IEEE SSCS/CASS Atlanta Joint Chapter Seminar

Should RFIC Designers Care About Quantum Computing?
Speaker: Dr. Stefano Pellerano
Affiliation: Intel Labs, Intel, Hillsboro, OR USA

Abstract: This talk will briefly introduce few of the basic concepts of quantum computing and focus on some aspects of the control systems required to manipulate and read-out quantum states of specific types of qubits. The talk will then try to address why and how mixed-signal and RFIC design combined with large scale integration has the potential of accelerating the implementation of a fault-tolerant scalable quantum computer.

Speaker Biography: Stefano is a principal engineer at Intel Labs, leading the Next Generation Radio Integration Lab. He drives several research activities focused at enabling radio circuit integration in deeply-scaled CMOS technologies.

Since joining Intel Labs in 2004, Stefano worked on MIMO transceivers for WiFi, digital PLLs, high-efficient digital architectures for polar and outphasing transmitters, mm-wave radio transceiver and phased-array systems, and low-power radios. His latest research interests also include cryogenic CMOS integrated electronics for qubit control in fault tolerant scalable quantum computers.

Before joining Intel, Stefano got his Laurea and PhD degrees from Politecnico di Milano, Italy, in 2000 and 2004 respectively, after an internship in 2003 with Agere System (former Bell Labs) in Allentown, PA. His PhD thesis focused on the design of fully-integrated low-power frequency synthesizers for WLAN applications.

Stefano has authored or co-authored more than 40 IEEE conference and journal papers, one book chapter and more than 15 issued patents. He is the Wireless Subcommittee Chair of the International Solid-State Circuit Conference (ISSCC) and the TPC Chair of the Radio Frequency Integrated Circuit (RFIC) Symposium.

Seminar Time: 10:30AM-11:30AM on June 8th 2018   **Seminar Location:** TBD, Georgia Tech

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