"Quantum Computers: a new world of computing?"

Abstract:
In August 1998 at the International Math Congress in Berlin Dr. Peter Shor of AT&T Bell Labs was awarded the Nevanlinna prize for his work on quantum computing. In particular he devised a fast algorithm for quantum computers that would easily crack the "unbreakable" Public Key RSA codes used for Internet security. In another recent groundbreaking work on the so called "quantum phone book" L. Grover of AT&T showed how a quantum computer could find an item in an unstructured database with N cells in square root of N steps. This is totally impossible for conventional computing devices. These results have ignited among physicists, mathematicians, engineers, and computer scientists the intense interest in quantum computers, which has existed for about a decade. The only thing that moderates the hype is that those quantum computers ... do not exist yet, and it is not clear whether it is practically possible to create them. So, what is this amazing machine, the quantum computer? This will be the topic of the lecture, delivered by a non-expert for non-experts. References to recent introductory publications will be given.

Friday, September 24, 1999
3:00 PM in 372 Jabara Hall

Please come join us for refreshments before the lecture
at 2:30 p.m. in room 353 Jabara Hall.