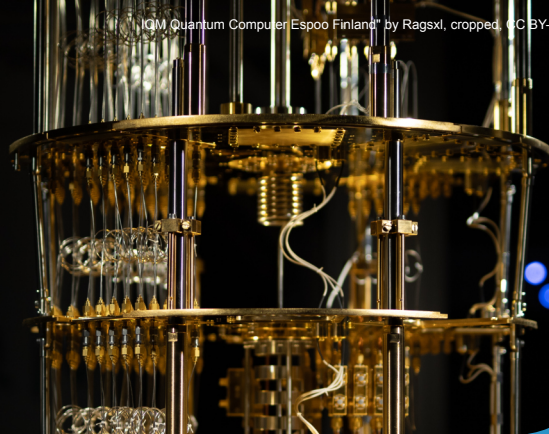




Save the Date: MQSF 2026

The fourth edition of the Munich Quantum Software Forum (MQSF) will take place on 14–15 October 2026 at the Backstage Kulturzentrum (Halle) in Munich. The forum brings together leading researchers, developers, and industry representatives from across the quantum software ecosystem to exchange ideas, showcase state-of-the-art software solutions, and discuss the future direction of the field.

Confirmed speakers include Jay Gambetta (IBM), Sebastian Stern (AWS), Martin Kiffner (planqc), Josh Izaac (Xanadu), Seyon Sivarajah (Quantinuum), and Markus Müller (FZ Jülich), with more to be announced. The forum also traditionally features numerous software pitches - short presentations of new tools and features - both on stage and in dedicated poster sessions. Past editions have seen this format grow steadily, with 42 software pitches presented in 2025 alone.

Registration for the event will open in August 2026. Read more about the event and follow their [LinkedIn](#) channel for updates or announcements. [Read more](#)

DFG Participates in NSERC-Led Quantum Call

NSERC is leading an international joint call for proposals on quantum research. The initiative brings together NSERC (Canada), the DFG (Germany), the Japan Science and Technology Agency (JST), UKRI-EP SRC (United Kingdom), the U.S. National Science Foundation (NSF), and NordForsk – representing Innovation Fund Denmark, the Research Council of Finland, the Research Council of Norway, and the Swedish Research Council. Together, they support bilateral or multilateral research projects on quantum science and technologies. The call has now officially launched, with propo-

Project Updates

QDMI Adopted in IQM's Production HPCQC Workflows (P5)

QDMI, the hardware/software interface developed within SPP 2514, has been adopted in IQM's HPC Integration Service, with the HPCQC workflow now running in production at the Leibniz Supercomputing Centre (LRZ). The deployment demonstrates the practical potential of vendor-neutral quantum hardware integration in HPC environments. [Read more](#)

MQT Compiler Collection Released (P12)

The MQT Compiler Collection has been released: an open-source, MLIR-based compiler framework for hybrid quantum-classical workflows. It provides an end-to-end toolchain from high-level quantum programs down to hardware-specific instructions. The repository can be found

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Project Spotlight: P2, Error-Aware Compilation of Quantum Circuits for the Rydberg Atom Platform (ECQuRyd)

Executing a quantum algorithm on real hardware requires compiling it down to the native operations of the underlying platform. Neutral-atom systems based on Rydberg interactions are a particularly promising candidate for scalable quantum computing, offering arrays of thousands of qubits, competitive gate fidelities, and native operations that go well beyond what other platforms provide, including multi-qubit gates and the ability to dynamically reconnect qubits by physically moving them. Existing compilation tools, however, are largely built around superconducting qubits and do not exploit these capabilities.

To close this gap, the project brings together the groups of Prof. Hans Peter Büchler, Prof. Ilia Polian, and Dr. Sebastian Weber (all University of Stuttgart), combining expertise in quantum circuit compilation and EDA with an in-depth physical understanding of the Rydberg platform and its error mechanisms. The goal is to develop compilation methods that make full use of multi-qubit gates and qubit shuttling while explicitly accounting for how errors arise and propagate.

Recent work includes progress on unitary synthesis for controlled circuits, a systematic comparison of Kraus-operator-based versus simplified multiplicative noise models, and continued development of RydOpt (rydopt.readthedocs.io), the team's open-source package for optimizing Rydberg gate pulses. With key contributions from ParityQC, RydOpt now supports optimizing entire gate families at once, deriving one general expression from which pulses for any desired target can be generated directly, rather than computing a separate pulse for every target gate. A full publication list and further details are available [here](#).

Podcast Appearance (P12)

Prof. Robert Wille (TU Munich) is featured on The Superposition Guy's Podcast, hosted by Yuval Boger, discussing the move from quantum software research to practical deployment, hardware-agnostic software stacks, and the integration of quantum computing into HPC environments. Full episode and transcript can be found [here](#).

Please feel free to follow our [LinkedIn](#) profile where we frequently publish updates about the priority programme!



For more information about SPP2514 you can visit our [website](#)!

Save the Date: SPP Activities in 2026

Annual Meeting
17–18 November 2026
Stuttgart, Germany

YIN Workshop
7–11 December 2026
Obergurgl, Austria

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