



## Quantum Computing Mechanics(Foundations, Principles and Applications)

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## Product Description

Quantum Computing Mechanics(Foundations, Principles and Applications) **Unlock the Quantum Frontier**

**Quantum Computing Mechanics: Foundations, Principles and Applications** is a comprehensive journey into the heart of one of the 21st century's most transformative scientific revolutions. Bridging the disciplines of quantum mechanics and computational theory, this book presents a lucid and in-depth exploration of quantum computing—from its theoretical foundations to its real-world applications. **Whether you are a curious student, a passionate researcher, or an industry professional, this volume offers:**

- A rigorous yet accessible introduction to the principles of quantum mechanics and how they power next-generation computation.
- Core topics like qubits, quantum gates, superposition, entanglement, and interference, laid out clearly with diagrams, examples, and circuit design.
- Step-by-step walkthroughs of groundbreaking quantum algorithms including Grover's, Shor's, and the Quantum Fourier Transform.
- Essential coverage of error correction, fault tolerance, and the global push toward quantum supremacy.
- Extensive practice sections with short questions, multiple-choice quizzes, solved numerical problems, and innovative project ideas—making it ideal for self-study or academic use.

From the roots of classical logic to the surreal domain of entangled qubits, **Quantum Computing Mechanics** brings clarity to complexity. It does not merely teach you what quantum computing is—it shows you why it matters.



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## Table of Contents

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Preface Acknowledgements

- FOUNDATIONS IN QUANTUM COMPUTING MECHANICS
- OUTLINES OF QUANTUM MECHANICS
- THE QUBIT AND QUANTUM GATES AS BUILDING BLOCKS
- QUANTUM LOGIC GATES AND CIRCUITS
- QUANTUM PARALLELISM AND INTERFERENCE
- QUANTUM ENTANGLEMENT AND NONLOCALITY
- QUANTUM ALGORITHMS
- QUANTUM ERROR CORRECTION AND FAULT TOLERANCE

APPENDICES

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