



Call for Papers: 4th International Workshop on Quantum Software-Engineering Tools, Algorithms & Verification (Q-STAV 2027)

Q-STAV 2027 will take place on 22 February 2027 in Dortmund, Germany, co-located with SE27. With quantum hardware moving towards early fault-tolerant quantum computers, we need comprehensive methods and tools for quantum software engineering. These include concepts well established in classical software engineering, such as modelling abstractions, programming languages, compiler construction, and testing and analysis techniques, as well as novel approaches like noise-aware circuit design and entanglement-dependent distribution of quantum workloads. As part of our priority programme, this fourth edition of the workshop invites researchers from classical software engineering and quantum computing to shape this new interdisciplinary research area, define a research roadmap, and build collaborations between both disciplines.

We accept two types of contributions: presentations of already published papers, for which a short summary (two pages in LNI format) will appear in the workshop proceedings, and original, previously unpublished papers (six to twelve pages in LNI format), which will appear as full papers. Original papers are reviewed by at least three programme committee members in a single-blind process, while already published papers are only checked for formal requirements and fit to the workshop's scope. Submissions are due on 1 December 2026 via [EasyChair](#). Notifications follow on 21 December 2026, and final versions are due on 5 January 2027.

The workshop is organised by Anna Schmitt and Adrián Marín Boyero (PC Co-chairs) and Malte Lochau (General Chair), with a Steering Committee of Benedikt Fauseweh, Anna Pappa, and Benjamin Kaminski. For further information, please consult the [workshop web page](#) or contact Malte.Lochau@uni-siegen.de.

Project Updates

QECirc Launched (P5)

QECirc, a community-driven library of quantum error correction circuits, has been launched. It collects circuits for encoding, state preparation, syndrome extraction, and flag gadgets, organised by error-correcting code. More than 900 circuits for over 80 codes are available in STIM and QASM formats, and new circuits can be contributed via GitHub. [Read more](#)

New MQT Releases (P12)

Several new releases bring the MQT Compiler Collection, updated error-correction workflows, device-aware compiler selection, and QDMI integrations to the Munich Quantum Toolkit: [MQT Core 4.0.0](#), [MQT QECC 2.0.0](#), and [MQT Predictor 2.4.0](#).

FullStaQD Reference Architecture released

The complexity of quantum computation and the fragmentation of the quantum software ecosystem complicate the implementation of quantum software applications and tools. FullStaQD addresses this challenge by designing a reference architecture for quantum software systems covering the various different concerns in quantum software, and by providing a reference implementation realising the reference architecture's separation of concerns and its interface specifications.

KIT and FZI have recently released the documentation of the reference architecture to the public which covers quantum software from various different perspectives including structural, behavioural and deployment concerns. On a high level, the FullStaQD Reference Architecture separates quantum software systems into three layers, offering appropriate levels of abstraction to different stakeholders:

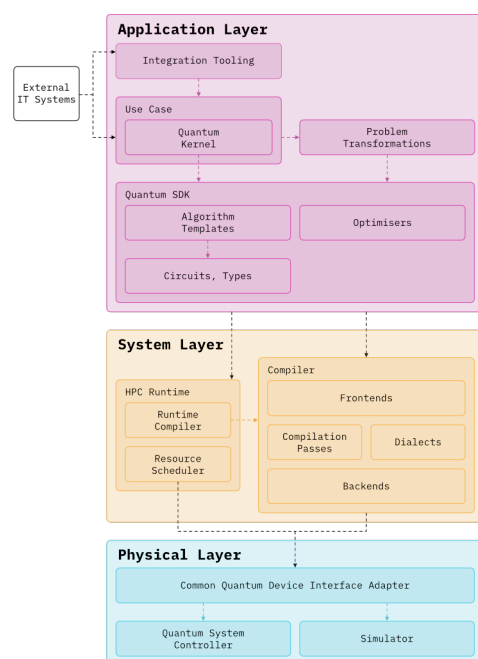
1. Quantum programs are first specified in the Application Layer, which is largely device-independent and offers high-level programming tooling.
2. The System Layer's purpose is to translate these programs into efficient low-level representations, taking into account execution environment properties both from quantum devices and HPC resources.
3. Quantum programs are executed in the Physical Layer, which covers quantum-device-specific firmware or simulators, and adapters exposing the features of those devices under a unified interface.

