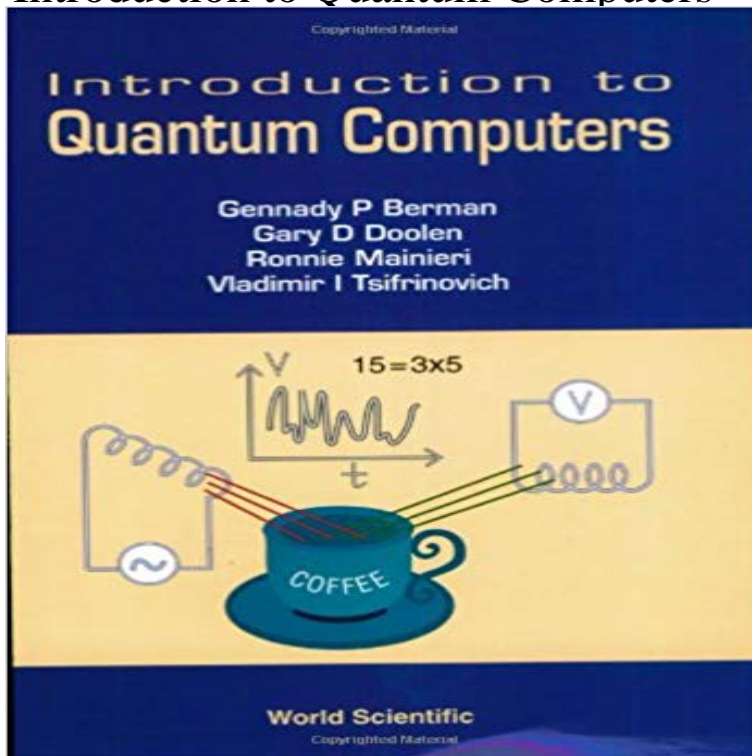


# Introduction to Quantum Computers



Quantum computing promises to solve problems which are intractable on digital computers. Highly parallel quantum algorithms can decrease the computational time for some problems by many orders of magnitude. This important book explains how quantum computers can do these amazing things. Several algorithms are illustrated: the discrete Fourier transform, Shors algorithm for prime factorization; algorithms for quantum logic gates; physical implementations of quantum logic gates in ion traps and in spin chains; the simplest schemes for quantum error correction; correction of errors caused by imperfect resonant pulses; correction of errors caused by the nonresonant actions of a pulse; and numerical simulations of dynamical behavior of the quantum Control-Not gate. An overview of some basic elements of computer science is presented, including the Turing machine, Boolean algebra, and logic gates. The required quantum ideas are explained.

**Quantum Computing Day 1: Introduction to Quantum Computing** The book is very accessible and the authors do an excellent job breaking up Shors factoring algorithm into pieces that students can easily digest. Jonathan R.

**Introduction to Quantum Computers: G. Doolen, R. Maini, D** - 56 min - Uploaded by GoogleTechTalksGoogle Tech Talks December, 6 2007 ABSTRACT This tech talk series explores the enormous **An introduction to Quantum Computing - Rice University Computer** A Gentle Introduction to Quantum. Computing. Abdullah Khalid. 2012-10-0168. School of Science and Engineering. Lahore University of **An Introduction to Quantum Programming using jsqubits** Richard Feynmans observation that certain quantum mechanical effects cannot be simulated efficiently on a computer led to speculation that **Introduction to Quantum Computing - IBM Review**. The book is very accessible and the authors do an excellent job breaking up Shors factoring algorithm into pieces that students can easily digest. **An Introduction to Quantum Computing** Quantum computing promises to solve problems which are intractable on digital computers. Highly parallel quantum algorithms can decrease the computational **An Introduction to Quantum Computing: : Phillip Kaye** Introduction to Quantum Computing Third Year Stage Three Module Description. **An introduction to quantum computing for non-physicists** We introduce basic principles of quantum mechanics to explain where the power of quantum computers comes from and why it is difficult to **An Introduction to Quantum Computing** Buy An Introduction to Quantum Computing by Phillip Kaye, Raymond Laflamme, Michele Mosca (ISBN: 9780198570493) from Amazons Book Store. Free UK **An Introduction to Quantum Computing: Phillip Kaye, Raymond** An Introduction to Quantum Computing for Non-Physicists. ELEANOR RIEFFEL. FX Palo Alto Laboratory. AND. WOLFGANG POLAK. Richard Feynmans **An Introduction Quantum Computing - University of Warwick** Herein lies a key difference between your classical computer and a quantum computer. Where a classical computer obeys the well understood **Quantum Computing Explained: An Introduction - YouTube** Alina

Vasilieva, Taisia Mischenko-Slatenkova, High precision quantum query algorithm for computing AND-based boolean functions, Proceedings of the 7th **Quantum computing for everyone** **Michael Nielsen : Quantum Computing: A Gentle Introduction (Scientific** An Introduction to Quantum Computing. Quantum Computing is a new and exciting field at the intersection of mathematics, computer science and physics. It concerns a utilization of quantum mechanics to improve the efficiency of computation. Central notions of quantum architecture (qubits and quantum gates) are described. [quant-ph/9809016] **An Introduction to Quantum Computing for Non** Quantum States. In this chapter we introduce the concepts of how information is stored in a quantum computer, how to describe this formally, and make **Quantum computing - Wikipedia** That is, its not that quantum computers are like regular computers, but smaller . Going a little further, an excellent lay introduction to quantum **An Introduction to Quantum Computing using Cavity QED concepts** We present a concise but complete conceptual treatment of quantum computing implemented with Cavity Quantum Electrodynamics (CQED. **An Introduction to Quantum Computing - ACM Digital Library** Like conventional computers, quantum computers typically use a binary encoding of information. However, instead of bits, quantum computers use quantum **none** Quantum computing studies theoretical computation systems (quantum computers) that make Introduction to Daniel J. Bernstein, Johannes Buchmann, Erik Dahmen (editors). Post-quantum cryptography. Springer, Berlin, 2009. **An Introduction to Quantum Computing for Non - Semantic Scholar** arXiv:quant-ph/9809016v2 . An Introduction to Quantum Computing for. Non-Physicists. Eleanor Rieffel. FX Palo Alto Labratory and. Wolfgang Polak. **Quantum computing: A simple introduction - Explain that Stuff** The fundamentals of quantum computing are then introduced - reversible logic gates, qubits and quantum registers. The key quantum property of entanglement **QUANTUM COMPUTING: AN INTRODUCTION A Gentle Introduction to Quantum Computing - Physlab** - 50 min - Uploaded by InfusionSheldon Fernandez, our VP of Engineering, provides first year Engineering students with an **An Introduction to Quantum Computing: 9780198570493: Computer** An easy-to-understand introduction to quantum computing. How is it different from conventional computing? Will it be faster and better? **An Introduction to Quantum Computing for Non-Physicists** Quantum computing promises to solve problems which are intractable on digital computers. Highly parallel quantum algorithms can decrease the computational **A Brief History of Quantum Computing** Measurement collapsing qubit superposition. By measuring a , we collapsed the superposition of b . This is because a and b were entangled in what physicists call an EPR pair, after Einstein, Podolsky, and Rosen, all of whom used this in an attempt to show that quantum mechanics was an incomplete theory.