



4th WORKSHOP ON ROBUSTNESS OF IOT DEVICES

Co-Located with the 2021 EOS/ESD Symposium

CALL FOR PAPERS

Sept 29-30, 2021

Westin La Paloma Resort & Spa

Tucson, AZ, USA

The Workshop on Robustness of IoT Devices is dedicated to the need of the growing world of IoT applications and their electrical robustness requirements. This workshop facilitates evaluation of robustness risks in the diverse environments of IoT applications and a faster growth of innovative IC/module codesign approaches. IoT devices are now deployed in industrial, automotive, personal, and commercial environments, each vector with its own constraints on the radio communications, power consumption, and sensor features of IoT.

Special Focus Topics

IoT for Robotics

Collaborative robots are the next development step of robots in industrial use. They collaborate with humans next to each other and a high level of safety must be guaranteed to avoid injuries or massive damages. Sensor and compute devices are essential component of these robots. The special topic session calls out for papers which address robustness and quality testing for robotic applications.

Novel system/IC codesign methods for IoT Mission Profiles

The wide use of IoT device in various application fields requires novel design tools and methods to account for a cost efficient and reliable designs. Codesign methods for robustness will span from large scale system designs down to transistor level design on IC. The special topic session is looking for novel approaches in pre-hardware optimization and verification e.g. using machine learning techniques to handle the complexity and manage the compute runtime.

Submission Options

Technical Paper

Abstract: Maximum 4 pages

Final Manuscript: 4-10 pages

Presentation: Maximum 20 slides

Technical Poster

Abstract: Maximum 6 slides

Teaser Presentation: Maximum 5 slides

Presentation: Maximum 24 slides

Abstract (Paper/Poster) submission due February 8, 2021: Your original 50-word abstract and summary of work to be expanded in a full technical paper or a technical poster must clearly and concisely present specific results and explain the importance of your work in the context of prior work. Authors are required to use the applicable abstract submission template available at <https://www.esda.org/events/43rd-annual-eesesd-symposium-and-exhibits>. Final classification of abstracts as full technical papers or technical posters is at the discretion of the technical program committee. Full manuscripts of accepted technical papers will be due before the workshop. Registration for the workshop is required for the author presenting the paper.

The technical program committee accepts unpublished papers/posters for peer review with the understanding that the author will not publish the work elsewhere prior to presentation at the workshop. Publication of accepted papers/posters in any form prior to presentation at the workshop may result in the paper/poster being withdrawn from the proceedings. Authors must obtain appropriate company and government clearances prior to submitting an abstract.

Suggested Submission Areas:

- Aspects of reliability and transients causing EOS
- Design and test of IP blocks, ICs, and system modules
- Commercially available techniques and offerings.
- Overlapping engineering domains bringing cross functional expertise together, fostering best-practice sharing, and product innovation.
- Device robustness requirements in industrial and automotive ecosystem
 - Characterization methods for robust/reliable IoT design including system- level testing
 - Characterization of Safe Operating Area
 - Mission profile and system lifetime assessment
- Robust design approaches and validation with Rf and sensor integration
 - Case studies and related failure analysis
 - IC/PCB/module co-design for reliability and robustness
 - Design for a wide range of ambient conditions
- IP and EDA landscape
- IP offerings and design environments for IoT

Technical Program Chair

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