

Friday, 17.07.2026, 1:15 p.m.  
in Lecture Hall **ROT (0.056)**

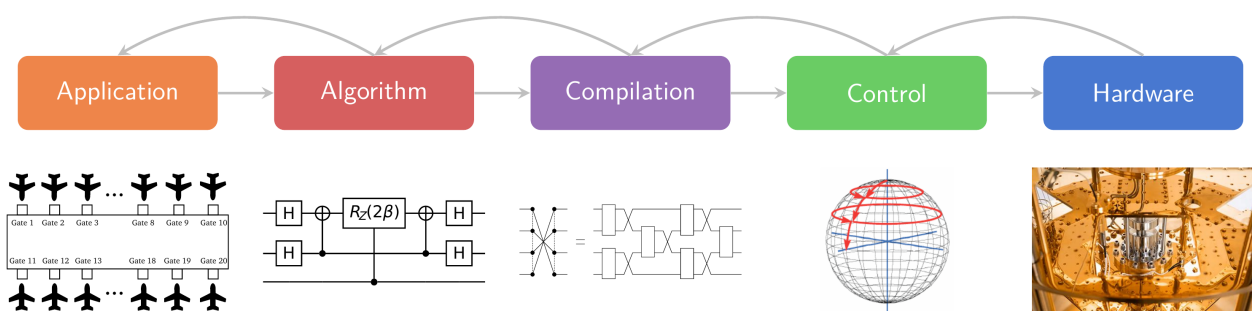
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## „Applications for Quantum Computers - Navigating between Hype and Hope“

In recent years, the rapid development of quantum computing hardware has generated a significant amount of interest in the potential applicability of this technology for solving real-world computational problems. However, this interest has sometimes led to unrealistic expectations.

In this presentation, I will provide an overview of the current state of quantum computing technology and outline the steps necessary to achieve practical quantum advantage for real-world applications. Specifically, I will address the challenges that must be overcome for quantum computers to become valuable assets for potential users in science and industry.

I will present examples of potential applications, along with explanations of the quantum algorithms behind them. The discussion will also cover the open questions and challenges involved in assessing quantum advantage, especially given that large-scale quantum computers are not yet available.



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**Everybody is welcome, especially students of all semester**

