



Dear Quantum Flagship member,

This month we start by wishing all our readers a Happy World Quantum Day, which is celebrated globally on 14 April every year. We commemorate the day with the launch of our first *Quantum Explained* video.

For those needing more complex questions answered, we have an updated Competence Framework, a new IP Guideline document, and a survey on teaching quantum in high schools.

You can also read about the newly signed *European Declaration on Quantum Technologies*, an open call for quantum sensing and quantum communications, upcoming events like the Q-Expo and EQTC, and exciting news from Quantum Flagship projects.

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

Best regards,
The Quantum Flagship Coordination Team

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News from the Quantum Flagship

News from the Quantum Flagship

EU leaders showcase quantum technology ambitions after signing landmark pact



Deputy Director-General Thomas Skordas (Directorate-General for Communications Networks, Content and Technology, EC, right) and Director General Frank Monteny (Directorate Research and Space, Belgian Science Policy Office, left) celebrate the signature of the Quantum Declaration.

EU leaders convened in Brussels to commemorate the signing of the *European Declaration on Quantum Technologies*, representing a commitment by EU countries to acknowledge the strategic significance of QT for both the scientific and industrial competitiveness of the EU. The overarching aim is to establish Europe as the leading global hub for quantum innovation.

The Quantum Declaration was formally celebrated with the presence of special guests and representatives from Member States during the Belgian Presidency Event 'Shaping Europe's Quantum Future' on 22 March.

[READ MORE](#)

'Quantum Explained' video series launched



To celebrate World Quantum Day on 14 April 2024, the Quantum Flagship has launched a new video series *Quantum Explained*.

From the quirky behaviour of particles and quantum principles to the impact on our daily life, each episode will offer a captivating glimpse into the quantum realm. The series will also look at Europe's ambitious efforts to harness the potential of quantum technology.

This first episode comes as a celebration of quantum science and the profound impact it already has on our everyday lives. Stay tuned for more episodes, and let's continue to celebrate of World Quantum Day together!

[WATCH VIDEO](#)

News from the Quantum Flagship

Intellectual Property Guideline for QT

The Quantum Flagship has created a 46-page guideline on intellectual property (IP) for European quantum technologists. The goal of this initiative is to provide best practices, particularly in ensuring and facilitating technology transfer and commercialisation through the sustainable utilization of intellectual property rights.

The guideline covers a range of relevant topics, from computer-implemented inventions through to Freedom-to-Operate assessments. It was authored by QuIC and VTT on behalf of QUCATS, and goes hand in hand with QuIC's recently released [global patent landscape white paper](#).

News from the Quantum Flagship

Updated European Competence Framework for QT

A new update (Version 2.5) of the [European Competence Framework for QT](#) has been published. The update includes an extension of the framework with new qualification profiles, typical industry-relevant qualifications with example personas and suggestions. It is based on the analysis of more than 30 interviews with industry representatives, complemented by further discussions and expert consultations, as well as a mapping of job vacancies to the profiles.

The framework is an output of [QUCATS'](#) efforts on workforce development. It is intended to act as a common language for QT training, a tool for planning, mapping and comparing training offers or personal qualifications, and a first step towards standardisation of QT education.

[READ MORE](#)

Quantum Flagship event news

Save the date: EQTC 2024

EQTC European Quantum Technologies Conference 2024
a Quantum Flagship event

Save the date

📅 18-20th November 2024
📍 Culturgest, Lisbon
🗨️ PQI - Portuguese Quantum Institute

QUANTUM FLAGSHIP PORTUGUESE QUANTUM INSTITUTE

Don't miss this year's European Quantum Technologies Conference (EQTC), Europe's biggest quantum event, taking place in **Lisbon** from **18 - 20 November 2024**.

