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Nota di contenuto	1. Shaping Tomorrow: The Convergence of Artificial General Intelligence and Quantum Computing -- 2. Evolution of Artificial Intelligence and Quantum Computing -- 3. Architecture of Quantum Neural Networks: Design and Implementation -- 4. Quantum- Based Computing and Machine Learning Convergence: Paving the Path to Artificial General Intelligence -- 5. Synergizing Quantum Computing and Machine Learning for Superior Artificial General Intelligence -- 6. Deep dive into Generative, Federative and Explainable Models for Integrating Artificial General Intelligence into Quantum Computing -- 7. AGI: A Transformational Paradigm: Comprehension and Navigation of Future Intelligence -- 8. Enhancing Metaheuristics: The Role of Quantum-Inspired Soft Computing -- 9. Quantum Algorithms for AGI: Unlocking the Potential of Superintelligence -- 10. Ethical AI Development: Mitigating Bias in Generative Models -- 11. Future

Frontiers: The Role of AGI and Quantum Computing in Solving Complex Global Problems -- 12. Toward Autonomous Quantum Systems: AGI-Driven Self-Optimization and Quantum Computing Synergy -- 13. Quantum Machine Learning for AGI: Redefining Intelligence Through Quantum Algorithms -- 14. Quantum-Enhanced Artificial General Intelligence: Bridging Computational Paradigms -- 15. Quantum-Infused Deep Learning Frameworks Utilizing Quantum-Enhanced Feature Extraction to Propel AGI -- 16. Streamflow Forecasting in the Downstream Catchment of Mahanadi River Basin using AI and Quantum Computing -- 17. Integrating Neural Networks with Quantum Chips: Converging Two Cutting-Edge Frontiers -- 18. Orchestrating Intelligence: Governance and Leadership Frameworks for Human-AGI Collaboration in Quantum Systems.

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## Sommario/riassunto

This book investigates the dynamic relationship between artificial general intelligence (AGI) and quantum computing. AGI refers to a form of AI capable of performing any intellectual task that a human can, while quantum computing utilizes quantum mechanics principles to process information in fundamentally different ways compared to classical computing. This interplay explores how quantum computing might enhance AGI by accelerating complex computations and optimizing learning algorithms, potentially enabling AGI systems to solve problems beyond the reach of traditional computers. It also examines the challenges and opportunities presented by combining these technologies, including theoretical implications and practical applications in advancing AI capabilities. This book examines the groundbreaking intersection of artificial general intelligence (AGI) and quantum computing. The book explores how AGI, which aims to replicate human-like cognitive abilities, can be enhanced by quantum computing's unique processing capabilities. It delves into theoretical foundations, practical applications, and potential synergies, illustrating how quantum computing could tackle complex computational challenges inherent in AGI development. By integrating these advanced technologies, the book provides a comprehensive analysis of their combined impact, offering insights into future advancements and the transformative potential of merging AGI with quantum computing.

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