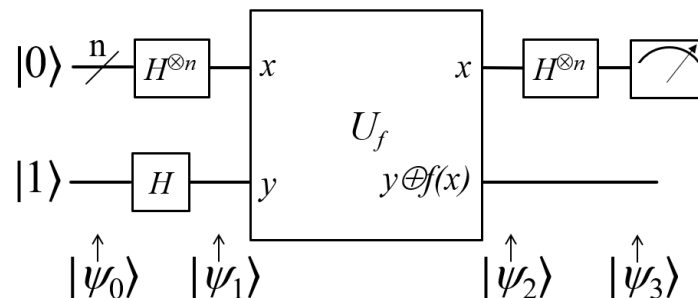


Quantum Circuits and Algorithms

Undergraduate Math Club
CORNELL UNIVERSITY



SPEAKER

Arthur Tanjaya

ABSTRACT

In 2001, we had a breakthrough: Shor's algorithm was used to factor 15 in polynomial time. We will begin with a brief rundown of the mathematics involved in quantum computation, such as qubits and entanglement, and see why linear algebra lets us have our cake and eat it too. The talk will focus on the construction of several quantum logic gates, such as the Toffoli and Hadamard gates, which we will leverage to prove that quantum circuits are actually capable of faster computation than classical ones. If time permits, we will hopefully get to an overview of Shor's algorithm.

APR 29 at 5:15pm

Malott 532 ★ Refreshments