

# John Preskill

FEYNMAN PROFESSOR OF PHYSICS  
CALIFORNIA INSTITUTE OF TECHNOLOGY

Tuesday, April 18, 2017

4:30 PM

Cardwell Hall – Room 101

Kansas State University



## Quantum Computing and the Entanglement Frontier

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.

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 received his Ph.D. in physics in 1980 from Harvard, where he was a student of Steven Weinberg. He was Associate Professor of Physics at Harvard before joining Caltech in 1983.

He became the John D. MacArthur Professor in 2002, and the Richard P. Feynman Professor of Theoretical Physics in 2010.

Preskill founded Caltech's Institute for Quantum Information, which is one of the world's leading centers for theoretical research on quantum information and quantum computing.

In 2011, the IQI became part of the Institute for Quantum Information and Matter, an NSF Physics Frontiers Center.

Preskill is less weird than a quantum computer, and easier to understand.