

Northwestern Quantum Week
Quantum Innovation Symposium

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Jens Koch is a Professor of Theoretical Physics at Northwestern University, where his research focuses on superconducting circuits and quantum information processing. He is best known for his contributions to the development/modeling of transmon and fluxonium qubits. Koch is the lead developer of **scqubits**, an open-source Python library widely used by the superconducting qubit community for modeling and simulation.

Introduction to Quantum Computing with Superconducting Qubits

Abstract: This talk is especially geared towards workshop attendees who are not yet experts on the topic of superconducting qubits. The introduction will touch on the basic ideas of constructing quantum bits from superconducting circuits and how to perform qubit operations and readout. I will include some historical remarks and comment on the state-of-the-art as well as ongoing challenges with scaling up to processors with larger qubit numbers.