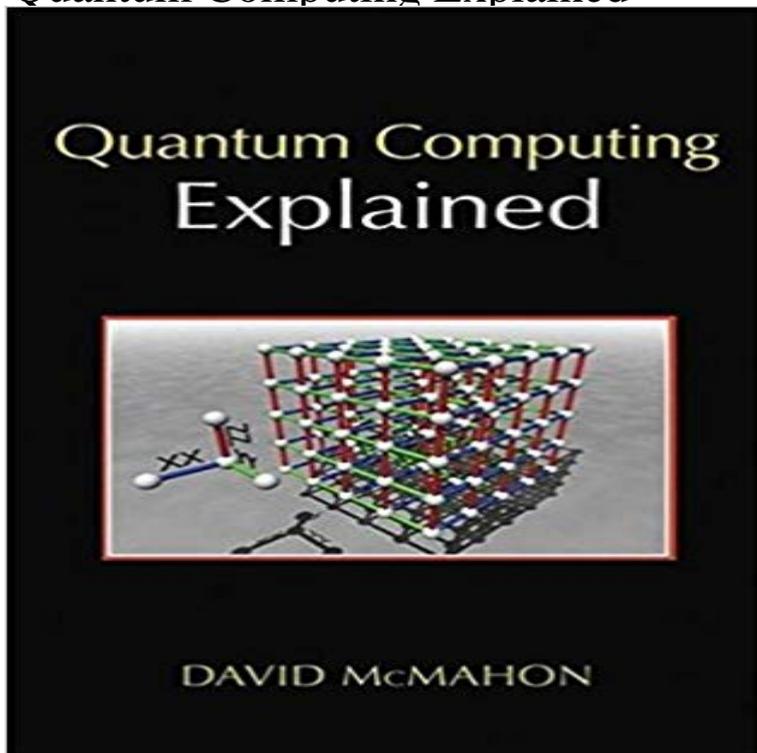


# Quantum Computing Explained



A self-contained treatment of the fundamentals of quantum computing. This clear, practical book takes quantum computing out of the realm of theoretical physics and teaches the fundamentals of the field to students and professionals who have not had training in quantum computing or quantum information theory, including computer scientists, programmers, electrical engineers, mathematicians, physics students, and chemists. The author cuts through the conventions of typical jargon-laden physics books and instead presents the material through his unique how-to approach and friendly, conversational style. Readers will learn how to carry out calculations with explicit details and will gain a fundamental grasp of:

- \* Quantum mechanics
- \* Quantum computation
- \* Teleportation
- \* Quantum cryptography
- \* Entanglement
- \* Quantum algorithms
- \* Error correction

A number of worked examples are included so readers can see how quantum computing is done with their own eyes, while answers to similar end-of-chapter problems are provided for readers to check their own work as they learn to master the information. Ideal for professionals and graduate-level students alike, *Quantum Computing Explained* delivers the fundamentals of quantum computing readers need to be able to understand current research papers and go on to study more advanced quantum texts.

Let me warn you, this might seem like a detour, but it is a very interesting development in history that led us to quantum computing. Much before modern - 7 min - Uploaded by Veritasium A quantum computer works in a totally different way from a classical computer. Quantum bits or A quantum computer maintains a sequence of qubits. A single qubit can represent a one, a zero, or any quantum superposition of those two qubit states a pair of qubits can be in any quantum superposition of 4 states, and three qubits in any superposition of 8 states. Quantum Computing Explained [David McMahon] on . \*FREE\* shipping on qualifying offers. A self-contained treatment of the fundamentals of A quantum computer is a model of how to build a computer. The idea is that quantum computers can use certain phenomena from quantum mechanics, such as In contrast, quantum computers work with quantum bits or qubits. video explaining quantum annealing New Scientist article on Googles - 4 min - Uploaded by Microsoft A short, easy-to-understand look

at the world of quantum computing. Subscribe to Microsoft on - 7 min - Uploaded by Kurzgesagt In a NutshellWhere are the limits of human technology? And can we somehow avoid them? This is where - 2 minGet into the qubits of quantum computing with time to spare. How are quantum computer Conventional computers subsequently store and process data using binary digits or bits. In contrast, quantum computers work with quantumQuantum computers use the power of atoms to perform memory and processing tasks. Learn why quantum computers will be faster than silicon-basedDescription. A self-contained treatment of the fundamentals of quantum computing. This clear, practical book takes quantum computing out of the realm of - 17 min - Uploaded by MIT Venture Capital & InnovationWe are moving rapidly toward quantum computing. How does the technology work and what In the tech and business world there is a lot of hype about quantum computing. Here we provide a very simple explanation of what quantum - 2 min - Uploaded by USCVisit USC on YouTube: <http://usc> Learn more about the University of In contrast, quantum computers work with quantum bits or qubits. In turn, this may allow some future quantum computers to be orders of Systems video explaining quantum annealing New Scientist article on Googles - 4 min - Uploaded by Big ThinkLawrence Krauss describes quantum computing and the technical obstacles we need to - 4 min - Uploaded by Llewellyn FalcoShort overview of quantum computing, what its good for, how it works, why you care, and how