QUANTUM FLAGSHIP

Dear ,

We have plenty of news for you this month, with a whole lot of exciting developments in the European quantum scene!

We will tell you about various exciting events – in particular the next European Quantum Technologies Conference, EQTC 2023, coming in October this year. There is also a Women of Quantum webinar, World Quantum Day 2023, and more.

There are fascinating reports to read too – there is a retrospective on the Quantum Flagship's first three years, and an wide analysis of patents in quantum computing.

Beyond that, there is news of major results and funding rounds for European start-ups AQT and PASQAL.

If you would like to inform the quantum community on any QT activities or events within your national or regional community, or provide feedback to the QT newsletter, please get in touch at newsletter@qt.eu.

Best regards,
The Quantum Flagship Coordination Team

- **Mobile World Congress 2023**
- **European Quantum Technologies Conference 2023**
- **Survey - What are your standardisation needs in quantum?**
- **EC report: Ramp-up phase of the Quantum Flagship**
- **Patent insight report on quantum computing**
- **European network for testing quantum technologies starting soon**
- **AQT pushing the performance of Quantum Computing in Europe**
- **World Quantum Day 2023**
- **Women of Quantum webinar**
- **International quantum industry councils formally joining forces**
- **New ML4Q&A-Podcast released**
- **QuiX Quantum wins Prism Award 2023 in the Quantum Tech category**

- **PASQAL raises €100M in Series B Funding**

News from the Quantum Flagship

Quantum Flagship event news

Mobile World Congress 2023

The European Quantum Flagship returns to the Mobile World Congress (MWC23) with the **European Quantum Space – Hall 4 Stand 4A10** – aimed at showcasing the most recent and important advances in quantum technologies for the digital market as well as the immersive and connectivity industry.

The worldwide congress, held from **27th February to 2nd March in Barcelona**, will be an outstanding opportunity for the European Quantum Flagship and other EU Quantum Initiatives to show their most mature technology and disruptive innovations, connect with the global audience, and to enable the integration of these technologies within the current market.

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Quantum Flagship event news

European Quantum Technologies Conference 2023

European Quantum Technologies Conference 2023

Hosted by Quantum Valley Lower Saxony

This year's European Quantum Technologies Conference (EQTC), organised by Quantum Valley Lower Saxony (QVLS), a leading German quantum hub, in cooperation with the Quantum Flagship, will take place in Hannover from 16th to 20th October 2023.

The EQTC 2023 will bring together leading minds from science, industry and politics with up to 1,000 expected guests.

The event will showcase all main scientific and technology pillars of the Quantum Flagship and the European ecosystem as well as global developments. Special attention will also be dedicated to the transfer of these research-intensive technologies to European industry and the presentation of the most promising start-ups.

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Quantum Technologies standardisation survey

What are your standardisation needs in quantum?

Are you developing devices based on quantum technologies? Are you producing components for quantum technologies? Or are you planning to purchase a quantum system for your business? Standardisation will be important for you!

Help us to understand your standardisation needs by answering the survey below, which takes a just few minutes.

The purpose of the survey is to gain insight on standardisation needs, and will serve as input to the new CEN and CENELEC Joint Technical Committee on quantum technology (JCT22-QT). It would be great to hear the views from your organisation.

TO THE SURVEY

For more information watch also the video of the Seminar on Quantum Standardisation and Upcoming Technical Committee by QuIC and TNO.

News from the European Commission

EC report: Ramp-up phase of the Quantum Flagship

The European Commission has published a report on the initial three-year phase (2018-2022) of the Quantum Technologies Flagship. It reviews the achievements and lessons-learned, covering everything from the projects' main results to the number of filed patents and spin-off companies.

The comprehensive document shows Europe to be at the forefront of quantum technologies, as has been reported by various media outlets. You can read more and download the full report below.

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European Patent Office

Patent insight report on quantum computing

The European Patent Office (EPO) have published a 'patent insight report' on quantum computing, covering the field in general and also focussing on areas like platform types, error correction, and related tech. The report reveals a dynamic increase in the number of quantum computing inventions in recent years, well above the rate observed in other technological fields.

This report is part of a series on quantum technologies being prepared by the EPO – past reports can be accessed here, and a report on quantum simulation is expected later this year.

