AKATECH

Assistant Professor

Ecole/Institution/Société:
TÉLÉCOM PARIS, **France / Palaiseau**

Discipline:
Communication Engineering, Computer Vision

Type d'emploi::
Full-time

Date de publication:
2022-03-12

Personne à contacter:
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Assistant/Associate Professor in Learning for Video Processing and Computer Vision

Télécom Paris, a school of the IMT (Institut Mines-Télécom) and a founding member of the Institut Polytechnique de Paris, is one of the top 5 French general engineering schools. An institution on a "human scale" but with a strong international component,

Télécom Paris is recognized for its proximity to companies. This public school guarantees excellent employability in all sectors and is the leading engineering school for the entire digital vertical (from hardware layers to uses).

With its excellent teaching and innovative pedagogy, Télécom Paris is at the heart of a unique innovation ecosystem, based on interaction and the importance of project mode in its training on the one hand, and its interdisciplinary research on the other.

Its teacher-researchers are affiliated with two research laboratories: on the one hand, the LTCI laboratory, which is presented by the HCERES as a flagship unit in the field of digital sciences with remarkable international influence; and on the other hand, the i3 laboratory, Interdisciplinary Institute of Innovation (I3 - UMR 9217 of the CNRS), which pursues a multidisciplinary research program focused on innovation in the framework of a collaboration with the École Polytechnique and Mines ParisTech

Based in Palaiseau, at the heart of the Institut Polytechnique campus alongside the École Polytechnique, ENSTA, Télécom Sud Paris and ENSAE, Télécom Paris also has an incubator based in Paris at the heart of the French start-up ecosystem.

Télécom Paris is positioned as an open-air laboratory for all the major technological and societal challenges: artificial intelligence, quantum computing, IOT, cybersecurity, large-scale digital equipment (Cloud), 5G/6G, Green IT.

SCIENTIFIC CONTEXT

The multimedia team has a research activity historically centered around image and video compression, and transport and orchestration of multimedia content. In recent years, the team has opened its research field to computer vision to design new multimedia processing methods. This field is booming and the number of requests to set up research projects has increased considerably in recent years due to recent progress and the many possible applications.

In addition, the computer vision scientific community has grown enormously and scientific conferences such as CVPR, ICCV and ECCV are becoming major scientific and economic events. By reinforcing the team on this theme, we hope that the Multimedia team will be able to establish itself permanently in this very competitive ecosystem.

Through this opening, we wish to confirm the orientation to the team while reinforcing, if possible, its expertise in video processing and analysis. In this way, we keep our objective of orienting the team towards the field of computer vision while keeping our specificity.

Moreover, the field of computer vision is very vast. Thus, we are looking for a profile complementary to the profiles of the current team members in order to open new perspectives for the team.

DESIRED SCIENTIFIC EXPERTISE

Primary Expertise:

The candidate's scientific expertise should be in one or more of these areas:

Methodology

- Deep Learning:
- Representation learning
- Unsupervised learning
- Self-supervised learning
- Learning with few examples

Applications

- Image and video compression
- Computer Vision:
- Video, media and document analysis
- Detection/recognition
- Tracking of people or objects

In addition to outstanding research and teaching skills, candidates should also be team players, have good social skills, be able to develop international academic and industry partnerships.

Other Skills:

- Be able to obtain grants and funding at national and European level.
- Autonomous, motivated, able to set up and conduct research projects independently
- Experience in university teaching (or equivalent);
- Fluency in English (oral and written).

Other Desired Expertise (optional):

- Reinforcement learning for vision
- Active learning
- Uncertainty estimation for neural networks
- Meta-learning for deep learning
- Neural architecture search
- Graph neural networks
- 3D vision

JOB DESCRIPTION

MAIN RESPONSIBILITIES AND DUTIES

- Applicants should participate in the design and implementation of courses in their scientific field.
- They should conduct research.
- They should participate in the development of partnerships, collaborations, and contractual agreements in their scientific field.

ACTIVITIES

Teaching:

In collaboration with the other faculty members of the department:

- Provide 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.;
- Contribute to the analysis of training needs;
- 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:

- Engage in research activities in the scientific field concerned;
- 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;
- Carry out industrial 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 Institut Mines-Télécom and the Institut Polytechnique de Paris:

- Disseminate research findings via scholarly writing and publication;
- 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.

Job requirements

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 QUALIFICATIONS

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.

APPLICATION INSTRUCTIONS

The application consists of:

- cover letter,
- curriculum vitae,
- statements of research and teaching interests (4 pages)
- three publications
- contact information for two references to: Stéphane Lathuilière.

Contact:

Team: Stéphane Lathuilière, stephane.lathuiliere@telecom-paris.fr

IDS department: Florence d'Alché, florence.dalche@telecom-paris.fr

Job details

Title: Assistant/Associate Professor in Learning for Video Processing and Computer Vision (F/H) at Télécom Paris - CDI

Employer: Télécom Paris

Location: 19 place Marguerite Perey Palaiseau, France

Job type: Assistant / Associate Professor

Field: Artificial Neural Network, Computer Graphics, Computer Vision, Image Processing, Machine Learning

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