The EQTC serves as the exhibition and collaborative hub of the Quantum Flagship, uniting figures from science, industry, and policy for a stimulating agenda. Join this

year's event to learn about latest developments in research and innovation in QT and discuss scientific and technological challenges ahead. The conference will feature a variety of inspiring talks, panel discussions, poster sessions and an exhibition.

Stay tuned on the event website, and sign up for updates on registration, sponsorship opportunities and more.

We look forward to welcoming you at the EQTC 2024 in Lisbon!

[VIEW EVENT WEBSITE](#)

[REGISTER FOR UPDATES](#)

News from the Quantum Flagship

EQTC 2023 Book of Abstracts

Get an idea of what to expect from the next EQTC, or simply relive the highlights of a great conference: the EQTC 2023 book of abstracts has now been published in full. The book of abstracts has an official DOI, allowing the proceedings to be cited.

Hosted by the Quantum Valley Lower Saxony in Hannover from 16 – 20 October 2023, last year's EQTC saw 700 quantum enthusiasts convene. The book of abstracts contains summaries of over 140 talks and 180 poster presentations, and bios of renowned speakers. Look back at what made EQTC 2023 Europe's quantum event of the year.

[READ MORE](#)

News from the Quantum Flagship

Survey: Quantum physics at secondary schools?

The **QTEdu** pilot project "Community-based development of the Quantum Concept Inventory" aims to develop a test instrument for assessing secondary school students' understanding of key concepts in quantum physics. To achieve this goal, the project team has engaged in consultations with physicists, educational researchers, and high school teachers through a Delphi study.

A broad list of essential quantum physics topics for secondary education has been compiled and subsequently narrowed down to those with the strongest consensus. Physicists, physics educational researchers, and high school teachers are cordially invited to provide their input on which topics should be incorporated into the secondary school curriculum.

[TO THE SURVEY](#)

News from European Commission

News from the Quantum Flagship

Open European Defence Fund call on QT

The European Defence Fund (EDF) has released its 2024 work programme, which includes a 24M€ call addressing quantum sensing and quantum communication technologies. The call is open until **5 November 2024**.

Proposals must address at least one of the following technological domains:

- Quantum sensing technologies for Positioning, Navigation and Timing
- Quantum technologies for optronics and RF sensing
- Quantum technologies and/or quantum-resistant cryptography for secure communications

The call text can be found on p. 50-54 via the button below. Further open and coming calls are listed on our [funding opportunities page](#).

