

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

ORGANIZING COMMITTEE

General Chair:

Nuno Horta, *IT and University of Lisbon, PT*

Technical Program Chairs:

Francisco Fernández, *IMSE-CNM, USeville and CSIC, ES*

Günhan Dündar, *Boğaziçi University, TR*

Ricardo Martins, *IT and University of Lisbon, PT*

EDA Competition Chairs:

Elisenda Roca, *IMSE-CNM, ES*

Marcelino dos Santos, *INESC-ID and ULisbon, PT*

IC Design Contest Chair:

Jorge Fernandes, *INESC-ID and ULisbon, PT*

Tutorial & Special Session Chairs:

Jorge Guilherme, *IT and Polytechnic of Tomar, PT*

Nuno Lourenço, *IT, PT*

Industrial Liaison Chairs:

Fábio Passos, *IT, PT*

Rafael Castro-López, *IMSE-CNM, ES*

Publication & Publicity Chairs:

Nuno Lourenço, *IT, PT*

Giulia Di Capua, *UCassino and Southern Lazio, IT*

TECHNICAL PROGRAM COMMITTEE

E. Afacan; S. Azimi; M. Barragán; A. Boni; M. Caselli; R. Castro-Lopez; P. Cavallini; H.-M. Chen; C. Dehollain; M. Dessouky; G. Di Capua; A. Doboli; G. Dündar; N. Evmorfopoulos; M. Fakhfakh; N. Femia; J. Fernandes; F. V. Fernandez; F. Garcia-Redondo; G. Gielen; G. Gläser; H. Gräß; F. Grasso; J. Guilherme; L. Hedrich; E. Hennig; N. Horta; A. Kubacak; G. Leger; C.-N. Liu; N. Lourenço; P.-H. Lin; R. Martins; M. Nafria; V. Ntinas; J. Núñez; V. Oklobdzija; K. Ozanoglu; F. Passos; S. Reza; E. Roca; M. Santos; J. Scheible; G. Shi; R. Sommer; H. Stratigopoulos; S. Tan; E. Tlelo-Cuautle; G. Vandersteen; M. Yakupov; M. Yelten; L. Zhang.

CONFERENCE VENUE

VidaMar Resort Hotel, Funchal, Madeira Island



CONTACT: info@smacd-conference.org