



UNIVERSITAT POLITÈCNICA DE CATALUNYA

BARCELONATECH

PROJECT DESCRIPTION

Title: Millimetre-wave and Radio-frequency integration in Nanoelectronics for Modern Wireless Communications

Project description:

Objective: Future communication standards will rely on the advanced characteristics of CMOS nanometer technologies (32nm and beyond) that allow higher frequencies and lower power consumption. This project aims to the Millimetre-wave and Radio-frequency integration in Nanoelectronics CMOS Platforms for Modern Wireless Communications. Works will be conducted in order to offer a silicon technology platform adequate for the development of modern wireless communication applications. Using these new 32 nm CMOS devices, hardware that will enable the future wireless communication systems will be designed.

The project is participated by the most important European semiconductor companies (ST Microelectronics, Infineon, Ericsson, Nokia, etc). The professors in Universitat Politecnica de Catalunya are now offering two 3-year contracts to develop research work in the framework of this project. The candidate will work in these 3 years towards a PhD degree.

The tasks offered are related to the design of ultra-low power radio receiver circuits for Wireless Sensor Networks (WSN), and design of receiver circuits for the implementation of the Cognitive Radio concept, both in CMOS technology (32nm).

UPC RESEARCHER CONTACT

Professors: Xavier Aragones and Jose Luis Gonzalez

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OTHER INFORMATION

Funding: 33,000 €/year contract (35 hours/week)

Duration: From 01/01/2010 to 21/12/2012

Facilities: Labs and facilities of the HiPICS group in UPC: VLSI-CAD lab, workstations, RF test and measurement lab.