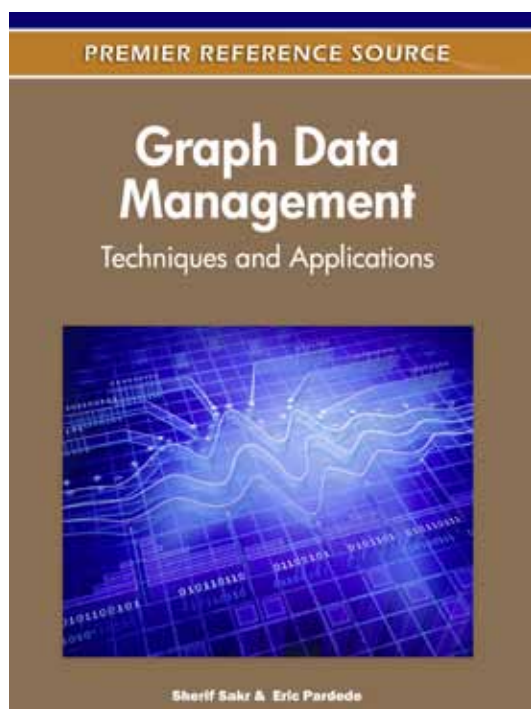


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## Graph Data Management: Techniques and Applications



Sherif Sakr (University of New South Wales, Australia)  
and Eric Pardede (LaTrobe University, Australia)

Graphs are a powerful tool for representing and understanding objects and their relationships in various application domains. The growing popularity of graph databases has generated data management problems that include finding efficient techniques for compressing large graph databases and suitable techniques for visualizing, browsing, and navigating large graph databases.

**Graph Data Management: Techniques and Applications** is a central reference source for different data management techniques for graph data structures and their application. This book discusses graphs for modeling complex structured and schemaless data from the Semantic Web, social networks, protein networks, chemical compounds, and multimedia databases and offers essential research for academics working in the interdisciplinary domains of databases, data mining, and multimedia technology.

### Topics Covered:

- Business Process Graphs
- Clustering Vertices in Weighted Graphs
- Graph Applications in Chemoinformatics
- Graph Indexing Querying Techniques
- Kernel-Based Similarity Searches
- Large Scale Graph Mining
- Querying RDF
- Real and Synthetic Graphs
- Relational Approaches for Graph Pattern Matching
- Semantic Process Model Discovery

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**Sherif Sakr**, Ph.D., is a Research Scientist in the Managing Complexity Group at National ICT Australia (NICTA), ATP lab, Sydney, Australia. He is also a Conjoint Lecturer in The School of Computer Science and Engineering (CSE) at University of New South Wales (UNSW) and an Adjunct Lecturer with the Department of Computing in the Division of Information and Communication Sciences at Macquarie University. He received his PhD degree in Computer Science from Konstanz University, Germany in 2007. He received his BSc and MSc degree in Computer Science from the Information Systems department at the Faculty of Computers and Information in Cairo University, Egypt, in 2000 and 2003 respectively. His research interest is data and information management in general, particularly in areas of indexing techniques, query processing and optimization techniques, graph data management, social networks, data management in cloud computing.

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