



## PhD position: Design and development of autonomous flexible two-dimensional material based IoT edge nodes

Department of Electronics and Computer Technology. University of Granada



UNIVERSIDAD  
DE GRANADA

We are seeking a talented and motivated young graduate interested in doing a PhD within an exciting research project aimed at designing, modeling, and demonstrating innovative electronic devices for an Internet of Things (IoT) node using two-dimensional (2D) materials. This project offers a unique opportunity to be at the forefront of technological innovation in a rapidly growing field. You will work in a multidisciplinary and dynamical team that fosters creativity, critical thinking, and excellence. You will have the chance to contribute to the advancement of IoT technology through applied research and the development of new electronic devices based on two-dimensional materials.

### Main aims of the PhD position:

**Design and Optimization of Electronic Devices:** You will conduct advanced numerical simulations to optimize the architectures and materials of the key electronic devices.

**Compact Device Modeling:** You will develop accurate compact models of electronic devices to be integrated into IoT nodes, ensuring their performance and scalability.

**Device Layout Design and Fabrication:** You will collaborate on designing the layouts for device fabrication, ensuring they are ready for production and characterization.

**Development of IoT Electronic Modules:** You will design and optimize the full electronic modules that integrate the devices into a functional IoT system, focusing on efficiency, low power consumption, and high connectivity.

**Evaluation and Validation of the IoT Node:** You will carry out rigorous testing to evaluate and improve the performance of the IoT node, ensuring its functionality in real-world environments.

### What Are We Looking for in You?

We are seeking highly motivated candidates, passionate about advanced technology research, with a strong interest in electronics and cutting-edge materials. We are looking for individuals who enjoy solving complex problems, working in teams, and who have a proactive attitude toward pushing the boundaries of knowledge.

### Requirements:

- Degree in Electronic Engineering, Telecommunications, Physics, or related fields.
- Prior knowledge of numerical simulations, device modeling, and/or circuit layout design is welcome.
- Interest in the Internet of Things (IoT) and two-dimensional materials.
- Ability to work in a team, effectively communicate ideas, and propose innovative solutions.

### We Offer:

- A PhD contract with a duration of 4 years.
- First-class research environment with state-of-the-art technologies and laboratories.
- Opportunity to collaborate with international researchers and experts in 2D electronics and radiofrequency.
- Participation in scientific conferences and international collaboration networks.
- Support for professional and academic development.
- Opportunity to contribute to the creation of disruptive technologies that could define the future of IoT.

### How to Apply?

To apply (or to get further information), please submit your CV, specifically referencing expertise aligned with the above list of desired skills to Enrique G. Marin ([egmarin@go.ugr.es](mailto:egmarin@go.ugr.es)) and Andrés Godoy ([agodoy@ugr.es](mailto:agodoy@ugr.es)). We look forward to meeting you and building the future of IoT together!