------------ JOB ANNOUNCEMENT ------------

POSITION TITLE

Assistant/Associate Professor in security and safety of embedded systems

TELECOM PARIS

Télécom Paris is one of the top four Grandes Ecoles in France for training general engineers. Recognized for its close ties with businesses, this public graduate school ensures excellent employment prospects in all industries and is considered the number-one engineering school for digital technology. With its top-level innovative teaching, Télécom Paris is at the center of a unique innovation ecosystem, drawing on the interaction and cross-disciplinary nature of the school's academic programs, interdisciplinary research, two business incubators and its campuses (Paris and Sophia Antipolis – EURECOM). Its LTCI laboratory has been accredited by HCERES as an outstanding unit in the field of digital sciences for its international reputation and exceptional number of initiatives supporting the socio-economic world and industry, as well as for its great contribution to teaching.

A founding member of Institut Polytechnique de Paris and an IMT (Institut Mines-Télécom) school, Télécom Paris is positioned as the college for digital innovation on the Paris-Saclay Campus.

SCIENTIFIC CONTEXT

The SSH team is characterized by an active research in the field of hardware security and cybersecurity of embedded systems, as well as a strong teaching activity in engineering and Masters courses. Telecom Paris's graduates are highly valued on the job market for their skills in robust embedded systems (autonomous vehicles, IoTs, nanotechnologies, academic positions, etc.) and an excellent teaching at the forefront of research must be delivered. The team offers teaching based on practice and projects, so as to promote a creative mindset among students. The team carries out both theoretical and experimental research. Its research facility includes the "Trust Analysis Platform" (TAP) analysis laboratory as well as resources for the design of electronic circuits. Candidates with a strong research profile along the team scientific scopes are expected to prepare the future and meet strong needs in a promising field.

PREFERRED SCIENTIFIC EXPERTISE

The position requires expertise and skills in:

1. **Architectures and design methods of digital circuits/embedded systems for both hardware and low-level software.**
2. **Theory and practice in the security/safety of electronic circuits and on-board systems.**

Circuit and embedded system expertise as well as skills in modeling and quantifying risks are essential for the position. The design a circuit with effective protections against attacks and validation methods should be mastered. The position requires significant publications in leading journals and conferences. Initiating and participating to national, international and industrial research projects is expected. Higher education experience as well as fluency in written and oral English are required.

Candidates must hold a solid knowledge in information and communication technologies. Competencies that will serve for the position are listed below:

- Experience in developing embedded systems with hardware and / or software protections.
- Culture of cyber-physical threats and protection principles.
- In-depth knowledge of microprocessor architectures and associated software development tools.
- Methods and architectures of integrated circuits and embedded systems.
- Experimental data generation and analysis
- Knowledge in modeling, signal processing and machine learning methods.

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JOB DESCRIPTION

MAIN RESPONSIBILITIES AND DUTIES

1. **Applicants must participate in the design and implementation of courses in their scientific field.**
2. **They must conduct research.**
3. **They must participate in the development of partnerships, collaborations, and contractual agreements in their scientific field.**

POSITION RESPONSIBILITIES

Teaching:
In collaboration with the other faculty members of the department:
- Develop courses and teaching tools within the Group academic field,
- Design and organize teaching activities for undergraduate and graduate students;
- Teach labs and tutorials for undergraduate and graduate students;
- Design and implement project-based teaching and supervise student projects;
- Serve on juries for prospective students who are applying for engineering courses, specialized masters, etc.;
- Contribute to the analysis of training needs;

Research:
- Engage in research activities in the team scientific field;
- Write proposals and participate in projects with partners from the Institut Polytechnique de Paris, the Institut Mines-Télécom or other institutions from the academic and/or corporate world, in particular in the framework of fundamental, national, or European projects;
- Explore and develop partnerships within the industry and establish contractual agreements.
- Carry out industrial research contracts;

Coordination:
- Participate in and contribute to the scientific activities of the Group (seminars, presentations, juries, etc.).

Fostering the recognition of Telecom Paris and the Institut Polytechnique de Paris:
- Disseminate research findings via scholarly writings and publications;
- Lead presentations and seminars;
- Take an active role in scholarly and professional organizations;
- Maintain close relations with academic institutions, research centers, and companies.

Other responsibilities:
- Participate in the scientific, pedagogical, and management activities of the department and/or institution;
- Where appropriate, direct and manage the staff placed under his or her responsibility or supervision;
- Report on the activities and results of the tasks for which he or she is responsible.

SKILLS

Required skills, experience, and knowledge:
- In-depth theoretical or applied knowledge in his or her field of expertise;
- An excellent command of spoken and written English.
- If the candidate is does not speak French, at the moment of hire he or she must commit to obtaining a professional proficiency of French as quickly as possible while under contract.

Preferred skills, experience, and knowledge:
- Post-doctoral or international experience in an academic or industrial laboratory is appreciated;
- Teaching experience.

Other abilities and skills:
- The ability to be an active team member in a diverse faculty, staff, and student environment;
- Strong teaching, pedagogical, and mentoring capabilities;
- Superb written and interpersonal communication skills.

REQUIRED QUALIFICIATIONS

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Candidates with one or more of the following required qualifications may apply:
- Doctorate or equivalent;
- Civil servant recruited through the École Polytechnique or ENA or former student of the École Normale Supérieure and ≥ 3 years of professional experience;
- Holds a post-graduate degree from an engineering, business, or management school and has ≥ 5 years of professional experience;
- Holds a post-graduate degree and has ≥ 5 years of professional experience;
- Is a high-level business executive with ≥ 8 years of professional experience.

ACADEMIC RANK and CARRIER EVOLUTION

The proposed position is a permanent position. Depending on its experience, the successful candidate will obtain the Assistant Professor or Associate Professor title. The latter is given to the candidates having the French habilitation diploma, HDR (Habilitation à Diriger des Recherches) or an equivalent international academic experience. To obtain the Full Professor title, one of the conditions is to take the HDR.

APPLICATION INSTRUCTIONS

Applicants should submit a single PDF at https://institutminestelecom.recruitee.com/l/en/o/maitre-de-conferences-en-securite-et-surete-des-systemes-embarques-a-telecom-paris-cdi file that includes:
- cover letter,
- curriculum vitae,
- statements of research and teaching interests (4 pages)
- three publications
- contact information for two references

For full consideration, applications should be received no later than 5 April 2021.
For any question or visit of the team, please contact: jean-luc danger@telecom-paris.fr

SELECTION

The selection is made in four steps :
- Removal of the applications that do not satisfy the required qualifications
- Interview by the host team and selection of a first short-list
- Interview by the Hiring Committee, selection and ranking of the final short-list
- Interview by the dean of Telecom Paris

TELECOM
Paris

IP PARIS

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ADDITIONAL INFORMATION

Date posted: 18 january 2021

Contract type: CDI (permanent contract)

Job location: Télécom Paris, 19 Place Marguerite Perey, Palaiseau 91120, France
Department/Unit: Department COMELEC
Superior/Supervisor: Department Head Bruno Thédrez
Category / job title: II – C
Categories / titles agents can apply for: II - C

Validations	
Bruno Thédrez *Department Head COMELEC* *le 18/01/2021*	**Nicolas Glady** *President of Télécom Paris*
Isabelle Zaquine *Vice-dean for faculty affairs*	**Bénédicte Humbert** *Human Resources Director*
Date position was accepted: Date the position was issued: Signature of the person hired:	

Telecom Paris is an equal-opportunity employer.
All our positions are open to individuals with disabilities