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News from Quantum Flagship projects

Qu-Test project news

European network for testing quantum technologies starting soon

A consortium of 26 organisations has been awarded €19 million under the Quantum

Flagship, for federating European capabilities for testing and validating quantum devices.

The newly formed federated network, **Qu-Test**, led by TNO in the Netherlands is organised into three federated testbeds for quantum computing, quantum communication and quantum sensing, respectively. Each partner in the network will apply its own unique facilities and knowledge to test quantum components, devices or system prototypes provided by the European quantum industry.

The Quantum Flagship project will start in April 2023.

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AQT project news

AQT pushing the performance of Quantum Computing in Europe

Alpine Quantum Technologies (AQT) has demonstrated a Quantum Volume of 128 on its 19-inch rack-compatible Quantum Computer system PINE.

This achievement marks a considerable success for quantum in Europe, with a PINE system designed by AQT, and a first prototype validated in the Quantum Flagship project AQTION at the University of Innsbruck.

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News from the Community

Event news

World Quantum Day 2023

The World Quantum Day, celebrated on and around 14 April, is an initiative from quantum scientists from 65+ countries, aiming at promoting the public understanding of Quantum Science and Technology around the World.

It is a decentralized and bottom-up initiative, inviting all scientists, engineers, educators, communicators, entrepreneurs, etc., to celebrate the World Quantum Day around the planet.

The World Quantum Day was officially launched in 2022, with 200+ events, in 5 continents, in 44+ countries,
193+ cities, in
17+ different languages.

This year we aim at reaching an even wider audience: create and submit your own event!

Examples from past and upcoming events can be found on Twitter @WorldQuantumDay and on the World Quantum Day website.

Join us in celebrating the World Quantum Day, on and around 14 April 2023!

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Event news

Women of Quantum webinar

A webinar is being held on **8th March, 17:00 CET**, to coincide with International Women's Day. The 'Women of Quantum' event seeks to explore the key role women play in addressing systemic challenges in the field of quantum technologies, and to learn how to drive change towards a more sustainable, inclusive, and equitable organisation and society.

The webinar, organised by the European Quantum Industry Consortium (QuIC), is free and open to all. You can register via the button below.

And if you are a woman in quantum, you can also consider sharing your successes and challenges in the field by filling out the pre-event questionnaire here.

News from QuIC

International quantum industry councils formally joining forces

A new chapter for quantum technologies opened with the founding of the **International Council of Quantum Industry Associations** late last month.

With the merger of four associations from around the world, Quantum Industry Canada, the Quantum Economic Development Consortium, Quantum Strategic Industry Alliance for Revolution, and the European Quantum Industry Consortium, the international industry councils are formally joining forces for the development of quantum technologies.

News from ML4Q

New ML4Q&A-Podcast released

In the new podcast ML4Q features members of the cluster who are working at the intersection to other stakeholders in the larger quantum community.

In this episode, ML4Q talks to Tommaso Calarco, Director of the PGI Institute for Quantum Control at Forschungszentrum Jülich, professor for Theoretical Physics at the University of Cologne and member of ML4G.

Find out how he started working on apparently useless science which soon turned out to be the future of quantum and learn about many synergies between theory and experiment, science and government as well as academia and rising startups in the field.

FIND OUT MORE

News from QuiX Quantum

QuiX Quantum wins the renowned Prism Award 2023 in the Quantum Tech category

QuiX Quantum has been awarded the Prism Award, touted as the "Oscars of Photonics", for their 20-mode Quantum Photonic Processor. This recognition is a great accomplishment for the Dutch photonic quantum computing company.

The Prism Awards is an international competition that honors the best new optics and photonics products on the market, held annually by SPIE, the international society for optics and photonics. This year SPIE received 76 applications from 19 countries for the award.

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News from PASQAL

PASQAL raises €100M in Series B Funding

PASQAL has announced raising $100 million in a Series B funding round led by its investor Temasek.

In addition to well-known investors, the European Innovation Council (EIC) Fund of the European Commission also took the opportunity to join as an investor. This funding reinforces PASQAL's position as a worldwide leader in neutral-atom quantum computing. The company will dedicate the funding towards its efforts to build a 1,000-qubit quantum computer in the short term, and fault-tolerant architectures in the long term.

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