# IEEE COMPUTER SOCIETY ANNUAL SYMPOSIUM ON VLSI

## CALL FOR PAPERS

*1st International Workshop on Quantum Computing: Circuits Systems Automation and Applications (QC-CSAA)*

ISVLSI 2020

**www.isvlsi.org**

Authors are invited to submit papers for "1st International Workshop on Quantum Computing: Circuits Systems Automation and Applications (QC-CSAA)" in conjunction with the IEEE Computer Society Annual Symposium on VLSI, July 6-8, 2020. Workshop papers will provide a comprehensive review on fundamentals as well as the current state of the art in research and technology. The purpose of this workshop 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 workshop. 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, cryptography, machine learning, etc. will be of special interest.

**Topics of interest for this workshop 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

**Submission Procedure:**

Authors are invited to submit unpublished 2-page extended abstract or maximum 6-page regular paper. Previously published papers or papers under review for other conferences/journals should not be submitted for consideration. Please use IEEE conference-style template. All accepted papers will be published in the workshop proceedings, which will be published in IEEE Xplore as part of the ISVLSI proceedings. A selected set of papers from the workshop will be invited for submission to a special issue of a peer-reviewed journal based on reviewer's feedback and quality of conference presentation.

## For additional information, please contact

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## Paper submission deadlines

Proposal Submission Deadline: March 27, 2020
Author Notification: April 20, 2020
Submission of Final Version: May 10, 2020
Submission site: https://edas.info/index.php?c=26135