



Grenoble INP - UGA is a member of international engineering and management education and research networks. It is widely recognized in national and international rankings.



8 schools + 39 laboratories

8300 students

1 300 teaching, research, administrative and technical staff

Grenoble INP - UGA is a renowned public institution of higher education and research, and a major player in the Grenoble ecosystem. It is the engineering and management institute of Grenoble Alpes University, and plays a leading role in the scientific and industrial community.

Researcher in sustainable electronics

Job reference number	2024-RESEARSUSTELECTRO-CROMA
Research field	Analogue and radio frequency electronics (design and characterisation of devices using PCB technology), Life Cycle Assessment (LCA)
Host laboratory	CROMA (UMR 5130 Grenoble-INP, UGA et CNRS) https://croma.grenoble-inp.fr/
Researcher profile	First stage researcher (R1)
Location	Grenoble, France
Hiring date / contract term	01/10/2024 (12 months)
Contacts	pascal.xavier1@grenoble-inp.fr

Grenoble INP - UGA is a leading public institution accredited with the French label "Initiative d'excellence". It offers innovative engineering and management programs, with an increasing internationalization of its course offers. The courses are grounded in sound scientific knowledge and linked to digital, industrial, organizational, environmental and energy transitions. The Engineering and Management Institute of Grenoble Alpes brings together more than 1300 staff members (teacher-researchers, lecturers, administrative and technical staff) and 8300 students, located on 8 sites (Grenoble INP - Ense3, Grenoble INP - Ensimag, Grenoble INP - Esisar, Grenoble INP - Génie industriel GI, Grenoble INP - Pagora, Grenoble INP - Phelma, Polytech Grenoble, Grenoble IAE and the INP Prepa). Grenoble INP is also a highly-ranked institution of higher education and research, leading the way in the fields of engineering and management on an international scale. It is a member of a large number of international academic and research networks. It is part of the European University UNITE!.

As part of Grenoble Alpes University, Grenoble INP has associated guardianship of 39 national and international research laboratories and of technological platforms. The research conducted there benefits both its socio-economic partners and its students. Grenoble INP is at the heart of the following scientific fields: physics, energy, mechanics and materials; digital; micronanoelectronics, embedded systems; industry of the future, production systems, environment; management and business sciences.

Grenoble INP - UGA is an equal opportunity employer committed to sustainability. Grenoble INP-UGA celebrates diversity and equity and is committed to creating an inclusive environment for all employees. All qualified applications will be considered without discrimination of any kind.

Research

The Radiofrequency, Optics and Micro-Nanoelectronics Centre of the Alps "CROMA" (formerly IMEP-LAHC) is a Mixed Research Laboratory "UMR 5130" (CNRS / Grenoble INP / UGA/ Université SAVOIE Mont-Blanc) with a staff of 110, heavily involved in research into micro- and nanoelectronics, microphotonics, micro- and nanosystems, microwaves and optomicrosondes.

The laboratory is located at two sites around 70 km apart: Grenoble (38) and Le Bourget du Lac (73).

The person recruited will be part of the DHREAMS team. This team has two main areas of research into microwave design and characterisation: sustainable electronics on the one hand, and applications to microelectronics, life and the environment on the other.

Position description :

This 12-month research post is funded as part of the European Horizon EIC Pathfinder Challenge "responsible electronics" project entitled "DESIRE4EU", a 48-month project starting on 1 September 2024 and coordinated by Grenoble INP. The partners are the University of Budapest (Hungary), the Université Catholique de Louvain (Belgium), Arduino (Sweden), Meslin (Hungary), AB Chimie (France), Alba PCB (Italy) and Sinano (France). The main activities of the person recruited will focus on the design rules for electronic boards on bio-sourced substrates that maximise the circularity of the materials used. These boards will be based on Arduino development kits incorporating analogue and digital functions, radio frequency elements and sensors using AI technology. To achieve this, the person recruited will also have to take part in dielectric and thermal characterisation campaigns on the substrates, and functional testing of the boards. The team's research is based on several of the laboratory's experimental platforms, in particular the HYPER platform dedicated to microwave characterisation, one of whose key pieces of equipment is the anechoic chamber. Microfabrication technology is also available in the laboratory. The person will also have to collaborate and exchange data with the partners concerning the materials making up the substrates, the assembly of the cards, the ageing of these cards, the analysis of the life cycle and circularity of the value chain, the recovery of materials at the end of the life of the cards. Finally, the person will be required to participate in the drafting of the reports/deliverables planned as part of this project.

Specific requirements or conditions

The candidate must have skills in analogue electronic design, particularly in the microwave field, as well as in microwave characterisation of materials/systems. The ability to work in both French and English is imperative. Knowledge of LCA and international experience will be additional assets.

Specifics of the position

Research can be done at several sites in Grenoble, Le Bourget du Lac and St Martin-d'Hères. In view of existing partnerships, short international trips are expected.

Position assigned to a restricted area: YES

(Device for the protection of the scientific and technical potential of the nation, conditioning the appointment of the researcher to the authorization of the Defense Security Officer).

How to apply

Applications must be sent to : pascal.xavier1@grenoble-inp.fr

Application deadline : 10/07/2024