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

8 300 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.

University Lecturer Position

Short profile	Computer science and digital sobriety
Body	University Lecturer
Position number	27-61 MCF 0621
CNU Section	27-61
Location	Grenoble
Date of recruitment	01/09/2023
Key words	Computer science, software engineering and programming, algorithms and architectures of hardware and embedded software systems, hardware security, dependability, fault tolerance, digital sobriety, design and validation of embedded systems.

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 s 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 - Phelma

School website: https://phelma.grenoble-inp.fr/

Contacts : patrice.petitclair@phelma.grenoble-inp.fr

Grenoble INP Phelma is an engineering school within the Grenoble Institute of Technology. It offers its students a wide range of courses at the cutting edge of scientific and technological progress: micro and nanotechnology, instrumentation, energy, innovative materials, information technology, biomedical engineering, process engineering, and environmental engineering. Phelma provides learning to than 1,400 students in 11 engineering programs, one of which is an apprenticeship program, and a dozen master's programs. The teaching staff is made up of about 100 full professors and over 300 part-time lecturers. The administrative and technical team consists of about fifty employees. The school operates on two sites, the Minatec site in Grenoble and the university campus in Saint-Martin d'Hères. Phelma's three main pillars - physics, electronics, and materials - are firmly anchored in the school's mission. The school's engineering and master's programs are evolving to keep pace with the changing needs of the industry, especially in the areas of energy and digital transition.

Teaching profile:

The digital transition that has taken place in recent years has shown the need to provide all future engineers with a solid training in computer science, regardless of their specialization. Our graduates have long been recognized for this. In addition, there is a pressing need for training in digital sobriety. The candidate will join Phelma's computer science teaching team and participate in the first-year computer science classes and projects, both in the traditional classroom and through apprenticeships. The current focus is on structured programming, data structures and associated algorithms. The person recruited will also take part in the 2nd and 3rd year courses of the Embedded Systems and Connected Objects (SEOC), Signal Images Communication Multimedia (SICOM, joint course with Ense3), Integrated Electronic Systems (SEI) and the Microelectronics and Telecommunications (MT) apprenticeship course. These courses include software projects, system programming, object programming, network and embedded software programming and operating systems. The successful candidate will be expected to participate in the development of Phelma's courses, including hardware security.

It is important to be able to adapt teaching methods to an audience that is not specialized in computer science, with a focus on the school's themes (physics, electronics, materials), and to have an appetite for innovative teaching methods.

Research

Team : TIMA, MSTIC pole

Laboratory website : https://tima.univ-grenoble-alpes.fr/

Contacts : tima-direction@univ-grenoble-alpes.fr

TIMA (Unité Mixte de Recherche N°5159) is a public research laboratory under the authority of Grenoble INP (Institut Polytechnique de Grenoble), CNRS (Centre National de la Recherche Scientifique), and UGA (Université Grenoble Alpes). The research topics of the TIMA Laboratory cover specification, design, verification, test, CAD tools and design support methods for embedded systems, from basic analog and digital components to multiprocessor systems on the chip and their basic operating system. TIMA is a multinational team, with researchers and interns from all over the world. Much of the research is conducted in a project-based collaborative environment

Research Profile:

The miniaturization of CMOS microelectronics and the rise of new technologies are creating significant design challenges for digital circuits. To design these circuits quickly and efficiently with sufficient quality for a minimum operating time, many factors must be considered. These circuits allow for a range of new applications in areas such as medical assistance, transportation safety, environmental monitoring, energy management, and secure communication. Depending on the application, non-functional requirements such as power consumption, safety, security, and real-time performance may also need to be met in addition to functional specifications.

To meet the demands of the modern digital design landscape, hardware engineers must possess a range of skills, from optimized design methods for multi-core architectures to modeling physical and electrical phenomena such as dispersion and aging in advanced technologies. These models are used to validate the complex architectures. The scope of digital design has broadened in recent years, requiring the collaboration of various skills for successful project completion.

The research focus of the TIMA Laboratory is to create methods and tools for the design and validation of complex integrated systems. These systems serve as the basis for digital systems that are high-performing, trustworthy, safe, robust, and secure. The laboratory also creates demonstration circuits and reusable blocks (IPs).

The laboratory is looking for a candidate to join one of its teams in the field of digital design, for this global problem. A good understanding of the issue from the behavioral specification level, and a good knowledge of ASIC or FPGA design flows, is expected.

The candidate should have research experience in several of the following areas: system-on-chip architectures, hardware security and trust, resistance to natural disturbances or malicious attacks, virtual prototyping, hardware design for power and consumption optimization, formal methods, reconfigurable systems-on-chip, network-on-chip architectures.

Position assigned to a restricted area: NO

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

Specific requirements and conditions

The ability to teach in English is required, as a number of the school's courses are taught exclusively in English. In addition, previous international experience will be an asset.

Administrative activities

Within the next few years, the candidate will take on traditional responsibilities of a Teaching Unit.

Specifics of the position

The teaching activities can be carried out on the two sites of the school: Grenoble and St Martin-d'Hères.

How to apply

Applicants must submit their applications on the Galaxie Platform of the French Ministry of Higher Education and Research from 23rd of February 2023, 10 a.m. (Paris time) to 30th of March 2023, 4 p.m. (Paris time), 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.