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   Autore   Zheng Quan

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   Edizione   [First edition.]

   Descrizione fisica   1 online resource (210 pages) : illustrations, tables

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   Disciplina   302.3

   Soggetti   Social networks - Mathematical models

   Lingua di pubblicazione   Inglese

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   Nota di bibliografia   Includes bibliographical references and index.

   Nota di contenuto   chapter 1 introduction -- chapter 2 the core model -- chapter 3
                        background -- chapter 4 modelling relationships of different types --
                        chapter 5 modelling asymmetric relationships -- chapter 6 modelling
                        asymmetric relationships with multiple types -- chapter 7 modelling
                        relationships that change over time -- chapter 8 modelling positive and
                        negative relationships -- chapter 9 signed graph-based semi-
                        supervised learning -- chapter 10 combining directed and signed
                        embeddings -- chapter 11 summary.

   Sommario/riassunto   "Social Networks with Rich Edge Semantics introduces a new
                        mechanism for representing social networks in which pairwise
                        relationships can be drawn from a range of realistic possibilities,
                        including different types of relationships, different strengths in the
                        directions of a pair, positive and negative relationships, and
                        relationships whose intensities change with time. For each possibility,
                        the book shows how to model the social network using spectral
                        embedding. It also shows how to compose the techniques so that
                        multiple edge semantics can be modeled together, and the modeling

techniques are then applied to a range of datasets.FeaturesIntroduces the reader to difficulties with current social network analysis, and the need for richer representations of relationships among nodes, including accounting for intensity, direction, type, positive/negative, and changing intensities over timePresents a novel mechanism to allow social networks with qualitatively different kinds of relationships to be described and analyzedIncludes extensions to the important technique of spectral embedding, shows that they are mathematically well motivated and proves that their results are appropriateShows how to exploit embeddings to understand structures within social networks, including subgroups, positional significance, link or edge prediction, consistency of role in different contexts, and net flow of properties through a nodeIllustrates the use of the approach for real-world problems for online social networks, criminal and drug smuggling networks, and networks where the nodes are themselves groupsSuitable for researchers and students in social network research, data science, statistical learning, and related areas, this book will help to provide a deeper understanding of real-world social networks."--Provided by publisher.