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Manipulation of Majorana fermions using superconducting qubits

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Majorana fermions are special particles, predicted to appear in certain superconductors. They are extremely useful for quantum computation, due to the possibility to store quantum information in the degenerate ground state of the system. Moreover braiding Majorana fermions around each other allows to implement certain quantum gates in a fault-tolerant manner. I introduce a scheme of quantum computation with Majorana fermions which relies on interplay of charging and Josephson energy to measure, controllably couple, and braid Majorana fermions. The advantage of this scheme is that it fully relies on control elements usual for superconducting circuitry and does not require fine tuning on the scale of Fermi wavelength.