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Protocols for Mobile Ad Hoc Networks (Lap Kong Law, Srikanth V. Krishnamurthy, and Michalis Faloutsos) -- 10. ACK-Thinning Techniques for TCP in MANETs (Stylianos Papanastasiou, Mohamed Ould-Khaoua, and Lewis M. MacKenzie) -- 11. Power Control Protocols for Wireless Ad Hoc Networks (Junhua Zhu, Brahim Bensaou, and Farid Nait-Abdesselam) -- 12. Power Saving in Solar-Powered WLAN Mesh Networks (Amir A. Sayegh, Mohammed N. Smadi, and Terence D. Todd) -- 13. Reputation-and-Trust-Based Systems for Ad Hoc Networks (Avinash Srinivasan, Joshua Teitelbaum, Jie Wu, Mihaela Cardei, and Huigang Liang) -- 14. Vehicular Ad Hoc Networks: An Emerging Technology Toward Safe and Efficient Transportation (Maen M. Artimy, William Robertson, and William J. Phillips) -- 15. Performance Issues in Vehicular Ad Hoc Networks (Maria Kihl and Mihail L. Sichitiu) -- 16. Cluster Interconnection in 802.15.4 Beacon-Enabled Networks (Jelena Misic and Ranjith Udayshankar).
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Sommario/riassunto

Learn the fundamental algorithms and protocols for wireless and mobile ad hoc networks. Advances in wireless networking and mobile communication technologies, coupled with the proliferation of portable computers, have led to development efforts for wireless and mobile ad hoc networks. This book focuses on several aspects of wireless ad hoc networks, particularly algorithmic methods and distributed computing with mobility and computation capabilities. It covers everything readers need to build a foundation for the design of future mobile ad hoc networks:

- . Establishing an efficient communication infrastructure.
- Robustness control for network-wide broadcast.
- The taxonomy of routing algorithms.
- Adaptive backbone multicast routing.
- The effect of inference on routing.
- Routing protocols in intermittently connected mobile ad hoc networks and delay tolerant networks.
- Transport layer protocols.
- ACK-thinning techniques for TCP in MANETs.
- Power control protocols.
- Power saving in solar powered WLAN mesh networks.
- Reputation and trust-based systems.
- Vehicular ad hoc networks.
- Cluster interconnection in 802.15.4 beacon enabled networks

The book is complemented with a set of exercises that challenge readers to test their understanding of the material. Algorithms and Protocols for Wireless and Mobile Ad Hoc Networks is appropriate as a self-study guide for electrical engineers, computer engineers, network engineers, and computer science specialists. It also serves as a valuable supplemental textbook in computer science, electrical engineering, and network engineering courses at the advanced undergraduate and graduate levels.
