

The European Quantum Computer Project OpenSuperQ Is Extended

OpenSuperQPlus unites 28 European research partners from 10 countries aiming to develop a 1,000 qubit quantum computer

Jülich, 1 March 2023 – The project [OpenSuperQPlus](#) – part of the [European Quantum Technology Flagship](#) – gets underway. It is continuing and enhancing the project [OpenSuperQ](#) and brings together most of its team with new partners – including the key partners of the national initiatives of the Netherlands, France, Finland, Germany, Hungary and Sweden, full-stack quantum computing startups and many other key players in the field. The large-scale follow-up project coordinated by Forschungszentrum Jülich involves a total of 28 partners from 10 countries.

This team has formed a framework partnership and put forward an ambitious seven year agenda ultimately leading to a 1,000 qubit quantum computing system. The consortium is now launching its first stage OpenSuperQPlus 100 that on the one hand aims at developing several systems for evaluating hard- and software as well as a user-oriented 100 qubit system for first quantum applications within the next 3.5 years. With regard to the second stage it will also look at the critical components and technological decisions needed for the 1,000 qubit quantum computing system.

OpenSuperQPlus (Open Superconducting Quantum Computers) is funded by the European Union with 20 million euros from a specific quantum grant within the Horizon Europe framework programme. This budget goes a long way through synergies with local and national initiatives. “We are bringing together European specialists for all the components of such a quantum computing system under a unified framework – be they in the public or private sector. The technological challenge of beating errors in quantum computers and scaling them up needs all hands on deck from the outstanding quantum ecosystem in Europe”, says coordinator Frank Wilhelm-Mauch of Forschungszentrum Jülich.

Like its predecessor project OpenSuperQ, the project's continuation within the framework of OpenSuperQPlus aims at a versatile quantum computer made in Europe. The consortium anticipates special use cases in quantum simulation for the chemical industry, materials science or in solving optimisation problems and in machine learning.

For more information, please visit

- <https://opensuperqplus.eu>
- <https://twitter.com/opensuperqplus>
- <https://linkedin.com/showcase/93100945>



[OpenSuperQPlus Partners](#)

Germany:

- Forschungszentrum Jülich GmbH
- Bayerische Akademie der Wissenschaften
 - Walther-Meissner-Institute
 - Leibniz Supercomputing Centre
- Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e. V.
- Karlsruher Institut für Technologie
- Qruise GmbH
- Rohde & Schwarz GmbH & Co. KG
- supracon AG
- Zurich Instruments Germany
- EURICE – European Research and Project Office GmbH

Finland:

- Aalto University
- BlueFors Cryogenics Oy
- CSC – IT Center for Science Ltd.
- IQM Finland Oy
- Teknologian Tutkimuskeskus VTT Oy

Netherlands:

- Netherlands Organisation for Applied Scientific Research
- Orange Quantum Systems
- QuantWare B.V.
- Technische Universiteit Delft

France:

- Alice & Bob
- Centre National De La Recherche Scientifique
- Commissariat à l'Énergie Atomique et aux Énergies Alternatives

Hungary:

- Budapest University of Technology and Economics
- Wigner Research Centre for Physics

Austria:

- Institute of Science and Technology Austria

Sweden:

- Chalmers Tekniska Högskola AB



Estonia:

- Tartu Ülikool

Spain:

- Universidad del País Vasco / Euskal Herriko Unibertsitatea

Israel:

- The Hebrew University of Jerusalem

[About the Quantum Flagship](#)

The [Quantum Flagship](#) was launched in 2018 as one of the largest and most ambitious research initiatives of the European Union. With a budget of €1 billion and a duration of 10 years, the flagship brings together research institutions, academia, industry, enterprises, and policy makers, in a joint and collaborative initiative on an unprecedented scale. The main objective of the Flagship is to consolidate and expand European scientific leadership and excellence in this research area as well as to transfer quantum physics research from the lab to the market by means of commercial applications and disruptive technologies. With over 5,000 researchers from academia and industry involved in this initiative throughout its lifetime, it aims to create the next generation of disruptive technologies that will impact Europe's society, placing the region as a worldwide knowledge-based industry and technological leader in this field.

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