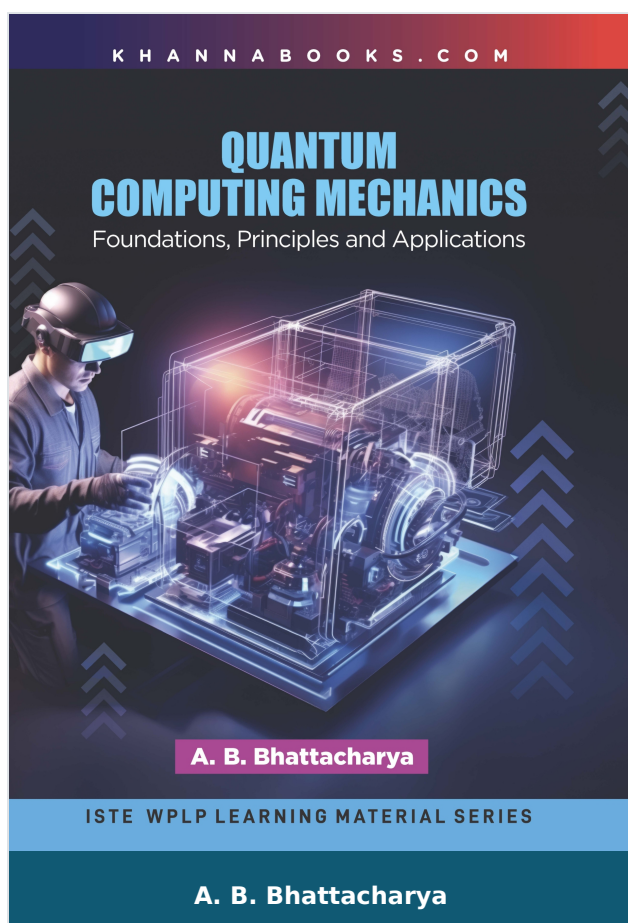




Quantum Computing Mechanics(Foundations, Principles and Applications)

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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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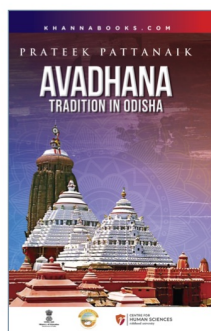
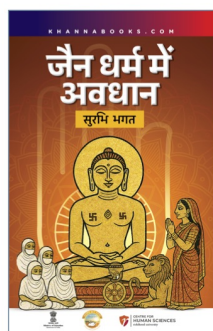
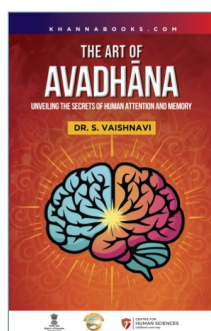
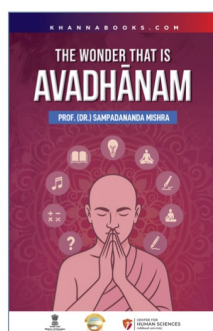
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Author

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Prof. A. B. Bhattacharya did his MSc and PhD degree from the University of Calcutta in Physics and Post-doc from the Massachusetts Institute of Technology (MIT), Cambridge, USA. He worked in close collaboration with the leading laboratories like Lincoln Laboratory; Milestone Hill Observatory; Earth, Atmospheric and Planetary Sciences division of MIT and many other well recognized laboratories in India and abroad. He served as Professor & Head of the Department of Physics, University of Kalyani; Dean of Research and Head of the ECE Department, Techno India University; Pro Vice Chancellor of JIS University and Director of Brainware University. He has published 32 text books for Science and Engineering students, two popular books for general readers and over 400 research articles in reputed International Journals. Under his supervision 24 scholars

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**Prateek Pattanaik, Sampadananda Mishra,
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Surbhi Bhagat

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