

COLLOQUIUM

Quantum Computing and the Entanglement Frontier

John Preskill

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September 12, 2018

4:00 p.m. - Wilson Hall, One West

The quantum laws governing atoms and other tiny objects seem to defy common sense, and information encoded in quantum systems has weird properties that baffle our feeble human minds. John Preskill will explain why he loves quantum entanglement, the elusive feature making quantum information fundamentally different from information in the macroscopic world. By exploiting quantum entanglement, quantum computers should be able to solve otherwise intractable problems, with far-reaching applications to cryptology, materials, and fundamental physical science. Preskill is less weird than a quantum computer, and easier to understand.