



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 + **38** laboratories

8 350 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.

Associate Professor

Research profile field	Communicating embedded electronic systems
Requested job profile	Lecturer
Ministerial reference for the position	63/61 MCF 0437
CNU Section	63-61
Job location	Valence
Hiring date	01/09/2024 (DD/MM/YY)
Keywords	Embedded electronics, Communication systems, IoT, AI

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 8 350 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 38 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.

Teaching

School: Grenoble INP – Esisar, UGA

School website: <https://esisar.grenoble-inp.fr/en>

Contact: Laurent.Guilloton@esisar.grenoble-inp.fr

Grenoble INP - Esisar, which is a school with a 5-year curriculum, recruits about sixty students after the baccalaureate through the national Geipi-Polytech competitive examination, about thirty students after the CPGE through the national CCINP competitive examination, and about thirty students recruited upon graduation from IUTs, ATS preparatory courses, etc., and a handful of other admission routes including international students (about 20% of the graduated).

Grenoble INP - Esisar also runs the international Master IMESS (International Master in Embedded Systems Security).

Grenoble INP - Esisar trains engineers to master the design of cyber-physical systems and cybersecurity, based on the fundamental disciplines of electronics, automatic control, computing, networks and cybersecurity.

Grenoble INP – Esisar has strong industrial relations, notably through Industrial Projects integrated into the training of 4th year students and the Esynov technological platform, relying on Training-Research-Transfer synergies in connection with the research laboratory LCIS.

Several funded projects of which Esisar is a beneficiary, as part of the Skills and Jobs for the Future France 2030 calls, will make it possible to consolidate and increase teaching resources related to the security of Embedded systems and security systems. information (Cyberskills@UGA project), the design of communicating embedded electronic systems (Fame project), the teaching of artificial intelligence (MIAI project).

These projects support the desire to develop tools such as platforms to increase the skills-based approach in training through more activities based on projects carried out by students throughout the 5-year course, most often in partnership with industry.

Teaching Profile:

The newly appointed associate Professor will teach in the field of communicating embedded electronic systems, with a particular emphasis on digital systems applied to communication systems. He or She will be involved in teaching activities concerning: embedded system architecture (microcontrollers, DSP), hardware and software system design (FPGA, SoPC), programming of real-time embedded systems, implementation of networked and wireless communicating systems.

Also, teaching Artificial Intelligence tools is a strong requirement for Grenoble INP – Esisar, UGA. The associate Professor's demonstration of knowledge of AI tools for teaching at a user level of an engineer will be an additional asset for this position.

Teaching at Esisar takes a variety of forms: lectures, tutorials, practical work, projects, internship supervision, tutoring of apprentices, and this for different levels of training (Bac to Bac+5).

The associate Professor will need to master the English language in order to set up courses accessible to international curricula in line with the school's policy. He or she must be dynamic and have a keen interest in new teaching methods that integrate scientific and cross-disciplinary skills, which are essential for training engineers who are open to the world of business.

He or she will quickly have to take on educational and administrative responsibilities within the school.

Research

Team: LCIS (EA 3747 Grenoble-INP, UGA) - ORSYS Team

Laboratory website: <https://esisar.grenoble-inp.fr/en/research/research-lcis-1>

Contact: Nicolas.Barbot@lcis.grenoble-inp.fr

Laboratory presentation:

The LCIS is a multidisciplinary laboratory that brings together key areas of expertise to cover the fields of embedded and communicating systems, i.e., computer science, electronics, and automatic control. More specifically, work focuses on the study of interconnected software/hardware systems immersed in a physical environment. The LCIS develops new methods, models, and tools for the design and integration of these systems, from components to behaviors and uses. The laboratory is structured into three research groups.

Research Profile:

The newly appointed associate Professor will join the ORSYS team, associated with UGA's Labex Microelectronics and the FMNT (Fédération des Micro et Nano Technologies). The team's research focuses on the use of radio frequency (RF) and wireless technologies and signals for communication, signal processing and measurement. ORSYS members are specialized in RF, particularly in the design, optimization and measurement of communicating, hybrid and embedded systems. ORSYS is particularly interested in low-power wireless technologies, especially those used in RFID, based on the principle of backscattering or backscatter modulation of electromagnetic waves. The associate Professor's work should build on ORSYS' strengths in system design, optimization and measurement. He or she will be expected to integrate with the team's existing research activities. Any broadening of the team's spectrum of skills, such as system design using artificial intelligence, or the development of secure, reliable, agile RF systems capable of adapting to real-life environments, will be appreciated. A number of different directions are possible, such as the Internet of Things, smart antennas, software-defined and cognitive radio, to name but a few.

The selected candidate will be expected to invest in the laboratory's collective tasks, in particular to increase its visibility. He/she will be expected to participate in the laboratory's activities and scientific dissemination, and to contribute actively to the search for funding for new national and international projects.

The research activity presented in the application must be proven, in particular by international publications.

Posting in a restricted area: NO

(Protection of the nation's scientific and technical potential, conditioning the appointment of the teacher-researcher on the authorisation of the Defence Security Officer).

Specific requirements

None.

How to apply

Applications are to be submitted on the Galaxie platform of the French Ministry of Higher Education and Research between the 22 of February 2024, 10:00 a.m. (Paris time zone) and the 29 of March 2024, 4:00 p.m. (Paris time zone), deadline.

Any document sent outside the Galaxie procedure will not be taken into account.

The interview will include simulation/situational exercises. The details will be communicated when the invitation is sent out. In addition, part of the interview may be conducted in English.