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Development of a commercial superconducting quantum annealing processor

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In January 2017, D-Wave announced general commercial availability and the first system order of its D-Wave 2000Q quantum computer. This system implements an algorithm called quantum annealing, and is based upon a superconducting integrated circuit chip with over 128 thousand Josephson junctions. I will review quantum annealing, some of its potential applications, and discuss some of the unique challenges encountered commercializing a technology based on superconducting circuits.



Keywords: Quantum computing, Quantum annealing, Josephson junction, Superconductor electronics

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