Single Photons for Quantum Information

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The fundamentally quantum nature of single photons makes them ideally suited both to explore the core principles of quantum mechanics and implement practical quantum information technologies that could revolutionize computing and communication. However, real single photon sources are not ideal quantum systems, and designing sources for a wide variety of quantum schemes remains an active research area. Following an introduction to the field, rooted in the long history of experimental work using single photons to study fundamental quantum phenomena, I will discuss current research on single photon sources for quantum information applications including engineering single photon wavepackets and coherently storing single photons.

Hosts: Rose Ahlefeldt, Rufus Cone, and Charles Thiel

Thursday, March 24, 2016
4:10-5:00 PM
Roberts Hall 301