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ML4Q - Machine Learning for Quantum

The Marie Skłodowska-Curie Doctoral Network "ML4Q - Machine Learning for Quantum" provides high-level interdisciplinary, intersectoral and international training to 10 doctoral researchers who will explore how machine learning and quantum science technology can be combined to (i) extend quantum and classical machine learning based prediction of materials and matter properties and to strongly-correlated regimes, and (ii) accelerate the development of quantum technologies through machine learning, thus enabling new approaches to solving outstanding problems currently out of reach of classical computers. This has the potential to address some of the world's most pressing challenges, such as developing tools for discovering more environmentally friendly chemical processes and efficient materials, or accelerating the development of quantum technologies which will give Europe an edge in the global tech race. ML4Q fellows will realize this vision will through their individual projects and interdisciplinary collaborations reinforced by a comprehensive training program which combines cutting-edge research with a focus on networking, career development for academic and non-academic career paths, open science and responsible research and innovation for society, that will enable them to shape emerging technologies and the next digital transformation in Europe. The consortium consists of 5 academic and 5 non-academic research partners (including 2 leading Eu QT startups) and 11 principal investigators who bring together all the necessary expertise computer science, AI and machine learning, quantum technology, and chemistry and materials science, as well as their interfaces. Together we will prepare the next generation of strong, resilient, flexible, and creative quantum and computer scientists with the combination of skills needed to meet the future needs of the rapidly evolving innovative materials, quantum technologies industries, as well as other knowledge based sectors.

Coordinator: Universite de Strasbourg

Beneficiary: Università degli Studi d Padova

UNIPD Supervisor: Simone Montangero

Department: Department of Physics and Astronomy

Total Contribution: € 259 437,60

Project Duration in months: 48

Find out more: <https://cordis.europa.eu/projects/en>