



Talk information

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Title of the talk: Control and Readout Electronics for Quantum Computing

Abstract of the talk: This talk introduces the control and readout mechanisms used in quantum computers based on superconducting qubits. Quantum computers are inherently analog systems, so the control and measurement of the qubit states is essentially done using analog RF electronics. Furthermore, recent quantum computers with increasing number of qubits face a scaling challenge, and Integrated Circuit designs make it possible to alleviate this issue.

Biography of the speaker: Dr. Hector Solar received the M.Sc. degree in telecommunication engineering from the University of Pais Vasco, Bilbao, Spain, in 2002, and the Ph.D. degree in electronic engineering from Tecnun, the Technological Campus of the University of Navarra, Donostia-San Sebastian, Spain, in 2007.

From 2007, he was a Researcher with the Electronics and Communications Division of CEIT, Donostia-San Sebastian, Spain. Through CEIT, he has collaborated in the design RF/mm-wave, low-power sensors, and RFID devices in CMOS. He has been an External Consultant of Seiko-Epson, Barcelona, Spain, from 2006 to 2007. He is currently an Associate Professor with the Electrical and Electronic Engineering Department, Tecnun-University of Navarra. He has authored or co-authored more than 40 international journal and conference papers. He holds one patent. He co-authored two books: Linear CMOS RF Power Amplifiers (Springer, 2014) and Systems Design for Remote Healthcare (Springer, 2014). His research interests include CMOS RF/mm-wave integrated circuit design and low power analog circuit design with a special emphasis on batteryless sensor nodes.