tool. Section 1, “Fundamental Concepts and Theories,” serves as a foundation for this extensive reference tool by addressing crucial theories essential to the understanding of Web-Based Services. Introducing the book is Service-Driven Computing with APIs: Concepts, Frameworks, and Emerging Trends by Hiranya Jayathilaka, Chandra Krintz, and Rich Wolski; a great foundation laying the groundwork for the basic concepts and theories that will be discussed throughout the rest of the book. Another chapter of note in Section 1 is titled Making Sense of the E-Service Quality Literature: Sampling, Undergraduates, and Replications by Sharron J. Lennon and Jung-Hwan Kim. Section 1 concludes, and leads into the following portion of the book with a nice segue chapter, A Review on Semantic Text and Multimedia Retrieval and Recent Trends by Öğuzhan Menemencioğlu and İlhami Muharrem Orak.

Section 2, “Development and Design Methodologies,” presents in-depth coverage of the conceptual design and architecture of Web-Based Services. Opening the section is A Resource Allocation Model for Desktop Clouds by Abdulelah Alwabel, Robert John Walters, and Gary B. Wills. Through case studies, this section lays excellent groundwork for later sections that will get into present and future ap-

Section 3, “Tools and Technologies,’’ presents extensive coverage of the various tools and technologies used in the implementation of Web-Based Services. Section 3 begins where Section 2 left off, though this section describes more concrete tools at place in the modeling, planning, and applications of Web-Based Services. The first chapter, Building Elastic Java Application Services Seamlessly in the Cloud: A Middleware Framework by Rostyslav Zabolotnyi, Philipp Leitner, and Schahram Dustdar, lays a framework for the types of works that can be found in this section. Section 3 is full of excellent chapters like this one, including such titles as Cloud Security Using Ear Biometrics by Santosh Kumar, Ali Imam Abidi, and Sanjay Kumar Singh; and Data Security for Software as a Service by Pradeep Kumar Tiwari and Sandeep Joshi. The section concludes with Two Factor Authentication using M-pin Server for Secure Cloud Computing Environment by Nitin Nagar and Ugrasen Suman. Where Section 3 described specific tools and technologies at the disposal of practitioners, Section 4 describes the use and applications of the tools and frameworks discussed in previous sections.

Section 4, “Utilization and Application,” describes how the broad range of Web-Based Services efforts has been utilized and offers insight on and important lessons for their applications and impact. The first chapter in the section is titled Analyzing French and Italian iPhone 4S Mobile Cloud Customer Satisfaction Presented by Organizational Sustainability Modeling written by Victor Chang. This section includes the widest range of topics because it describes case studies, research, methodologies, frameworks, architectures, theory, analysis, and guides for implementation. The breadth of topics covered in the chapter is also reflected in the diversity of its authors, from countries all over the globe. A good chapter to note is Multi-Cloud Data Management using Shamir’s Secret Sharing and Quantum Byzantine Agreement Schemes by Mohammed A. AlZain, Alice S. Li, Ben Soh, and Eric Paredes. The section concludes with Exploring the Three-Path Mediation Model: A Study of Customer Perceived Value, Customer Satisfaction Service Quality and Behavioral Intention Relationship by Manish Kumar Yadav, Alok Kumar Rai, and Medha Srivastava, a great transition chapter into the next section.

Section 5, “Organizational and Social Implications,” includes chapters discussing the organizational and social impact of Web-Based Services. The section opens with Analysis of Cloud Services on Business Processes in the Digitalization of the Consumer Product Industry by Ute Riemann. Where Section 4 focused on the broad, many applications of Web-Based Services technology, this section focuses exclusively on how these technologies affect human lives, either through the way they interact with each other, or through how they affect behavioral/workplace situations. The section concludes with The Role of Cloud Computing in Global Supply Chain by Kijpokin Kasemsap.

Section 6, “Managerial Impact,’’ presents focused coverage of Web-Based Services in a managerial perspective. This section serves as a vital resource for developers who want to utilize the latest research to bolster the capabilities and functionalities of their processes. The section begins with Management of Privacy and Security in Cloud Computing: Contractual Controls in Service Agreements by Deniz Tuncalp. The chapters in this section offer unmistakable value to managers looking to implement new strategies that work at larger bureaucratic levels. The section concludes with Customer Satisfaction via Service Quality Dimensions: An Empirical Research on Stock Broking Services: CS VIA SQD by Gyaneshwar Singh Kushwaha and Shiv Ratan Agrawal.
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Section 7, “Critical Issues,” presents coverage of academic and research perspectives on Web-Based Services tools and applications. The section begins with Cloud Adoption in Enterprises: Security Issues and Strategies by Ramanathan Venkatraman and Sitalakshmi Venkatraman. Chapters in this section will look into theoretical approaches and offer alternatives to crucial questions on the subject of Web-Based Services. The section concludes with QoS in the Mobile Cloud Computing Environment by Zhefu Shi and Cory Beard.

Section 8, “Emerging Trends,” highlights areas for future research within the field of Web-Based Services, opening with Towards Semantic Mashups: Tools, Methodologies, and State of the Art by Aikaterini K. Kalou and Dimitrios A. Koutsomitropoulos. This section contains chapters that look at what might happen in the coming years that can extend the already staggering amount of applications for Web-Based Services. The final chapter of the book looks at an emerging field within Web-Based Services, in the excellent contribution, A New Approach in Cloud Computing User Authentication by Alaa Hussein Al-Hamami and Rafał A. Al-Khashab.

Although the primary organization of the contents in this multi-volume work is based on its eight sections, offering a progression of coverage of the important concepts, methodologies, technologies, applications, social issues, and emerging trends, the reader can also identify specific contents by utilizing the extensive indexing system listed at the end of each volume. As a comprehensive collection of research on the latest findings related to using technology to providing various services, Web-Based Services: Concepts, Methodologies, Tools and Applications, provides researchers, administrators and all audiences with a complete understanding of the development of applications and concepts in Web-Based Services. Given the vast number of issues concerning usage, failure, success, policies, strategies, and applications of Web-Based Services in countries around the world, Web-Based Services: Concepts, Methodologies, Tools and Applications addresses the demand for a resource that encompasses the most pertinent research in technologies being employed to globally bolster the knowledge and applications of Web-Based Services.