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Titolo	Network Analysis : Methodological Foundations // edited by Ulrik Brandes, Thomas Erlebach
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Edizione	[1st ed. 2005.]
Descrizione fisica	1 online resource (XII, 472 p.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 3418
Disciplina	004.2/1
Soggetti	Computer science—Mathematics Discrete mathematics Computer networks Artificial intelligence—Data processing Algorithms Discrete Mathematics in Computer Science Computer Communication Networks Discrete Mathematics Data Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references (p. [439]-466) and index.
Nota di contenuto	Fundamentals -- I Elements -- Centrality Indices -- Algorithms for Centrality Indices -- Advanced Centrality Concepts -- II Groups -- Local Density -- Connectivity -- Clustering -- Role Assignments -- Blockmodels -- Network Statistics -- Network Comparison -- Network Models -- Spectral Analysis -- Robustness and Resilience.
Sommario/riassunto	'Network' is a heavily overloaded term, so that 'network analysis' means different things to different people. Specific forms of network analysis are used in the study of diverse structures such as the Internet, interlocking directorates, transportation systems, epidemic spreading, metabolic pathways, the Web graph, electrical circuits, project plans, and so on. There is, however, a broad methodological foundation which is quickly becoming a prerequisite for researchers and practitioners working with network models. From a computer science perspective, network analysis is applied graph theory. Unlike standard graph theory

books, the content of this book is organized according to methods for specific levels of analysis (element, group, network) rather than abstract concepts like paths, matchings, or spanning subgraphs. Its topics therefore range from vertex centrality to graph clustering and the evolution of scale-free networks. In 15 coherent chapters, this monograph-like tutorial book introduces and surveys the concepts and methods that drive network analysis, and is thus the first book to do so from a methodological perspective independent of specific application areas.
