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Nota di contenuto	Introduction -- Propagation effects in Optical Communication and Wireless Communication Channels, Noise Sources, and Channel Impairments -- Components and Modules and Subsystems -- Wireless and Optical Channel Capacities -- Advanced Modulation and Multiplexing Techniques -- Advanced Detection Techniques and Compensation of Channel Impairments -- OFDM for Wireless and Optical Communications -- Diversity and MIMO Techniques -- Advanced Coding and Coded Modulation Techniques -- Spread Spectrum, CDMA, and Ultra-Wideband Communications -- Conclusion.
Sommario/riassunto	This textbook introduces the advanced topics of: (i) wireless communications, (ii) free-space optical (FSO) communications, (iii) indoor optical wireless (IR) communications, and (iv) fiber-optics communications and presents these different types of communication systems in a unified fashion for better practical use. Fundamental concepts, such as propagation principles, modulation formats, channel coding, diversity principles, MIMO signal processing, multicarrier

modulation, equalization, adaptive modulation and coding, detection principles, and software defined transmission are first described and then followed up with a detailed look at each particular system. The book is self-contained and structured to provide straightforward guidance to readers looking to capture fundamentals and gain theoretical and practical knowledge about wireless communications, optical communications, and fiber-optics communications, all which can be readily applied in studies, research, and practical applications. The textbook is intended for an upper undergraduate or graduate level course in optical communication. It features problems, an appendix with all background material needed, and homework.