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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Part I: Theory of Complex Networks -- On the Eccentricity Function in Graphs -- Density Decompositions of Networks -- 188 Fast Streaming Small Graph Canonization -- Silhouette for the Evaluation of Community Structures in Multiplex Networks -- Jaccard Curvature: An Efficient Proxy for Ollivier-Ricci Curvature in Graphs -- Combinatorial Miller-Hagberg Algorithm for Randomization of Dense Networks -- Proposal of Strategic Link Addition for Improving the Robustness of Multiplex Networks -- Part II: Graph Embeddings -- Embedding-Centrality: Generic Centrality Computation Using Neural Networks -- Fast Sequence Based Embedding with Diffusion Graphs -- Semi–

supervised Graph Embedding Approach to Dynamic Link Prediction -- Modularity Optimization as a Training Criterion for Graph Neural Networks -- Part II: Network Dynamics -- Outer synchronization for General Weighted Complex Dynamical Networks Considering Incomplete Measurements of Transmitted Information -- Diffusive Phenomena in Dynamic Networks: A Data-driven Study -- Fractal Analyses of Networks of Integrate-and-Fire Stochastic Spiking Neurons -- Part IV: Network Science Applications -- Cultivating Tipping Points: Network Science in Teaching -- Terrorist Network Analyzed with an Influence Spreading Model -- Author Attribution using Network Motifs -- Complex Networks Reveal a Glottochronological Classification of Natural Languages -- A Percolation-based Thresholding Method with Applications in Functional Connectivity Analysis -- Discovering Patterns of Interest in IP Traffic Using Cliques in Bipartite Link Streams -- Router Level Topologies of Autonomous Systems -- Part V: Human Behavior and Social Networks -- Social Influence (Deep) Learning for Human Behavior Prediction -- Inspiration, Captivation, and Misdirection: Emergent Properties in Networks of Online Navigation -- Are Crisis Platforms Supporting Citizen Participation? -- Dynamic Visualization of Citation Networks and Detection of Influential Node Addition -- A Trust-Based News Spreading Model -- Discovering Mobility Functional Areas: A Mobility Data Analysis Approach -- Estimating Peer Influence Effects Under Homphily: Randomized Treatments and Insights.

Sommario/riassunto

This book aims to bring together researchers and practitioners working across domains and research disciplines to measure, model, and visualize complex networks. It collects the works presented at the 9th International Conference on Complex Networks (CompleNet) 2018 in Boston, MA in March, 2018. With roots in physical, information and social science, the study of complex networks provides a formal set of mathematical methods, computational tools and theories to describe prescribe and predict dynamics and behaviors of complex systems. Despite their diversity, whether the systems are made up of physical, technological, informational, or social networks, they share many common organizing principles and thus can be studied with similar approaches. This book provides a view of the state-of-the-art in this dynamic field and covers topics such as group decision-making, brain and cellular connectivity, network controllability and resiliency, online activism, recommendation systems, and cyber security.