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9. Free space optical communications underwater Brandon Cochenour and Linda Mullen; 10. The optical wireless channel Roger Green and Mark Leeson; 11. Hybrid RF/FSO communications Nick Letzepis and Albert Guille; Part IV. Applications: 12. Quantum key distribution R. Ursin, N.K. Langford and A. Poppe; 13. Optical modulating retro-reflectors William Rabinovich; 14. Visible-light communications Kang Tae-Gyu and John R. Barry; 15. Optical wireless in sensor networks Dominic C. O'Brien and Sashigaran Sivathanan.

Sommario/riassunto

Optical wireless communications is a dynamic area of research and development. Combining fundamental theory with a broad overview, this book is an ideal reference for anyone working in the field, as well as a valuable guide for self-study. It begins by describing important issues in optical wireless theory, including coding and modulation techniques for optical wireless, wireless optical CDMA communication systems, equalization and Markov chains in cloud channels and optical MIMO systems, as well as explaining key issues in information theory for optical wireless channels. The next section describes unique channels that could be found in optical wireless applications, such as NLOS UV atmospheric scattering channels, underwater communication links and a combination of hybrid RF/optical wireless systems. The final section describes applications of optical wireless technology, such as quantum encryption, visible light communication, IR links and sensor networks, with step-by-step guidelines to help reduce design time and cost.
