DESCRIPTION

This comprehensive text explains the principles and practice of Web services and relates all concepts to practical examples and emerging standards. Its discussions include:

• Ontologies

• Semantic web technologies

• Peer-to-peer service discovery

• Service selection

• Web structure and link analysis

• Distributed transactions

• Process modelling

• Consistency management.

The application of these technologies is clearly explained within the context of planning, negotiation, contracts, compliance, privacy, and network policies. The presentation of the intellectual underpinnings of Web services draws from several key disciplines such as databases, distributed computing, artificial intelligence, and multi-agent systems for techniques and formalisms. Ideas from these disciplines are united in the context of Web services and service-based applications.
Featuring an accompanying website and teacher’s manual that includes a complete set of transparencies for lectures, copies of open-source software for exercises and working implementations, and resources to conduct course projects, this book makes an excellent graduate textbook. It will also prove an invaluable reference and training tool for practitioners.

**ABOUT THE AUTHOR**

**Munindar P. Singh** is a Professor of computer Science at North Carolina State University. From 1989 through 1995, he was with the Microelectronics and Computer Technology Corporation (better known as MCC). Melinda’s research interests include multiagent systems and Web services. He focuses on applications in e-commerce and personal technologies. Munindar’s 1994 book *Multiagent Systems*, was published by Springer-Verlag. He coedited *Readings in Agents*, which was published by Morgan Kaufman in 1988. He has coedited several other books and authored several technical articles. Munindar’s research has been recognized with awards and sponsorship from the National Science Foundation, DARPA, IBM, Cisco Systems, and Ericsson.

Munindar was the editor-in-chief of *IEEE Internet Computing* from 1990 to 2002 and continues to serve on its editorial board. He is a member of the editorial boards of the *Journal of Autonomous Agents and Multiagent Systems* and the *Journal of Web Semantics*. He serves on the steering committee for the *IEEE Transactions on Mobile Computing*.

Munindar received a B.Tech. in computer science and engineering from the Indian Institute of Technology, New Delhi, in 1986. He obtained a PhD in computer science from the University of Texas at Austin in 1993.

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Mike is a member of Sigma Xi, Tau, Beta Pi, Eta Kappa Nu, ACM, IEEE, and AAAI. He is the author of over 180 technical papers in machine intelligence and an editor of the books *Distributed Artificial Intelligence, Volumes I and II*, and, with Munindar, *Readings in Agents*. His research interest are in the areas of multiagent systems, enterprise modeling and integration, and software engineering. From 1997 to 2003, he wrote a column *Agents on the Web* for *IEEE Internet Computing*.

Mike was an associate editor for *IEEE Expert* and the *ACM Transactions on Information Systems*. He is an associate editor for the *Journal of Autonomous Agents and Multiagent Systems*. He is on the Editorial Boards of the *International Journal on Intelligent and Cooperative Information Systems*, the *Journal of Intelligent Manufacturing*, and *IEEE Internet Computing*. He was an advisor for the First International Conference on Multiagent Systems, 1995, and has been on the advisory boards for the International
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Mike received the BSEE degree in 1969 from the University of Michigan Ann Arbor, and the MS and PhD degrees in electrical engineering in 1971 and 1975, respectively, from the University of Southern California, Los Angeles.

FEATURES

This well written title relates all concepts to practical examples and to emerging standards. It discusses ontologies, Semantic Web technologies, peer-to-peer service discovery, service selection, Web structure and link analysis, distributed transactions, process modelling, and consistency management. It also explains the use of these technologies for planning, negotiation, contracts, compliance, privacy, and network policies.

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