Call for Abstracts
The 1st Workshop on Fault-Tolerant Quantum Computer System Architecture (FTQCSA 2025) in conjunction with ISCA 2025 in Tokyo, Japan

Abstract

FTQCSA 2025 is the workshop at the aim of constructing a community of researchers who are interested in system architecture of fault-tolerant quantum computers (FTQCs).

1 Motivation

Fault-tolerant quantum computing (FTQC) is a promising field that requires a multidisciplinary approach to achieve quantum advantage. To overcome the complex challenges ahead, sustained efforts and international collaboration are essential. The FTQCSA workshop aims to bring together experts from diverse disciplines to share their advancements, discuss system-level challenges, and collaborate on strategies to accelerate FTQC development, ultimately driving progress toward realizing quantum advantages.

2 Scope

Topics of interest of the FTQCSA workshop include, but are not limited to:

- Scalable system design of fault-tolerant quantum computers
- Realtime quantum error decoding system
- Resource reductions to demonstrate quantum advantage
- Compilation techniques and application performance evaluation of distributed quantum computing
- Quantum computer design for emerging error correcting codes (e.g., Quantum LDPC codes)

3 Workshop format

The FTQCSA will feature a mix of invited talks, presentations, and posters selected from submissions to this call for participation. Abstracts should be submitted in PDF format (up to two pages) and include the title, authors, affiliations, and email address of the contact author. Submissions of works in progress and position papers are encouraged, and we also welcome previously published works. Preprints or published articles can be submitted in lieu of an abstract. As no formal proceedings are planned, submissions will not preclude publication at future conference venues. Please make sure to check any updates on https://ftqcsa.github.io.

4 Committees

Organizing members:

- **Chair:** Teruo Tanimoto, Kyushu University, Japan
- **Vice Chair:** Yosuke Ueno, RIKEN, Japan
- **Program Committee Chair:** Yasunari Suzuki, NTT, Japan
- **Program Committee Vice Chair:** Shota Nagayama, Keio University/Mercari, Japan

Program committee members:

- Ilkwon Byun (Kyushu University)
- Yufei Ding (University of California, San Diego)
- Poulami Das (University of Texas at Austin)
- Akihito Soeda (National Institute of Informatics, Japan)
- Gokul Subramanian Ravi (University of Michigan)
- Swamit Tannu (University of Wisconsin-Madison)
- Hayata Yamasaki (The University of Tokyo)

5 Important dates

- **Abstract submissions:** April 18 AoE
- **Author notification:** May 9
- **Workshop Date and Venue:** June 22 (Sun)

6 Submission

Please submit your abstract via [FIXME] https://hogehoge.com.

7 Contact

Please contact us via `ftqcsa-oc _at_ googlegroups.com`.