Special Seminar!!

Quantum Computation With Superconducting Qubits: a Journey from GeV to ueV

by

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2:00 p.m, Curia II

This talk will primarily focus on the results from the group at IBM T.J Watson research. Superconducting qubits are one of many implementations possible for quantum computation. Investigations are underway to use trapped ions, quantum dots, spins in silicon, and nitrogen vacancies in diamond. Each has its own merits and difficulties. The IBM Watson team views the superconducting approach as the most viable near term approach. The superconducting system is an anharmonic oscillator made up of a capacitor with a non-linear inductor. The macroscopic 2 level quantum system formed by the LC circuit acts as a qubit. The qubits are coupled through resonators. The status and future of this system will be shown.

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