

## Associate Professor

Ecole/Institution/Société:

**TÉLÉCOM PARIS, France / Palaiseau**

Discipline:

**Artificial Intelligence**

Type d'emploi::

**Full-time**

Date de publication:

**2022-03-12**

Personne à contacter:

**If you wish to apply for this position, please specify that you saw it on AKATECH.tech**

### **Assistant / Associate Professor in Artificial Intelligence and Computer Vision for Biomedical Imaging**

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**

Telecom Paris, a CS/EE school of IPParis, is hiring a tenured Assistant/Associate Professor in

the domain of artificial intelligence and computer vision for biomedical image processing and understanding. The applicant will integrate the IMAGES team, within the Image, Data and Signal Department (IDS) of the Information Processing and Communication Laboratory (LTCI). The team is involved in theoretical, methodological, and applied research in the domain of mathematics, computer vision, artificial intelligence, and computer graphics.

Team description at: <https://www.telecom-paris.fr/en/research/laboratories/information-processing-and-communication-laboratory-ltci/research-teams/image-modeling-analysis-geometry-synthesis>

Outstanding applicants in all areas of artificial intelligence for biomedical imaging will be considered. Possible research areas include:

- Deep learning for image reconstruction and analysis
- Statistical models for fusion of multi-modal data (i.e., imaging, clinical, genetic, etc.)
- Domain adaptation, Transfer learning, Self-supervised learning
- Generative machine/deep learning models
- Shape analysis and geometric statistics
- Medical knowledge representation and reasoning
- Association of symbolic and statistical machine/deep learning
- Federated learning

## **DESIRED SCIENTIFIC EXPERTISE**

The applicant is expected to have competences and skills in the domain of biomedical imaging, computer vision and artificial intelligence with a strong background in applied mathematics and/or computer sciences. The applicant should also show pedagogical skills and be able to teach on deep/machine learning and image processing.

The candidate must also be capable and interested in facilitating and creating new cross-disciplinary interactions within the LTCI laboratory, across the schools of IPParis and with external collaborators from the industry, hospitals, biological labs, etc

## **JOB DESCRIPTION**

### **MAIN MISSIONS OF THE POSITION**

- Participate in the design and implementation of courses in its scientific field
- Conducting research in his/her scientific field
- Participate in the development of partnerships, collaborations and contractual relations in his/her scientific field.

## **ACTIVITIES**

### **Teaching: in coordination with the other teacher-researchers in his/her group,**

- Ensures a set of teaching activities in his/her field in initial and continuing education;
- Participates in interview panels for the selection of candidates (engineering cycle, specialized masters, etc.);
- Participates in the analysis of training needs;
- Participates in the design and organization of teaching activities in initial and continuing education;
- Participates in the design and implementation of project-based teaching;
- Ensures the supervision of student projects;
- Designs courses, produces corresponding materials (including digital resources) and develops pedagogical tools for teaching in the above-mentioned field;
- Participates in training workshops for teachers.

### **Research:**

- Develops a research activity in the scientific field concerned
- Participates in projects involving partners from the Institut Polytechnique de Paris, the Institut

Mines-Télécom or outside, from the academic or business worlds, in particular within the framework of structuring projects or national or European projects;

- Carries out industrial research contracts;
- Seeks and develops relationships with industry and with international academic partners.

## **Animation :**

- Participates in and contributes to the scientific animation of the Group that hosts him/her (seminars, defenses, juries).
- Participation in the reputation of Institut Mines-Télécom and the Institut Polytechnique de Paris:
- Publishes the results of his/her research work;
- Realizes presentations and conferences;
- Involved in learned or professional societies;
- Maintains close relations with academic institutions, research centers and companies.

## **Miscellaneous:**

- Participates in the scientific, pedagogical, and management leadership of the Department or School;
- If necessary, directs and manages the agents placed under his/her responsibility or supervision;
- Reports on the activities and results of the missions for which he/she is responsible.

## **Job requirements**

### **Essential Skills, Knowledge and Experience:**

- In-depth knowledge, theoretical or applied, in his/her field
- Fluency in English.

### **Desirable skills, knowledge and experience:**

- Post-doctoral or international experience in an academic or industrial laboratory appreciated ;
- Teaching experience.

### **Abilities and skills:**

- Ability to work in a team, interpersonal skills;
- Pedagogical skills;
- Ability to write and summarize.

### **LEVEL OF TRAINING / EXPERIENCE REQUIRED**

- Doctorate or equivalent;
- Civil servant belonging to a body recruited through the École Polytechnique or ENA or former student of the École Normale Supérieure with professional experience  $\geq 3$  years ;
- Diploma from a School of Engineering or Business and Management or equivalent with professional experience  $\geq 5$  years ;
- Bac + 5 degree or equivalent with professional experience  $\geq 5$  years ;
- Very high level company executive with professional experience  $\geq 8$  years.

### **HOW TO APPLY**

The application consists of:

- a detailed CV
- a letter of motivation
- description of previous research and teaching activity (max 4 pages)
- a research and teaching project (max 5 pages)
- a copy of 3 principal publications
- the names and e-mail addresses of two qualified personalities who can give an informed opinion on the application

For more information, please contact: Yann Gousseau ([yann.gousseau@telecom-paris.fr](mailto:yann.gousseau@telecom-paris.fr)) and Pietro Gori ([pietro.gori@telecom-paris.fr](mailto:pietro.gori@telecom-paris.fr))

## **Job details**

**Title:** Assistant / Associate Professor in Artificial Intelligence and Computer Vision for Biomedical Imaging (F / H) at Télécom Paris - CDI

**Employer:** Télécom Paris

**Location:** 19 place Marguerite Perey Palaiseau, France

**Job type:** Assistant / Associate Professor, Tenure Track

**Field:** Analysis, Applied Mathematics, Artificial Intelligence, Biomedical Engineering, Computational Mathematics

Personne à contacter:

**If you wish to apply for this position, please specify that you saw it on AKATECH.tech**