

Company Description

The University of Navarra is a Catholic University founded in 1952. We are proud of our academic integrity, international focus and the professional development of our students. We are ranked 37th in the world in the 2017 QS Graduate Employability Ranking. We are also ranked as the best Spanish private university by the "El Mundo" Ranking. We are also 245th in the QS World University Ranking. Tecnun shares resources, facilities and personnel with its associated Research Centre, Ceit-IK4, a renowned multidisciplinary institution with more than 200 researchers that carry out applied research for companies at both the local and international level.

Information

 **Deadline:** 2018-12-31
 **Category:** Business
 **Province:** Gipuzkoa

 **Country:** Spain
 **City:** San Sebastián

Company

Ceit



Main functions, requisites & benefits

Main functions

RFID sensors are becoming more and more popular in IoT applications in which low-cost and long-range small sensors are desired. Tecnun has been working in the design of analog RFID front-ends for sensing applications for more than 10 years and currently we are looking for a PhD student to make our analog ASIC design team grow. Specifically, at this moment we are planning a new evolution for our tags, in the context of a publicly funded 3-year project in collaboration with Universidad de las Palmas de Gran Canaria. In this project we will focus on the following aspects:

- Adapt our tags for automatic testing and characterization of the device.
- Integration of UHF and LF RFID transducer in a single chip.
- Reduction of PVT variation effect in the system reference modules: Bandgap reference and current source.
- Development of a low-power and low-voltage configurable CMOS temperature sensor.
- Migration and optimization of the current designs to a new CMOS fabrication technologies compatible with microcontroller IPs.

The PhD student will be focused on the last two objectives of the project but will be involved in all the aspects of the design process in close collaboration with the design team and the project partners being possible a research stay in Canarias.

We offer a challenging project in the dynamic environment of the University of Navarra, one of the best Spanish universities according to QS ranking (<https://www.topuniversities.com/where-to-study/europe/spain/guide>). The research will be performed in the Engineering Campus, named Tecnun, located in San Sebastian.

The PhD advisors will be Dr. Andoni Beriain and Dr. Roc Berenguer, both Telecommunication Engineers with a solid background in the design and implementation of ad-hoc communication circuits and ASIC designs, especially in the passive RFID sensor field.

By doing your PhD with us:

- You will complete your formation in an applied research project with great potential in collaboration with reference companies and research centers.
- You will acquire skills in ASIC design which are really demanded in the job market.
- You will publish your research results in international journals and conferences.
- You will obtain a PhD in a top-class university.
- You will live in San Sebastian, a top European touristic location famous for having one of the best beaches in the world and an outstanding gastronomy.

Requisites

Telecommunications Engineering or Industrial Electronics and Control Engineering. Degree completed by: 2014 or after (excluding the final project).

Languages: Good knowledge of English. Software: EDA tools. Other:

- A candidate used to the specification driven problem solving, ready to apply those methodologies in the design phases of the project.
- A solid knowledge in electronic design is required. The candidate must be familiar with electronic elements such as current