

# SMACD 22

12-16 JUNE 2022 • VILLASIMIUS • SARDINIA • ITALY



## PRELIMINARY 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 the Tanka Village in Sardinia, Italy. SMACD is a forum devoted to modeling, simulation, and synthesis for Analog, Mixed-signal, RF (AMS/RF), and multi-domain (MEMs, nanoelectronics, optoelectronics, biological, etc.) integrated circuits and systems. Open source tool and methods for analog IC design, and experiences 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.

### 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 provided that Covid 19 pandemic situation allows it.

### 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!!"**

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