Development of an open-source calibration framework for superconducting qubits

Master degree in Physics

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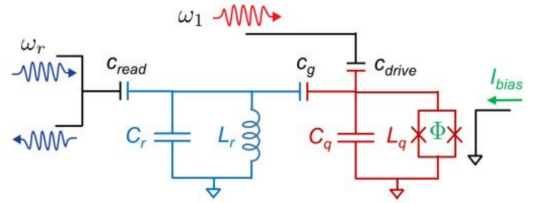
Table of contents

Superconducting qubits

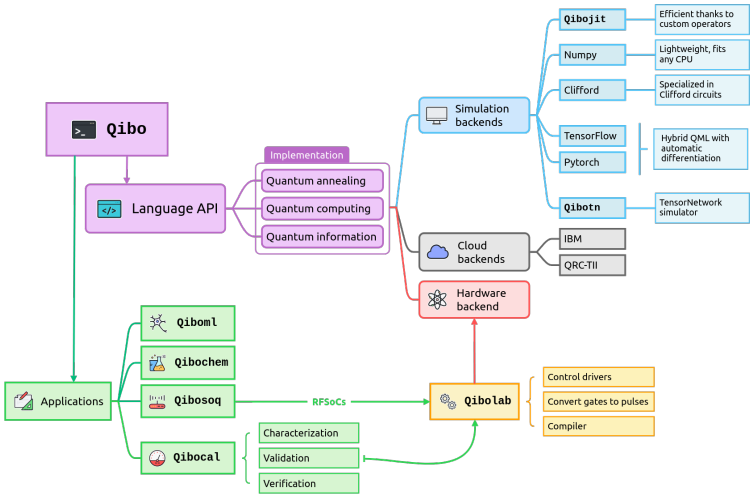
Artificial atoms

Qubit: two level system Superconducting qubits: use Josephson Junctions to build anharmonic oscillators

State readout



Qibo framework



Avarage Clifford gate fidelity optimization

Library additions

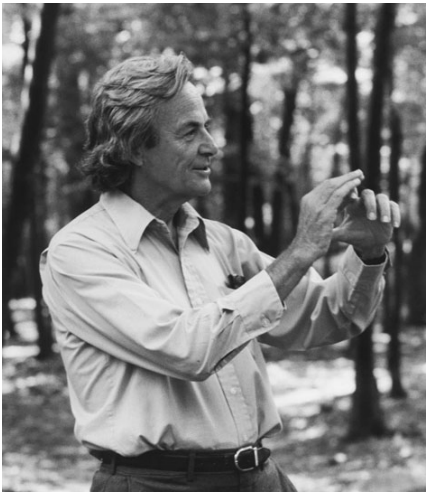
Conclusions & Outlooks

Questions?

References

What is for?

Simulation of quantum system: "Nature isn't classical, dammit, and if you want to make a simulation of nature, you'd better make it quantum mechanical, and by golly it's a wonderful problem, because it doesn't look so easy"



Other quantum computing

1. Optimization and modeling (finance, traffic, weather...)
2. Quantum algorithms
3. Quantum Machine Learning

Qubit platforms