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Altri autori (Persone)	ZhangXiao-Xue DuLin-Tao
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Sommario/riassunto	This book provides a comprehensive guide to the design and analysis of quantum secure communication schemes. While quantum computers

may provide a platform for arithmetic calculations which threaten classical cryptosystems, the development of quantum information has also brought a corresponding solution: quantum cryptography, which is the basis of quantum secure communication. Quantum secure communication (QSC) uses quantum states for key agreement and information transmission, and uses the basic principles of quantum mechanics to discover eavesdropping behavior, and to ensure the security of information. It can overcome the security risks of classical encryption technology and can securely distribute keys in real time via public channels. Beginning in 1984 with the first conception of quantum key distribution (QKD) based on single-photon polarization states, subsequent innovations include quantum identity authentication (QIA), quantum secret sharing (QSS), quantum direct communication (QDC), quantum key agreement (QKA), quantum private query (QPQ), and quantum network coding (QNC). Each of these schemes is explored in detail based on different environments and structures, along with specific security and feasibility analyses. This book is essential reading for academic researchers and graduate students in quantum science and technology, as well as professionals and engineers in quantum industries and cybersecurity.

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