

# SMACD 22

12-15 JUNE 2022 • VILLASIMIUS • SARDINIA • ITALY



## CALL FOR PAPERS

The 2022 edition of the **International Conference on Synthesis, Modeling, Analysis and Simulation Methods, and Applications to Circuit Design** (SMACD) will be held in Villasimius, Sardinia, Italy. 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. Conference proceedings will be submitted to **IEEEExplore** for publication.

### AREAS OF INTEREST

#### Modeling

- Compact modeling
- Performance and behavioral modeling
- Power and thermal modeling
- Reliability and variability modeling
- Multi-domain modeling (fluidic, bio, chemical, optical, mechanical)
- EMC & analog signal integrity
- RF/microwave/mm-wave modeling
- Linear and non-linear model order reduction
- Circuit & system theory and application
- Automated model generation

#### Simulation, Verification and Test

- Behavioral simulation
- Numerical and symbolic simulation methods
- Simulation and estimation methods of variability and yield
- Analysis of reliability effects (aging, electromigration, stress, faults,...)
- High-frequency simulation techniques
- Multilevel simulation techniques
- Multi-domain simulation
- Functional safety

#### Synthesis

- Multilevel design methodologies
- Synthesis methods of multi-domain circuit and systems
- Physical synthesis
- High-frequency circuit and system design
- Low-power and energy-aware design techniques
- Parasitic-aware synthesis
- Variability-aware & reliability-aware design
- Performance monitors & self-healing techniques
- Test and design-for-test methods
- Optimization methods applied to circuit and system design
- Procedural design automation

#### Applications of Modeling, Simulation and Synthesis in

- Automotive
- Bio-electronics
- Security
- Internet-of-things
- Communications
- Renewable systems
- Energy management
- Engineering education

### CONFERENCE VENUE

SMACD 2022 will be hosted at Tanka Village in Villasimius, Sardinia, Italy in person, provided that Covid 19 pandemic situation allows it.

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### IMPORTANT DATES

**18<sup>th</sup> Feb. 2022** Paper Submission Deadline

**1<sup>st</sup> April 2022** Author Notification

**29<sup>th</sup> April 2022** Camera Ready Paper Submission

### COMPANY FAIR

The **SMACD and PRIME Company Fair** will be held at the conference venue to allow academia **researchers** and Ph.D. **students**, attending to both conferences in the areas of IC Design and Electronic Design Automation, to get in contact with **industries** and other **research** institutions (and vice-versa) to promote **networking** and identify future **opportunities** and **collaborations**.

### EDA COMPETITION

As usual in SMACD Conferences, the 2022 edition will also hold a **thrilling** and **dynamic** event where MSc and PhD students can **compete** with their **best ideas**, methodologies, flows and tools with one unique yet **challenging** goal:

**"To improve design automation for integrated circuits and systems!!"**

### ORGANIZING COMMITTEE

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