

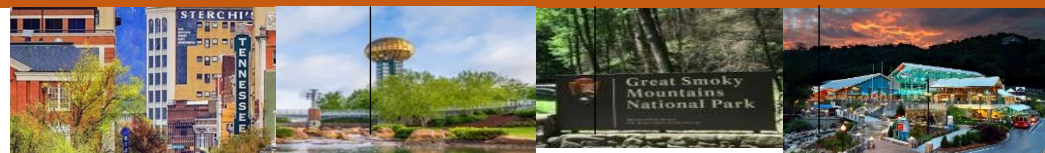
2024 International Workshop on Quantum Computing: Circuits Systems Automation and Applications (QC-CSAA)

Co-located with ISVLSI 2024



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https://www.ieee-isvlsi.org/ISVLSI_2024_Website/qc-csaa.html



July 2, 2024
Knoxville, TN, USA

Authors are invited to submit papers for “2024 International Workshop on Quantum Computing: Circuits Systems Automation and Applications (QC-CSAA)” July 2, 2024. The previous successful editions (2020, 2021 and 2022) of QC-CSAA have occurred as workshops at the IEEE Computer Society Annual Symposium on VLSI. The QC-CSAA workshop will provide a comprehensive review on fundamentals as well as the current state of the art in research and technology. The purpose of this is to explore design paradigms of quantum computing including developing a full stack from quantum algorithms to quantum chip. Advances in quantum computing hardware, software, and algorithms as well as contributions on the transformative research needed to guide quantum computing performance toward practical and sustainable operations will be aligned with the goal of this symposium. Further, circuits and systems targeting novel and existing applications of quantum computing to fields such as quantum chemistry, linear algebra, scientific applications, aerospace, material science, machine learning, etc. will be of special interest.

Topics of interest for this symposium include but are not limited to the following:

- Progress in quantum architectures, circuits, design automation and programming languages
- Circuits and systems targeting novel and existing applications of quantum computing
- Resource consumption estimates for quantum computing systems and applications
- System codesign that prioritizes sustainable and efficient platform operation
- Metrics and benchmarks for quantifying quantum computing performance
- Performance estimates of quantum and hybrid computations
- Resource-efficient methods for the control and execution of quantum programs
- Quantum computing in fields such as quantum chemistry, scientific applications, material science, machine learning, etc.

Submission Guidelines

Authors are invited to submit unpublished extended abstracts (2 pages) or full papers (maximum 6 pages) through EasyChair under “[Workshop on Quantum Computing: Circuits Systems Automation and Applications](#)”. Previously published papers or papers under review for other conferences/journals should not be submitted for consideration. Please use IEEE conference-style template. Accepted extended abstracts/full papers will be included in the ISVLSI conference proceedings indexed in the IEEE Xplore Digital Library. Extended version of accepted papers will be invited to peer-reviewed journals such as ACM Transactions on Quantum computing and Springer Nature Computer Science. The invitation will be based on reviewer’s feedback and quality of presentation.

Submission link: <https://easychair.org/conferences/?conf=isvlsi2024>

Workshop Organizers

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Paper submission deadlines

Paper Submission Deadline: **April 15, 2024**
Acceptance Notification: **April 30, 2024**
Submission of Final Version: **May 6, 2024**



Selected papers from QC-CSAA workshop will be invited for submission to a journal special issue. The selection process is based on reviewer feedback and quality of conference presentation