Quantum computing in the cloud!

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Quantum computing, and more broadly – quantum information, is a field of science and engineering that makes use of quantum theory in order to perform computation. This field of research, initiated in the eighties of the last century, is extremely interesting from the intellectual point of view and also seems to have many useful applications.

More and more scientist believe that general purpose useful quantum computers will be eventually build. Even today several commercial entities provide access to their quantum computer-like machines trough web interfaces. For example The IBM Quantum Experience[1] allows the users to play with their limited five-qubit quantum computer for free. D-Wave[2] offers services built on top of their quantum annealing machines.

The talk will introduce the basic concepts of quantum computation, quantum algorithms and quantum programming. The discussion of existing quantum systems and their human computer interfaces will be provided. Some speculations about the future of quantum computation will be delivered.

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[1] http://www.research.ibm.com/quantum/
[2] http://www.dwavesys.com/services