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AQTIVATE - Advanced computing, quantum algorithms, and data-driven approaches for science, technology and engineering

The joint doctoral project “Advanced computing, Quantum algorithms and data-driven Approaches for science, Technology and Engineering (AQTIVATE)” will deliver an interdisciplinary training program for fifteen fellows who will learn to utilise high performance computing, develop scalable algorithms and machine learning approaches, and explore quantum computing for research projects from physics, engineering and biology. AQTIVATE engages nine degree awarding institutions (DAIs) and four major research centres, including four national supercomputing centres in Cyprus, Germany, Italy and Sweden, one non-degree higher-educational institution, five companies as associated partners, NVIDIA participating through its research labs at two supercomputing centres, and IBM to join as a future associate partner. AQTIVATE will deliver joint degrees between at least two DAIs.

The training program and the research projects of the fellows are designed to be interdisciplinary and they all include a placement in industry and/or supercomputing center, exposing the fellows to different training and work settings. By integrating interdisciplinary methodologies and engaging leading experts from different fields across Europe, AQTIVATE aims to deliver an innovative doctoral program that goes beyond what can be delivered by a standard university curriculum. This combination of formal and hands-on training, coupled with an exposure to different training environments, aspires to produce graduates with excellent career prospects both in academia and industry, and who will be ideally positioned to develop disruptive approaches in their respective scientific fields. AQTIVATE responds to the advancements and investments in supercomputing infrastructure and quantum computing systems and the need for developing new algorithms and software, delivering the much needed human capital that is essential to ensure Europe’s leadership in exploiting digital technologies for research and innovation.

Coordinator: University of Cyprus

Beneficiary: Università degli Studi di Padova

UNIPD Supervisor: Simone Montangero

Department: Department of Physics and Astronomy



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Total Contribution: € 518 875,20

Project Duration in months: 48

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