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**Title: Towards protected superconducting qubits**

Abstract:

Alternatives to transmon qubits are gaining traction as alternative superconducting qubit platforms. In particular, current quantum devices are very prone to errors and we need conceptually improved qubits to truly perform reliable quantum calculations. Effective quantum computation is anchored on two key elements: high-fidelity two-qubit gates and precise readout. In this presentation, I will discuss various approaches to go beyond the transmon that we pursue in our lab. In particular, I will discuss the fluxonium qubit and the strategies that we take towards high fidelity readout and fast two-qubit gates.