

SMACD23

3 - 5 JULY • FUNCHAL-MADEIRA ISLAND • PORTUGAL

CALL FOR PAPERS

The 2023 edition of the **International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design** (SMACD) will be held at VidaMar Resort Hotel, a stunning location on Madeira island, Portugal. SMACD is a forum devoted to modeling, simulation, and synthesis for Analog, Mixed-signal, RF (AMS/RF), and multi-domain (nanoelectronics, biological, MEMS, optoelectronics, etc.) integrated circuits and systems. Open-source tools and methods for AMS/RF and multi-domain IC design and experiences with modeling, simulation, and synthesis techniques in diverse application areas are also welcomed. Objective technologies include CMOS, beyond CMOS, and More-than-Moore such as MEMS, power devices, sensors, passives, etc. Topics of interest include:

CAD AND EDA METHODOLOGIES AND TOOLS FOR AMS SYSTEMS (CAD/EDA)

Synthesis, Sizing & Optimization

- Multi-level Synthesis Methods
- Physical Synthesis Methods
- High-frequency Circuits & Systems
- Low-Power & Energy-Aware Design
- Parasitic-Aware Design
- Variability-aware & Reliability-Aware
- Sizing & Optimization Methods
- Procedural Design Methods

Modeling

- Performance/Behavioral
- Power and Electro-thermal
- Reliability and Variability
- RF/microwave/mm-wave
- Signal/Power Integrity
- Electromagnetic Theory
- Transmission Line Theory
- Automated Model Gen.

Simulation, Verification & Test

- Behavioral Simulation
- Numerical & Symbolic
- RF Circuit Simulation
- Electromagnetic Simulation
- Multilevel Simulation
- Analysis of Variability Effects
- Formal/Functional Verification
- Test & Design-for-Test

EMERGING TECHNOLOGIES AND APPLICATIONS (ETA)

CAD for/using Emerging Technologies

- CAD for Bio-Electronic Devices, Bio-Sensors
- CAD for Multi-Domain Devices and Circuits
- CAD for Nanophotonics and Optical Devices/Interc.
- CAD using AI and ML Algorithms
- CAD using Cloud Computing
- AMS CAS Soft and Hard IP Blocks Generating Meth.

Hardware Security

- Hardware Security primitives (PUFs, etc.)
- Attacks and Countermeasures
- Anticounterfeiting
- Methods, Architectures and Tools for Secure Design

Emerging Devices and Paradigms

- Emerging Device Modeling (Steep-Slope, TFET, NCFET, PTM, Memristor, etc.)
- Design Strategies using Emerging Devices
- Emerging Devices in Security
- Devices, Hardware and Methods for Bio-Inspired and Neuromorphic Computing

AMS ICS AND MULTI-DOMAIN DESIGN APPLICATIONS (DES)

Design Applications

- Internet of Everything
- Automotive Systems
- Biomedical and Bio-inspired CAS
- Low-Power Low Voltage CAS
- Sensors and Sensing Systems
- Security Systems
- Aerospace Systems
- Renewable Energy Systems

IMPORTANT DATES

Paper Submission Deadline	February 3 rd , 2023
Author Notification	March 17 th , 2023
Camera Ready Paper Submission	March 31 st , 2023
Early Registration Deadline	March 31 st , 2023

ORGANIZED BY



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VidaMar Resort Hotel, Funchal, Madeira Island

