

CSU PHYSICS SEMINAR

“Quantinuum’s Advanced Quantum SDK for the NISQ Era”

Dr. Kathrin Spendier

Quantinuum

Thursday, March 30th at 10:00 AM

Room 312 Lory Student Center

Abstract

Quantinuum, one of the world's leading full-stack quantum computing companies, integrates hardware and software solutions, including the open-source quantum software development kit (SDK) known as "TKET" (<https://github.com/CQCL/tket>). TKET adeptly handles the complexities of noisy intermediate-scale quantum (NISQ) technology for gate-based quantum computing, offering state-of-the-art circuit compilation and optimization performance. TKET is a platform-inclusive quantum SDK and promotes code reusability. In this presentation, I will briefly introduce the fundamental concepts and potential applications of quantum computing, and then focus on TKET's features and performance.

Biography

Dr. Kathrin Spendier is a Quantum Evangelist at Quantinuum, where she promotes the company's cutting-edge TKET software development kit. She holds a Ph.D. in Physics from the University of New Mexico and is an Associate Professor with a research affiliation at the University of Colorado Colorado Springs (UCCS). While at UCCS as a tenure-track faculty member and later as a tenured faculty member, Dr. Spendier conducted extensive research on biophysical phenomena and condensed matter physics and developed and taught numerous undergraduate and graduate physics courses.