

Quantum Machine Learning

Project partners

Université de Strasbourg, Karlsruher Institut für Technologie

Project duration / Awarded funding

01/02/2020 – 31/07/2022 / 28,571,40€

Short description of the project

“Quantum machine learning” sits at the interface of quantum mechanics and machine learning, exploring how results and techniques from one field can be used to solve the problems of the other. The project focused on establishing a close-knit community of students and researchers with international visibility and organising an Eucor-wide workshop on “Quantum Machine Learning”.

Concrete implementation of the project (What was the funding used for?) (max. 500 characters (including spaces))

- We organised the Machine Learning for Quantum X conference
- We purchased a software license for designing quantum gates via machine learning
- We hired a specialist to help prepare a proposal to the MSCA DN 2021 call
- We hired interns for 3 research projects on the "Design and simulation of robust quantum gates using quantum optimal control", "Interfacing the EASEA platform with a quantum machine simulator", and "Creation of a user interface for creating quantum programs".

Project result(s) and continuation of collaboration (max. 500 characters (including spaces))

We completed all our objectives, despite interruptions caused by Covid: 1) we established a community of students and researchers working in the field of machine learning for quantum, 2) we organised an international and interdisciplinary workshop on “machine learning for quantum X” (online, 74 participants) and 3) we submitted a funding application to the MSCA DN call of Horizon Europe (evaluation results expected April 2023).

Further information (links, articles, photos)

Machine Learning for Quantum X conference website: <http://mlqx.quantumexcellence.org/>

Virtual seminar by Anatole von Lilienfeld: <https://www.int.kit.edu/calendar.php/event/40581>