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

POSITION TITLE

Professor in Security of Systems and Software

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 successful candidate will join the LTCI laboratory as part of the ACES ("Autonomous & Critical Embedded Systems") team in Télécom Paris "Computer Science and Networks" department. This recruitment is in line with the "Cybersecurity and Risks" leadership theme of the Institut Mines Télécom and the "Trust, Safety and Cybersecurity" theme of the "Computer Science, Data, AI" department of the Institut Polytechnique de Paris.

The targeted research area is System and Software Security, including the design of secure systems, the analysis of existing systems, but also the modeling of threats and the study of new paradigms and techniques. This field combines various aspects of computer science, and is at the center of current societal issues, such as the security of the state and companies, or the protection of citizens' privacy. It is thus truly an issue of national sovereignty.

The candidate will integrate and animate a research ecosystem rich in partnerships: academic partnerships within the IMT and IP Paris (ACES is a member of the IP Paris joint team on Cyberphysical systems with the COSYNUS team at X/LIX and the SSH team at ENSTA/U2IS), and industry through joint laboratories or research chairs in which the ACES team participates (notably the SEIDO laboratory between Télécom Paris and EDF R&D on Security and the Internet of Things, and the "Cybersecurity and Digital Sovereignty" chair with IHEDN, ANSSI, CEA-DAM, EDF, SOPRA-STERIA, TOTAL). He will also be able to enrich this network with his own.

The candidate will carry out teaching activities and responsibilities in the field of cybersecurity in a variety of courses, as part of the school's engineering cycle, research Masters at IP Paris (M2 CPS on Cyberphysical systems, or M2 in Cybersecurity), courses dedicated to engineers in the prestigious *Corps des Mines* (foremost technical Grand Corps of the French State), or "Phd tracks".

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PREFERRED SCIENTIFIC EXPERTISE

The candidate is expected to have a renown level of expertise that covers the field of Cybersecurity in its entirety more particularly the Security of Systems and Software, such as, but not limited to, the following:

- ➢ **Complex Systems Security** (model-driven security, threat modeling, security/safety interdependencies modeling, ...),
- ➢ **Software Security** (code and malware analysis, language-based security, ...),
- ➢ **Operating System Security** (OS verification, access control techniques, ...),
- ➢ **Mobile Platform Security** (Trusted Execution Environment, security of virtualization, ...).

Complementary mastery of one or more of the following areas of expertise will be an asset for the candidate:

- ➢ Formal methods for security (information flow control techniques, ...),
- ➢ AI techniques for security (adversarial learning methods, ...),
- ➢ Dependability.

The priority areas of application for the work will be, but are not limited to, the following:

- ➢ Security of Internet of Things (smartgrids, …),
- ➢ Security of Critical Systems and Infrastructures (Industry 4.0, e-HealthCare, transports, etc.),
- ➢ Security of Cyberphysical Systems (robotics, drones, …)

JOB DESCRIPTION

MAIN RESPONSIBILITIES AND DUTIES

1. **Applicants should participate in the design and implementation of courses in their scientific field.**
2. **They should conduct an lead research in their scientific field.**
3. **They should 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:
- Provide and take responsibility for courses consistent with areas of knowledge, skills-set, and departmental needs;
- Teach labs and tutorials for undergraduate and graduate students;
- Serve on juries for prospective students who are applying for engineering courses, specialized masters, etc.;
- Participate in the analysis of training needs;
- Organize teaching activities in initial and continuing training;
- Design and organize teaching activities for undergraduate and graduate students;
- Design and implement project-based teaching;
- Supervise student projects;
- Develop courses and teaching tools in the above-mentioned field.

Research:
- Lead research activities in the scientific field concerned;

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- Write proposals and carry out 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;
- Propose and carry out innovative research contracts;
- Explore and develop partnerships within the industry and establish contractual agreements.

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:
- Publish the results of its research in the best conferences and journals in the field;
- Make invited presentations (key notes) and get involved in various conference committees;
- Take an active role in scholarly and professional organizations;
- Maintain close and long-lasting relations with academic institutions, research centers, and companies.
- Set up national or international projects, research centers, joint laboratories or chairs, by taking the initiative in responding to calls for proposals

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

Candidates with one or more of the following required qualifications may apply:
- Doctorate or equivalent;

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- 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. The successful candidate will obtain the Full Professor title.

APPLICATION INSTRUCTIONS

Applicants should submit at https://institutminestelecom.recruitee.com/l/en/o/professeur-en-securite-des-systemes-et-des-logiciels-a-telecom-paris-cdi a single PDF file that includes:

- cover letter,
- curriculum vitae,
- statements of research and teaching interests (4 pages)
- three publications
- contact information for two references to: Laurent Pautet (laurent.pautet@telecom-paris.fr).

For full consideration, applications should be received no later than 30 march 2020.
Contact: Laurent Pautet (laurent.pautet@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

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ADDITIONAL INFORMATION

Date posted: 13 January 2020

Contract type: CDI (permanent contract)

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

Validations	
Gérard Memmi *Department Head INFRES*	**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