The FullStaQD Reference Architecture is developed openly in collaboration with many partners from academia and industry, and it uses best practices from software engineering to address typical requirements in quantum software. Its open-source change process will allow the reference architecture to evolve with the state of the art. We invite the community to use it, to provide feedback, and to contribute to its continuous improvement through collaborative efforts. Bringing this abstract framework into practice, we expect the first reference implementation to be released in 2027.

Check out the FullStaQD Reference Architecture at: <https://fullstaqd.github.io/architecture>

New Associated Project (P14)

We are pleased to welcome the project "Systems Theory of Quantum Algorithms: Fundamentals and Applications to Noisy Quantum Computers" (University of Stuttgart) as a new associated project of SPP 2514. Represented by Dr. Julian Berberich and Mirko Legnini, it applies systems and control theory to robustness-aware quantum algorithm design and to the analysis of hybrid quantum-classical algorithms on noisy hardware. Julian and Mirko will contribute to several of our working groups, and we look forward to meeting them at the annual meeting. [Read more](#)



Please feel free to follow our [LinkedIn](#) profile where we frequently publish updates about the priority programme! For more information about SPP 2514 you can visit our [website](#)!

SPP 2514 Annual Meeting 2026

We are delighted to have received 53 registrations for this year's annual meeting of SPP 2514, which will bring the whole community together on 17–18 November 2026 at the [IBZ Stuttgart](#) (Robert-Leicht-Straße 161, 70569 Stuttgart). It starts on 17 November at 13:30 and ends on 18 November at around 17:00.

Each day will start with an industry talk, by Thomas Volz ([Quandela](#)) on day 1 and by Davide Dreon ([planqc](#)) on day 2, and every project will give a project presentation. On the evening of day 1, a poster session with food and drinks will round off the programme. Day 2 features working group sessions, where our cross-project groups can exchange ideas, discuss next steps, and work together. The programme also includes a dedicated slot for our data steward, who keeps all SPP members informed about the principles of open science, open source, and open data.

The meeting offers plenty of room to get to know each other's work and to start new collaborations. We are looking forward to welcoming everyone in Stuttgart!

SPP 2514 at the IEEE QCE

SPP 2514 was well represented at this year's [IEEE QCE](#). Three papers by our members Maja Franz, Wolfgang Mauerer, and Robert Wille received awards:

QML: Quantum Machine Learning Track (third place). ["Beyond Gates: Pulse Level Quantum Fourier Models"](#) by Melvin Strobl, Maja Franz, Lukas Scheller, Eileen Kuehn, Wolfgang Mauerer, and Achim Streit, ranked third out of 50 accepted papers.

QPHO: Quantum Photonics Track (third place). ["Handling Imperfections in Subcircuit Compilation for Linear Optical Quantum Computing"](#) by Tobias Forster, Yannick Stade, Andreas Fyrrillas, Jean Senellart, Lukas Burgholzer, and Robert Wille.

QuBench Workshop (Best Paper Award). ["Benchmarking Error Mitigation: Artefactual Improvements in Zero-Noise Extrapolation"](#) by Dominik Köster and Wolfgang Mauerer.

Congratulations to all authors! An overview of all best paper awards can be found [here](#).

MQSF 2026 Recap

The fourth Munich Quantum Software Forum (MQSF), organised by TU Munich and the Munich Quantum Software Company with our member Robert Wille co-organising, took place on 14–15 October 2026 at the Backstage Kulturzentrum (Halle) in Munich and, with more than 400 registrations, was its largest edition yet. Besides talks and software pitches, a dedicated community area and an informal gathering after the first day fostered discussions that, according to the organisers, often turned into concrete plans. Recordings and presentation material will be available on the [MQSF website](#) in the coming weeks.



Reminder SPP Activities in 2026:

Annual Meeting
17–18 November 2026
Stuttgart, Germany

YIN Workshop
7–11 December 2026
Obergurgl, Austria

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