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Section I. Fundamental Concepts and Theories

This section serves as the foundation for this exhaustive reference tool by addressing crucial theories essential to the understanding of Web technologies. Chapters found within these pages provide an excellent framework in which to position Web technologies within the field of information science and technology. Individual contributions provide overviews of the mobile Web, semantic Web, and Web 2.0, while also exploring critical stumbling blocks of this field. Within this introductory section, the reader can learn and choose from a compendium of expert research on the elemental theories underscoring the research and application of Web technologies.

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This section presents extensive coverage of the technology that informs and impacts Web technologies. These chapters provide an in-depth analysis of the use and development of innumerable devices and tools, while also providing insight into new and upcoming technologies, theories, and instruments that will soon be commonplace. Within these rigorously researched chapters, readers are presented with examples of the tools that facilitate and support the emergence and advancement of Web technologies. In addition, the successful implementation and resulting impact of these various tools and technologies are discussed within this collection of chapters.

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Chapter 8.7. Enhancing the Testability of Web Services
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Chapter 8.8. Making the Web Accessible to the Visually Impaired
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Chapter 8.9. Web Application Server Clustering with Distributed Java Virtual Machine
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Chapter 8.10. Virtual Web Services: Extension Architecture to Alleviate Open Problems in Web Services Technology
Julio Fernández Vilas, University of Vigo, Spain
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Chapter 8.11. Web-Based Corporate Governance Information Disclosure: An Empirical Investigation
Yabing Jiang, Fordham University, USA
Viju Raghupathi, City University of New York, USA
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Chapter 8.12. Using Web Service Enhancements to Establish Trust Relationships with Privacy Protection: (Extended and Invited from ICWS 2006 with id 47)
Zhengping Wu, University of Bridgeport, USA
Alfred C. Weaver, University of Virginia, USA

Chapter 8.13. The Interactive Computing of Web Knowledge Flow: From Web to Knowledge Web
Xiangfeng Luo, Shanghai University, P. R. China
Jie Yu, Shanghai University, P. R. China
Chapter 8.14. Knowledge Producing Megamachines: The Biggest Web 2.0 Communities of the Future

Laszlo Z. Karvalics, University of Szeged, Hungary

Chapter 8.15. Utilizing Past Web for Knowledge Discovery

Adam Jatowt, Kyoto University, Japan
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Chapter 8.16. New Forms of Deep Learning on the Web: Meeting the Challenge of Cognitive Load in Conditions of Unfettered Exploration in Online Multimedia Environments

Michael DeSchryver, Michigan State University, USA
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Chapter 8.17. General Strategy for Querying Web Sources in a Data Federation Environment

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Chapter 8.18. Empirical Studies for Web Effort Estimation

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