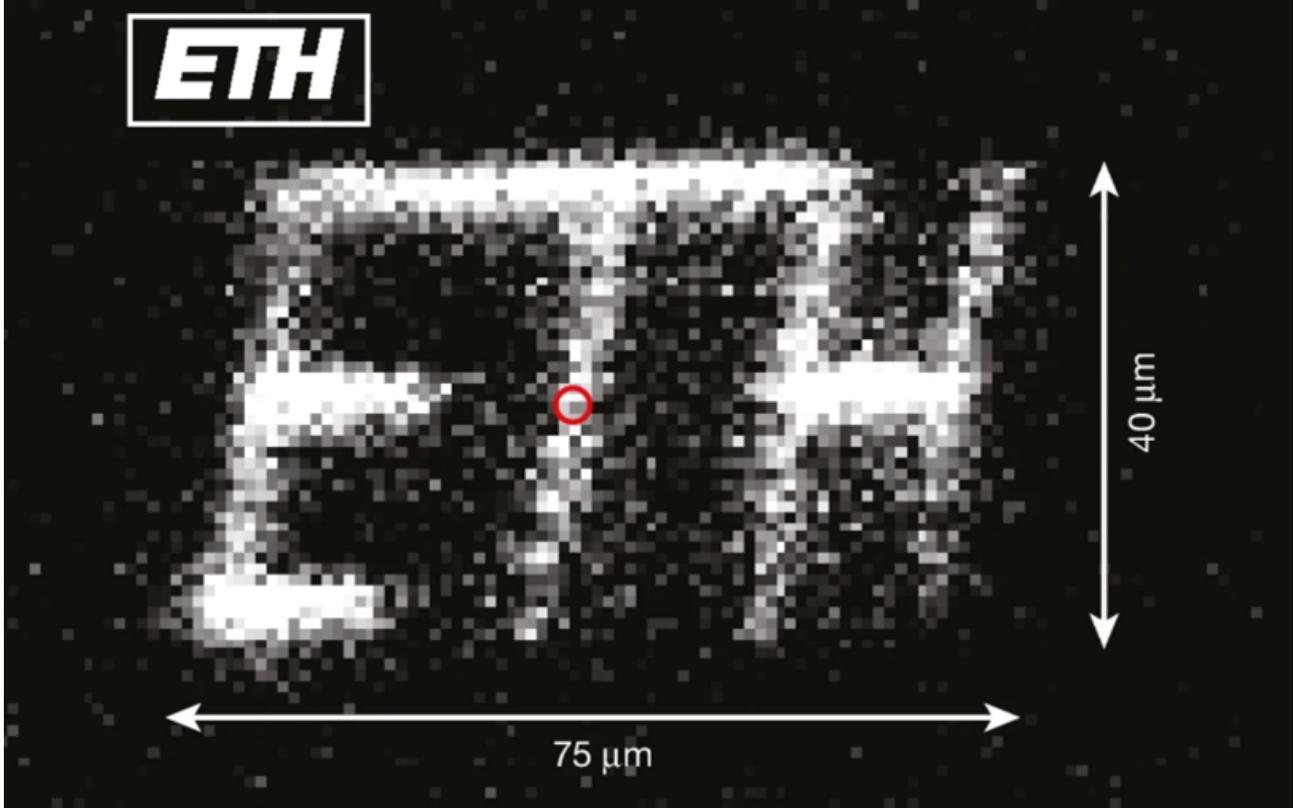
[DOWNLOAD CALL TEXT](#)

News from Quantum Flagship projects

AQTION project news

New ion trap could help quantum computers scale up

Researchers in Zürich have created an ion trap which traps using only static fields (an electric and a magnetic field). This helps to overcome some of the limitations of using an oscillating (RF) field, thus marking a step towards scaling up trapped ions as a quantum computing platform. The exciting results were recently reported in *Nature*.



