

Simulation of Superconducting QUBIT devices

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Superconducting qubits have matured from platforms demonstrating and manipulating macroscopic coherent quantum states to realizing exotic quantum states, running surface error correction codes, and single photon detection to name a few recent milestones. This talk will review the fundamentals of circuit QED related to the design and simulation of superconducting qubits. A brief overview of how to simulate the classical components of these devices using the finite element multiphysics software, COMSOL, will follow the discussion of their equivalent circuit models.

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