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Protecting quantum information in superconducting circuits

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Can we prolong the coherence of a two-state manifold in a complex quantum system beyond the coherence of its longest-lived component? This question is the starting point in the construction of a scalable quantum computer. It translates in the search for processes that operate as some sort of Maxwells demon and reliably correct the errors resulting from the coupling between qubits and their environment. The presentation will review recent experiments that test the dynamical protection by Josephson circuits of a logical qubit memory based on superpositions of particular coherent states of a superconducting resonator.