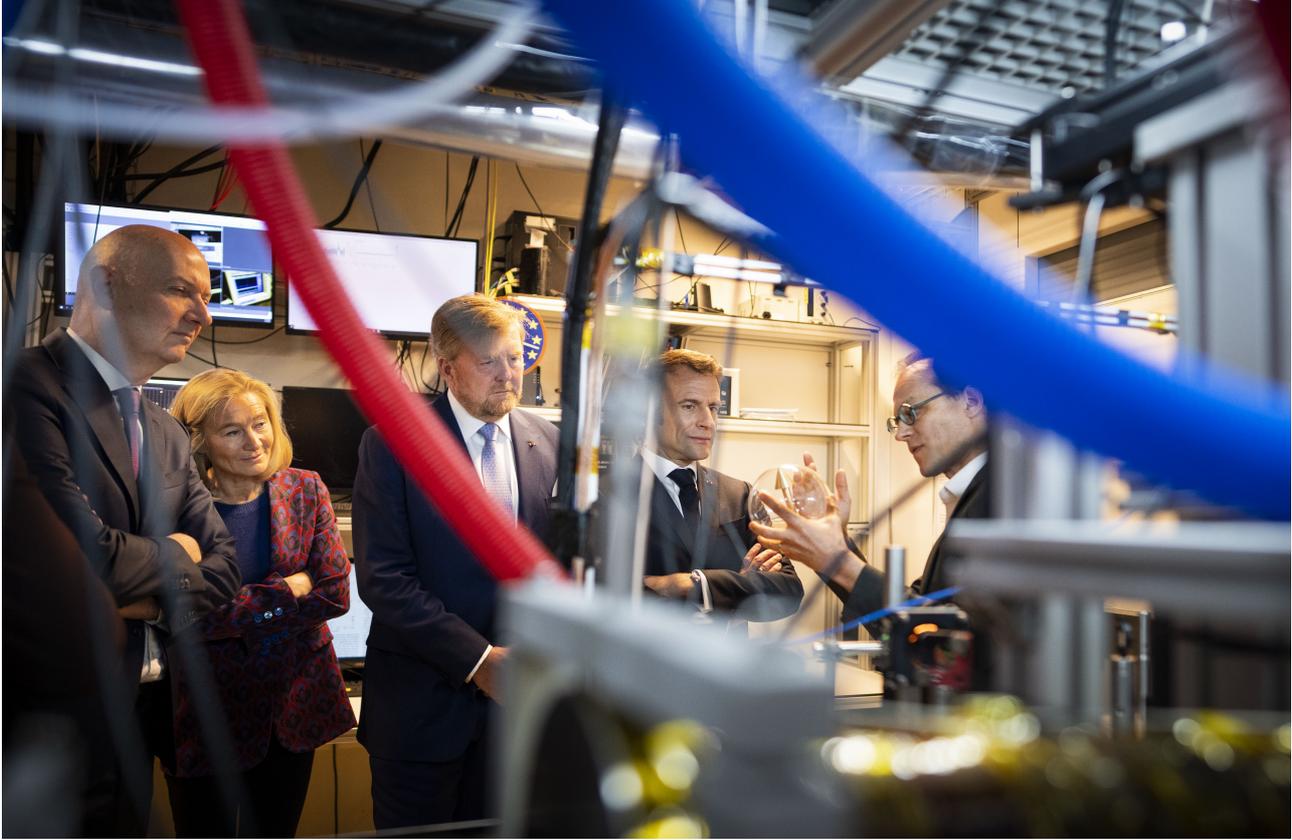
© ETH Zürich

Furthermore, the group have demonstrated full quantum control of the ions. By moving a single trapped ion around the microfabricated chip, they were able to recreate their institution's logo (image). This work, a collaboration between ETH Zürich and Uni Hannover/PTB, stems from the concluded Quantum Flagship project [AQTION](#) and the EU-funded PIEDMONS and IONPEN projects.

[READ MORE](#)

iqClock and EuRyQa project news

Physica Prize for Quantum Flagship scientist



Florian Schreck (right) explaining his work to King Willem-Alexander and Emmanuel Macron in 2023.
© Freek van den Bergh.

Congratulations to Florian Schreck, who has been awarded the 2024 *Physica* Prize for his work on Bose-Einstein condensates and their applications, which include building a coherent and continuous atom laser. Candidates are nominated by the Netherlands Physical Society (NNV), with previous winners including Klaus von Klitzing and Gerard 't Hooft.

Florian Schreck and his University of Amsterdam group coordinated **iqClock** (*Integrated quantum clock*) and are now strongly involved in **EuRyQa** (*European infrastructure for Rydberg Quantum Computing*), both Quantum Flagship projects.

[READ MORE](#)

News from the Community

QuIC event news

Q-Expo open for registration



The first ever edition of Q-Expo, an international quantum event, is set to bring fresh ideas and innovators together in the city of **Amsterdam** on **11 & 12 June 2024**. Join this unique summer event, an initiative of the European Quantum Industry Consortium (QuIC) co-hosted by Quantum Delta NL.

The two-day programme features a business expo day followed by a captivating plenary day, offering networking opportunities for quantum businesses, end-users, researchers, investors, and policymakers. From inspiring collaborations happening right now, to a future of exciting opportunities, Q-Expo will open the industrial quantum world for everyone.

You can register free of charge for the 2024 edition of Q-Expo via the button.

[READ MORE](#)



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Responsibility

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