

The History and Types of Quantum Computers

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The field of quantum computing is one of the areas of new technologies known as quantum technologies. Quantum technologies are based on the laws and principles of quantum physics that govern subatomic world. These laws and principles presented since 1900 and changed our viewpoint toward matter construction.

These principles and rules, since the second half of the twentieth century, have become the main parameters for formation of quantum technologies in many different fields such as electronics, medicine, and telecommunications and so on. Quantum computing is one of quantum technologies. Quantum computers are of very high computational power, being able to perform computations that take thousands of years with classical computers. Quantum computers do not have the limitations of classic computers. Although these computers, with absolute superiority over classic computers, have not been made yet, the built-in computers are highly efficient and have reached to commercial scale.

The announcement of one of the quantum computers companies (D-Wave Systems) for collaboration to find a cure for COVID-19 is an example of the feasibility and high efficiency of these computers. This high computing power can be used in many other areas, including agriculture, finance, and cyber security and so on.

In this article, after introducing quantum computers and their types in a simple and not so technical statement, we point out their potential applications in various fields. Furthermore, we present some suggestions for its implementation in our country.

Keywords: Quantum computation, Quantum computers, History, COVID-19, Medicine, Agriculture.

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