SUNDAY 08:30 – 17:50

Advanced mm-Wave IC Design: A Step Ahead

WS10
EuMC/
EuMIC

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[1]Huawei Technologies, [2]SIAE Microelettronica

Room: Juliana 2

The design of advanced mm-wave integrated circuits (ICs) has become a critical area of research and development in modern communications, radar systems, satellite communications, and emerging technologies such as beyond-5G. As the demand for higher data rates, increased bandwidth, and more efficient power consumption intensifies, engineers face new and complex challenges in design and integration of mm-wave ICs.

The workshop will explore the cutting-edge advancements in mm-wave IC design, focusing on the key challenges ahead. Topics will include the integration of high-frequency components, power efficiency in high-speed operations, thermal management, and the evolving role of novel materials and fabrication processes. Special attention will also be given to the unique challenges and opportunities in satellite communications, where mm-wave technology plays a crucial role in enabling next-generation satellite networks and services.

Participants will gain insights into the opportunities these challenges present, as well as the potential solutions that are shaping the future of mm-wave technologies across various domains.

Join us for an in-depth discussion on how to overcome these hurdles and drive innovation in one of the most exciting areas of modern electronics.

PROGRAMME

Innovative Gallium Nitride technologies enable disruptive architectures of Front-end T/R chips

Ernesto Limiti[1]
[1]University of Rome Tor Vergata

Transistor stacking: an enabling technique for mm-wave load-modulated power amplifiers?

Anna Piacibello[1]
[1]Politecnico di Torino

Efficiency vs. Linearity in Power Amplifiers for Satellite Communications

Julio Andres Lonac[1]
[1]Huawei Technologies

Characterization and modelling of electron devices at mm-wave frequencies: What is so complex?

Antonio Raffo[1]
[1]University of Ferrara

Ultra-low phase-noise frequency generation at mm-Wave

Simone Mattia Dartizio[1]
[1]Politecnico di Milano

Wideband and Power-Efficient SiGe BiCMOS Building Blocks for D-Band Communications

Guglielmo De Filippi[1]
[1]Fondazione Chips-IT

Front-end design of SiGe BiCMOS analog receivers for 5G and beyond backhauling applications

Pasquale Tommasino[1]
[1]Sapienza University of Rome

130nm SiGe BiCMOS 1-bit Active Switch Dual Input LNA for Slot Antenna based ARIS Element

Giulio Brancali[1]
[1]University of Perugia

Integrated Multiple Switch-Beam Array Antenna For Resilient Communication Link M2m/Iot Application

Francesco Grego[1]
[1]University of Calabria

Choosing the right technology – A comparison of Silicon-based and III-V technologies for millimeter-wave IC design s

Alessandro Fonte[1]
[1]SIAE Microelettronica