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Descrizione fisica	1 online resource (XXXII, 412 p. 292 illus., 224 illus. in color.)
Disciplina	658.15
Soggetti	Artificial intelligence Economics, Mathematical Computational intelligence Quantum field theory String theory Statistical physics Application software Artificial Intelligence Quantitative Finance Computational Intelligence Quantum Field Theories, String Theory Applications of Nonlinear Dynamics and Chaos Theory Computer Applications
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Part I – Quantum Finance Theory -- 1. Introduction to Quantum Finance -- 2. Quantum Field Theory for Quantum Finance -- 3. An Overview of Quantum Finance Models -- 4. Quantum Finance Theory -- 5. Quantum Price Levels – Basic Theory and Numerical Computational Technology -- 6. Quantum Trading and Hedging Strategy -- 7. AI Powerful Tools on Quantum Finance -- 8. Chaos and Fractals on Quantum Finance -- 9. Chaotic Neural Networks on Financial Prediction -- Part II – Quantum Finance Applications -- 10. Quantum Price Levels (QPL) for Worldwide Financial Products -- 11. QTime Series Chaotic Neural Oscillatory Networks (TSCNON) for Financial Prediction -- 12.

Chaotic Type-2 Transient-Fuzzy Deep Neuro-Oscillatory Network (CT2TFDNN) for Worldwide Financial Prediction -- 13. Quantum Trader – A Multiagent-based Quantum Financial Forecast and Intel-ligent Trading System -- 14. Future Trend in Quantum Finance.

Sommario/riassunto

With the exponential growth of program trading in the global financial industry, quantum finance and its underlying technologies have become one of the hottest topics in the fintech community. Numerous financial institutions and fund houses around the world require computer professionals with a basic understanding of quantum finance to develop intelligent financial systems. This book presents a selection of the author's past 15 years' R&D work and practical implementation of the Quantum Finance Forecast System – which integrates quantum field theory and related AI technologies to design and develop intelligent global financial forecast and quantum trading systems. The book consists of two parts: Part I discusses the basic concepts and theories of quantum finance and related AI technologies, including quantum field theory, quantum price fields, quantum price level modelling and quantum entanglement to predict major financial events. Part II then examines the current, ongoing R&D projects on the application of quantum finance technologies in intelligent real-time financial prediction and quantum trading systems. This book is both a textbook for undergraduate & masters level quantum finance, AI and fintech courses and a valuable resource for researchers and data scientists working in the field of quantum finance and intelligent financial systems. It is also of interest to professional traders/quants & independent investors who would like to grasp the basic concepts and theory of quantum finance, and more importantly how to adopt this fascinating technology to implement intelligent financial forecast and quantum trading systems. For system implementation, the interactive quantum finance programming labs listed on the Quantum Finance Forecast Centre official site (QFFC.org) enable readers to learn how to use quantum finance technologies presented in the book.
