Adiabatic quantum computation

Mark Fingerhuth, Tomáš Babej, Peter Wittek

Source

Mark Fingerhuth, Tomáš Babej, Peter Wittek. (2018). Open source software in quantum computing. PLoS ONE, vol. 13 (12), e0208561.

Quantum annealing devices exploit this model. At a high level, this paradigm uses a phenomenon from quantum physics known as the adiabatic theorem to find the global optimum of a discrete optimization problem. Recently, the actual physical devices that implement this paradigm have also been found useful in sampling a Boltzmann distribution. This paradigm does not have a direct classical analogue, and some understanding of statistical physics is recommended to work in this paradigm. This model will be referred to as quantum annealing.