
Orlando, located in central Florida, is home to well over a dozen theme and amusement parks, including Walt Disney World (Magic Kingdom and Epcot), SeaWorld, and Universal Orlando (Universal Studios and Islands of Adventure). Orlando is truly a magical place and the perfect setting for a dynamic conference like SiRF 2019. For a quieter time away from the conference, enjoy the Harry P. Leu Gardens or one of the many James Beard-nominated restaurants. Don’t miss a chance to visit the epicenter of American space exploration with a day trip to the NASA Kennedy Space Center at Cape Canaveral.

The charter for the 2019 SiRF conference is to illuminate the ever-increasing capabilities of silicon technologies in addressing today’s communication challenges. Our conference has grown from an early focus on basic silicon RF-capable device technology nodes and fundamental RF building blocks to where we are today, with the evolution of highly integrated platforms for Wi-Fi and cellular front ends, automotive radar systems, millimeter-wave for fifth-generation (5G), and Wi-Gig and phased arrays based on RF silicon-on-insulator (SOI), RF complementary metal–oxide–semiconductor (CMOS), and silicon germanium heterojunction bipolar transistor (SiGe HBT). RF silicon continues to push the boundaries, supplanting III-V technologies at all levels of system functionality and design.

Today, RF SOI technology dominates mobile front-end band-switching and antenna-tuning applications, millimeter-wave front ends, and phased array front ends for satellite terminals. It is also finding its way into high-power switching applications for receivers in massive multiple-input/multiple-output systems. Technology nodes at sub-100 nm are commonplace today to meet the challenging demands of 5G millimeter-wave frequencies. Dr. Julio Costa (Qorvo), a pioneer in the development and application of this important technology, will give a historical perspective and discuss future prospects for RF SOI technologies.

SiGe HBT pioneer John Cressler (Georgia Tech) will discuss the progress of SiGe HBTs in space systems. Prof. Ruonan Han (MIT Microsystems Technology Laboratory) will cover chip-scale molecular clocks used to create low-cost miniature clocks in CMOS. Prof. Hua Wang (Georgia Tech) will discuss millimeter-wave power amplifiers in silicon to address 5G and U.S. Department of Defense applications.

Several other invited speakers will discuss advances in millimeter-wave circuit design, silicon-based photonics, and SiGe for space and automotive radar. As always, we will have speakers presenting their work in RF and millimeter-wave circuits and systems, semiconductor technologies and processing, modeling and measurement techniques, and other emerging topics.

For the latest information and further details on the 2019 SiRF conference, please visit our website at https://radiowirelessweek.org/sirf-home. Safe travels, and see you in Orlando.