1. Record Nr. UNINA9910819007503321

Autore	McCulloh Ian
Titolo	Social network analysis with applications / / Ian A. McCulloh, Helen L. Armstrong, Anthony N. Johnson
Pubbl/distr/stampa	Hoboken, N.J., : Wiley, c2013
ISBN	1-118-64468-9 1-118-64467-0
Edizione	[1st ed.]
Descrizione fisica	1 online resource (315 p.)
Altri autori (Persone)	ArmstrongHelen (Helen Leslie) JohnsonAnthony N
Disciplina	302.3
Soggetti	Social networks - Mathematical models Social sciences - Network analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	SOCIAL NETWORK ANALYSIS; CONTENTS; LIST OF FIGURES; LIST OF TABLES; FOREWORD; PREFACE; ACKNOWLEDGMENTS; INTRODUCTION; PART I NETWORK BASICS; CHAPTER 1 WHAT IS A NETWORK?; 1.1 Basic Network Concepts; 1.2 Adjacency Matrices, Graphs, and Notation; 1.3 Nodes and Links; 1.4 Good Will Hunting Problem; 1.5 Formal and Informal Networks; 1.6 Summary; Chapter 1 Lab Exercise; Exercises; References; CHAPTER 2 CENTRALITY MEASURES; 2.1 What is ""Centrality"" and Why do we Study IT?; 2.2 Calculating Nodal Centrality Measures; 2.2.1 Degree Centrality; 2.2.2 Betweenness Centrality; 2.2.3 Closeness Centrality 2.2.4 Eigenvector Centrality 2.2.5 Google Page Rank: A Variant of Eigenvector Centrality; 2.3 Directed Networks and Centrality Measures; 2.4 Location in the Network; 2.5 Summary; Chapter 2 Lab Exercise; Exercises; References; CHAPTER 3 GRAPH LEVEL MEASURES; 3.1 Density; 3.2 Diameter; 3.3 Centralization; 3.3.1 Degree Centralization; 3.3.2 Betweenness Centralization; 3.3.3 Closeness Centralization; 3.4 Average Centralities; 3.5 Network Topology; 3.5.1 Lattice Networks; 3.5.2 Small World Networks; 3.5.3 Core Periphery; 3.5.4 Cellular Networks; 3.5.5 Scale-Free Networks 3.5.6 Random (Erdos-Renyi) Networks 3.5.7 Comparison of Network

Topologies; 3.6 Summary; Chapter 3 Lab Exercise; Exercises; References; PART II SOCIAL THEORY; CHAPTER 4 SOCIAL LINKS; 4.1 Individual Actors; 4.2 Social Exchange Theory; 4.3 Social Forces; 4.3.1 Homophily; 4.3.2 Reciprocity; 4.3.3 Proximity; 4.3.4 Prestige; 4.3.5 Social Conformity; 4.3.6 Transitivity; 4.3.7 Balance; 4.4 Graph Structure; 4.4.1 Structural Balance; 4.4.2 Clusterability; 4.5 Agent Optimization Strategies in Networks; 4.5.1 Structural Holes; 4.5.2 Social Capital; 4.5.3 Link Optimization
4.6 Hierarchy of Social Link Motivation 4.7 Summary; Exercises; References; CHAPTER 5 SUBGROUP ANALYSIS; 5.1 Subgroups; 5.2 Organizational Theory; 5.3 Random Groups; 5.4 Heuristics for Subgroup Identification; 5.4.1 Attribute Defined; 5.4.2 Consecutive Correlation (CONCOR); 5.4.3 Newman-Girvan Grouping; 5.5 Analysis Methods; 5.5.1 Group Membership; 5.5.2 Hierarchical Clustering; 5.5.3 Block Model; 5.6 Summary; Chapter 5 Lab Exercise; Exercises; References; CHAPTER 6 DIFFUSION AND INFLUENCE; 6.1 Applications for Social Diffusion; 6.2 Strain Theory; 6.3 Social Context
6.4 Group Impacts on Diffusion 6.5 Network Structure and Diffusion; 6.6 Group Influence Strategies and Bases of Power; 6.7 Summary; Exercises; References; PART III DATA; CHAPTER 7 META-NETWORKS AND RELATIONAL ALGEBRA; 7.1 Modes of Data; 7.2 Source, Target, Direction; 7.3 Multimode Networks; 7.4 Bridging a Meta-Network; 7.5 Strength of Ties; 7.6 Summary; Chapter 7 Lab Exercise; Exercises; References; CHAPTER 8 SOURCES OF DATA; 8.1 Network Sampling; 8.2 Measuring Links; 8.3 Data Quality; 8.4 Additional Ethnographic Data Collection Methods; 8.5 Anonymity Issues; 8.6 Summary; Exercises; References
PART IV ORGANIZATIONAL RISK

Sommario/riassunto

A comprehensive introduction to social network analysis that hones in on basic centrality measures, social links, subgroup analysis, data sources, and more Written by military, industry, and business professionals, this book introduces readers to social network analysis, the new and emerging topic that has recently become of significant use for industry, management, law enforcement, and military practitioners for identifying both vulnerabilities and opportunities in collaborative networked organizations. Focusing on models and methods for the analysis of organizational risk,