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Descrizione fisica	1 online resource (XXXII, 303 p. 66 illus., 63 illus. in color.)
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Soggetti	Computer networks Computer simulation Philosophy Sociology Computer Communication Networks Simulation and Modeling Philosophy of Technology Sociological Theory
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Nota di contenuto	Part I: Introduction -- Origins and Characteristics -- Delay Tolerant Routing and Applications -- A Developer's Guide to the ONE Simulator -- Part II: Human Aspects in Opportunistic Mobile Networks -- Emerging Sensing Paradigms and Intelligence in Networks -- Aspects of Human Emotions and Networks -- Part III: Cooperation in Opportunistic Mobile Networks -- Evolutionary Game in Wireless Networks -- Enforcing Cooperation in OMNs -- Part IV: Advanced Topics -- Heterogeneity in OMNs -- Opportunistic Mobile Networks: Towards Reality -- The Big Picture.
Sommario/riassunto	This clearly-written and practically-focused textbook/reference reviews the fundamental theory, varied applications, and latest breakthroughs in Delay Tolerant Networks (DTNs). Presenting a specific focus on Opportunistic Mobile Networks (OMNs), the text carefully considers the influence of human aspects, and examines emerging forms of inter-node cooperation. Readers will learn how to master protocol

development and testing, overcome issues of non-cooperative behavior, and address heterogeneity in OMNs and other networks. Topics and features: Contains review terms, study exercises and programming exercises in each chapter, with the solutions and source code available at an associated website Introduces the fundamentals of DTNs, covering OMNs, Pocket Switched Networks (PSNs), and Mission-Oriented Opportunistic Networks (MOONs) Describes the Opportunistic Network Environment (ONE) simulator, explaining how to set up a simulation project using NetBeans, and the version control software Git Provides detailed insights into the development and testing of protocols, together with a set of best practices for increased productivity and optimized performance Examines human aspects in the context of communication networks, from human-centric applications to the impact of emotion on human-network interplay Proposes various schemes for inter-node cooperation in DTNs/OMNs, including incentive-based and game theoretic approaches, as well as the DISCUSS scheme Presents a detailed discussion on aspects of heterogeneity in DTNs, and a comprehensive review of the latest research on DTNs/OMNs Students and instructors will find this easy-to-follow work to be ideally suitable as a textbook for introductory courses on OMNs and advanced courses on communication networks. Researchers will be greatly interested in the descriptions of state-of-the-art developments in OMNs, wireless sensor, and ad hoc networks. Practitioners developing real-world applications will also benefit from the coverage of relevant technical specifications and patents.

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