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Collana	Texts in Computer Science, , 1868-095X
Disciplina	300.285
Soggetti	Social sciences - Data processing Sociology - Methodology Data mining Graph theory Computer simulation Computer Application in Social and Behavioral Sciences Sociological Methods Data Mining and Knowledge Discovery Graph Theory Computer Modelling
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Nota di bibliografia	Includes bibliographical references (pages [305]-311) and index.
Nota di contenuto	Introduction -- Computation and Social Science -- Automated Information Extraction -- Social Networks -- Social Complexity I: Origins and Measurement -- Social Complexity II: Laws -- Social Complexity III: Theories -- Simulations I: Methodology -- Simulations II: Variable-Oriented Models -- Simulations III: Object-Oriented Models.
Sommario/riassunto	The emerging field of computational social science (CSS) is devoted to the pursuit of interdisciplinary social science research from an information processing perspective, through the medium of advanced computing and information technologies. This reader-friendly textbook/reference is the first work of its kind to provide a comprehensive and unified Introduction to Computational Social Science. Four distinct methodological approaches are examined in particular detail, namely automated social information extraction, social

network analysis, social complexity theory, and social simulation modeling. The coverage of each of these approaches is supported by a discussion of the historical context and motivations, as well as by a list of recommended texts for further reading. Topics and features:

- Describes the scope and content of each area of CSS, covering topics on information extraction, social networks, complexity theory, and social simulations
- Highlights the main theories of the CSS paradigm as causal explanatory frameworks that shed new light on the nature of human and social dynamics
- Explains how to distinguish and analyze the different levels of analysis of social complexity using computational approaches
- Discusses a number of methodological tools, including extracting entities from text, computing social network indices, and building an agent-based model
- Presents the main classes of entities, objects, and relations common to the computational analysis of social complexity
- Examines the interdisciplinary integration of knowledge in the context of social phenomena

This unique, clearly-written textbook is essential reading for graduate and advanced undergraduate students planning on embarking on a course on computational social science, or wishing to refresh their knowledge of the fundamental aspects of this exciting field.
