

UCLA Department of Physics & Astronomy

COLLOQUIUM

Thursday, February 5th, 2026 at 4 p.m.

PAB 1-434

Simulating Fundamental Physics Using Quantum Computers

Martin Savage
(University of Washington)



Remarkable advances in the development of quantum computers are accelerating efforts to simulate features of matter that are not accessible to classical computing or analytic techniques, ranging from the production of matter in the early universe to exotic materials for cleaner energy. Quantum simulations of the dynamics of systems of fundamental particles, such as quarks, gluons, neutrinos and more, which are universally challenging, may provide early achievable successes for quantum computers. I will present the vision and status of quantum simulations for scientific objectives in fundamental physics.

Host: Zhongbo Kang

Refreshments at 3:30 p.m. PAB Patio.

Undergraduates Welcome!