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Nota di contenuto	PREFACE xvii -- CHAPTER 1 INTRODUCTION 1 -- 1.1 Emerging Quantum Infl uences 2 -- 1.2 Quantum Information Theory 2 -- 1.3 Different Capacities of Quantum Channels 3 -- 1.4 Challenges Related to Quantum Channel Capacities 5 -- 1.5 Secret and Private Quantum Communication 6 -- 1.6 Quantum Communications Networks 8 -- 1.7 Recent Developments and Future Directions 9 -- CHAPTER 2 INTRODUCTION TO QUANTUM INFORMATION THEORY 11 -- 2.1 Introduction 12 -- 2.2 Basic Definitions and Formulas 15 -- 2.3 Geometrical Interpretation of the Density Matrices 25 -- 2.4 Quantum Entanglement 31 -- 2.5 Entropy of Quantum States 34 -- 2.6 Measurement of the Amount of Entanglement 43 -- 2.7 Encoding Classical Information to Quantum States 49 -- 2.8 Quantum Noiseless Channel Coding 54 -- 2.9 Brief Summary 57 -- 2.10 Further Reading 57 -- CHAPTER 3 THE CLASSICAL CAPACITIES OF QUANTUM CHANNELS 65 -- 3.1 Introduction 65 -- 3.2 From Classical to Quantum Communication Channels 73 -- 3.3 Transmission of Classical

Information over Quantum Channels 77 -- 3.4 The Holevo-Schumacher-Westmoreland Theorem 84 -- 3.5 Classical Communication over Quantum Channels 89 -- 3.6 Brief Summary of Classical Capacities 98 -- 3.7 Multilevel Quantum Systems and Qudit Channels 98 -- 3.8 The Zero-Error Capacity of a Quantum Channel 100 -- 3.9 Further Reading 117 -- CHAPTER 4 THE QUANTUM CAPACITY OF QUANTUM CHANNELS 126 -- 4.1 Introduction 126 -- 4.2 Transmission of Quantum Information 128 -- 4.3 Quantum Coherent Information 136 -- 4.4 The Asymptotic Quantum Capacity 146 -- 4.5 Relation between Classical and Quantum Capacities of Quantum Channels 149 -- 4.6 Further Reading 151 -- CHAPTER 5 GEOMETRIC INTERPRETATION OF QUANTUM CHANNELS 156 -- 5.1 Introduction 156 -- 5.2 Geometric Interpretation of the Quantum Channels 157 -- 5.3 Geometric Interpretation of the Quantum Informational Distance 162 -- 5.4 Computation of Smallest Quantum Ball to Derive the HSW Capacity 182 -- 5.5 Illustrative Example 190 -- 5.6 Geometry of Basic Quantum Channel Models 191. 5.7 Geometric Interpretation of HSW Capacities of Different Quantum Channel Models 197 -- 5.8 Further Reading 213 -- CHAPTER 6 ADDITIVITY OF QUANTUM CHANNEL CAPACITIES 218 -- 6.1 Introduction 218 -- 6.2 Additivity of Classical Capacity 223 -- 6.3 Additivity of Quantum Capacity 225 -- 6.4 Additivity of Holevo Information 232 -- 6.5 Geometric Interpretation of Additivity of HSW Capacity 245 -- 6.6 Classical and Quantum Capacities of some Channels 260 -- 6.7 The Classical Zero-Error Capacities of some Quantum Channels 264 -- 6.8 Further Reading 265 -- CHAPTER 7 SUPERACTIVATION OF QUANTUM CHANNELS 269 -- 7.1 Introduction 270 -- 7.2 The Non-Additivity of Private Information 270 -- 7.3 Channel Combination for Superadditivity of Private Information 274 -- 7.4 Superactivation of Quantum Capacity of Zero-Capacity Quantum Channels 282 -- 7.5 Behind Superactivation: The Information Theoretic Description 295 -- 7.6 Geometrical Interpretation of Quantum Capacity 302 -- 7.7 Example of Geometric Interpretation of Superactivation 305 -- 7.8 Extension of Superactivation for More General Classes 310 -- 7.9 Superactivation of Zero-Error Capacities 315 -- 7.10 Further Reading 322 -- CHAPTER 8 QUANTUM SECURITY AND PRIVACY 325 -- 8.1 Introduction 326 -- 8.2 Quantum Key Distribution 330 -- 8.3 Private Communication over the Quantum Channel 333 -- 8.4 Quantum Cryptographic Primitives 336 -- 8.5 Further Reading 354 -- CHAPTER 9 QUANTUM COMMUNICATION NETWORKS 362 -- 9.1 Long-Distance Quantum Communications 362 -- 9.2 Levels of Entanglement Swapping 368 -- 9.3 Scheduling Techniques of Purification 371 -- 9.4 Hybrid Quantum Repeater 375 -- 9.5 Probabilistic Quantum Networks 382 -- 9.6 Conclusions 384 -- 9.7 Further Reading 384 -- CHAPTER 10 RECENT DEVELOPMENTS AND FUTURE DIRECTIONS 388 -- 10.1 Introduction 388 -- 10.2 Qubit Implementations 391 -- 10.3 Quantum CPUs 396 -- 10.4 Quantum Memories 400 -- 10.5 Further Reading 411 -- NOTATIONS AND ABBREVIATIONS 413 -- REFERENCES 420 -- INDEX 455.

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 background. For students, engineers, and experts, Advanced Quantum Communications is an ideal guide to the communication channels and methods of the Quantum Age.
