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Nota di contenuto	Table of Contents -- Short-Range Wireless Communications: Emerging Technologies and Applications -- Editors: Rolf Kraemer and Marcos Katz -- Preface -- Acknowledgements -- Forewords -- Part I Introduction -- 1. Introduction -- 2. Design Rules for Future Short-Range Communication Systems -- Part II UWB Communications: State-of-the-Art, Challenges and Visions -- Edited by Thomas Kaiser -- 3. UWB Propagation Channels -- 4. Pulse Shaping and Diversity -- 5. Non-Coherent Detection -- 6. Transmit Reference UWB Systems -- 7. Multiband Modulation in UWB Systems -- 8. Design of Synchronization Algorithms for UWB Systems -- 9. An Overview of UWB Systems with MIMO -- 10. UWB Localization Algorithms -- 11. UWB Transceiver for Indoor Localization -- 12. UWB Higher Layers -- 13. UWB Sensor Networks for Position Location and Imaging of Objects and Environments -- 14. Low Power UWB Hardware -- 15. Analog-to-Digital Converters for UWB -- 16. UWB Co-Existence Scenarios -- 17. UWB Regulation and Standardization -- Part III 60 GHz Communication Systems: Concepts and Implementation Aspects (-- Edited by Eckhard

Grass -- 18. An Introduction to 60 GHz Communication Systems: Regulation and Services, Channel Propagation and Advanced Baseband Algorithms -- 19. Modulation techniques and system architectures for multi-Gb/s 60 GHz radios -- 20. System Concepts and Circuits for 60 GHz OFDM Transceiver -- 21. Enabling Technologies for 60 GHz Communications: Front-end Friendly Air Interface Design, Full CMOS Integration and System-in-a-package -- 22. Adaptive Arrays, Assembly Techniques and Compensation of Non-Linearities for 60GHz Technology -- 23. Improving Power Amplifier Utilization in mm-Wave Wireless Multicarrier Transmission -- Part IV Emerging Concepts in Short-Range Communications -- 24. Ultra-Wideband Radio over Optical Fiber -- 25. Visible Light Communications

Sommario/riassunto

This unique book reviews the future developments of short-range wireless communication technologies Short-Range Wireless Communications: Emerging Technologies and Applications summarizes the outcomes of WWRF Working Group 5, highlighting the latest research results and emerging trends on short-range communications. It contains contributions from leading research groups in academia and industry on future short-range wireless communication systems, in particular 60 GHz communications, ultra-wide band (UWB) communications, UWB radio over optical fiber, and design rules for future cooperative short-range communications systems. Starting from a brief description of state-of-the-art, the authors highlight the perspectives and limits of the technologies and identify where future research work is going to be focused. Key Features: *Provides an in-depth coverage of wireless technologies that are about to start an evolution from international standards to mass products, and that will influence the future of short-range communications *Offers a unique and invaluable visionary overview from both industry and academia *Identifies open research problems, technological challenges, emerging technologies, and fundamental limits *Covers ultra-high speed short-range communication in the 60 GHz band, UWB communication, limits and challenges, cooperative aspects in short-range communication and visible light communications, and UWB radio over optical fiber This book will be of interest to research managers, R&D engineers, lecturers and graduate students within the wireless communication research community. Executive managers and communication engineers will also find this reference useful.
