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Overhead considerations of surface codes

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How big would a commercially relevant superconducting quantum computer making use of the surface code need to be? What is the simplest experiment required to conclusively demonstrate that arbitrarily reliable quantum computation is technologically feasible? In this talk, we discuss the current state-of-the-art of the surface code and answer these two questions according to the latest available results. We describe ongoing research to bring down the overhead associated with quantum computation.