Recent Activities

Jamal Slim

FTX - SFT Group jamal.slim@desy.de

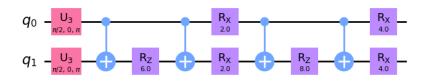
August 24, 2023

Recent Acitivites

- Contributed to the Beamtime at Jülich
 - Measurement of the horizontal and vertical magnetic plane of the machine. Measurement of the magnetic rotation axis.
 - Two papers (PRL and PR-AB) will be sumbited next Moday
- Attented the 3rd Terascale School of Machine Learning (advanced topics)

Recent Acitivites

- Quantum Approximate Optimization Algorithm
- Solve combinatorial optimization
- Use adiabetic evolulation of the time dependent Hamiltonian
- Find the ground state of the final Hamiltonian $H(t) = A(t)H_0 + B(t)H_1$
- Solution of the form $exp(i\delta t(A(t)H_0 + B(t)H_1))$
- Example implementation of a simple QAOA of a $H = Z_0Z_1$



 Finished literature of QSVM and QNN with basic implementations framework for realistic algorithms

SFT Meeting August 24, 2023 3/3