Introduction to Quantum Computing
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We are currently experiencing the second quantum revolution, during which devices are built that actively manipulate quantum mechanical objects. The implications of using quantum states for communication are many fold, and we are now just starting to understand the full potential. Apart from breaking widely used cryptosystems, quantum information can be used to achieve perfect s

In this talk I will explain the basics of quantum computing. I will start by introducing the basic notions including what are quantum bits/states. I will then briefly explain what is it that makes them so different from classical information carriers, and will specifically focus on the notions of entanglement and superposition. I will then explain how we can compute using quantum states and what types of advantages can we obtain, compared to classical computers. I will finally shortly introduce some of the known quantum algorithms and discuss about the implications that they bring in terms of security and computational power.