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Sommario/riassunto

"Whilst classic communications solutions are gradually inching closer to capacity, a new horizon is opened by this exquisite amalgam of fundamental physics and engineering-an essential read for the radical researcher." -- -Prof. Lajos Hanzo, Fellow of the IEEE and IET, University of Southampton, UKAn overview of the most advanced quantum communication techniques, helping readers study and understand the properties of quantum channelsQuantum communication systems exploit the quantum nature of information, offering new possibilities and limitations for engineers when designing

protocols. In the near future, advanced quantum communication and networking technologies driven by quantum information processing will revolutionize traditional methods.Advanced Quantum Communications explains quantum communication theory from an engineering viewpoint, including advanced quantum communication schemes, and provides an overview of these systems' security. It presents the fundamental theoretical results of quantum Shannon theory, along with details of advanced quantum communication protocols, with a clear mathematical and theoretical background.The book:. Explains the future's advanced quantum communication schemes. Offers a concise and up-to-date introduction to quantum channels, quantum networking, and secret quantum communication techniques. Explains why today's encrypted information will no longer be secure after the first quantum computers become available. Includes basic mathematical tools and heavily illustrated descriptions with more than 260 figures. Includes further reading sections with complete historical backgroundFor students, engineers, and experts, Advanced Quantum Communications is an ideal guide to the communication channels and methods of the Quantum Age.