



Call for application

Assistant-Professor in Digital communication, IoT and Signal Processing (W/M)

Localisation:	IMT Lille Douai, Site de Lille, Cité scientifique, Rue Guglielmo Marconi, 59650 Villeneuve-d'Ascq, FRANCE
Entity/Service:	IMT Lille Douai, Lille buildings / Digital Sciences and Technologies Center
Position of supervisor:	Head of Digital Sciences and Technologies Center
Contract type	Permanent contract

1. CONTEXT

1.1 IMT Presentation

Institut Mines-Télécom is a public institution dedicated to higher education and research for innovation in the fields of engineering and digital technology. Always tuned in to the economic world, it combines high academic and scientific legitimacy with a concrete presence alongside companies and a unique focus on the major transformations of the 21st century: digital technologies, the environment and energy, industry and education. Its training and research for innovation are conducted in the Mines and Télécom Graduate Schools under the supervision of the Minister for Industry and Electronic Communications, in two subsidiaries and in institutions that are associate partners or under contract. Institut Mines-Télécom is a founding member of the Industry of the Future Alliance. It has two Carnot labels for the quality of its research partnerships. Every year, around seventy startup companies leave its incubators.

1.2 School Presentation

Created by the merger of Mines Douai and Telecom Lille on January 1st, 2017, IMT Lille Douai is one of the largest graduate schools of engineering, north of Paris. It aims at training engineers and scientists of the future, with both industrial expertise and strong skills in digital technologies. Strategically located at the crossroad of Europe, one hour from Paris, one hour and a half from London and thirty minutes from Brussels, IMT Lille Douai intends to become a major player in industrial, digital and environmental transformations of the 21st century. Therefore, our school is building bridges between education, research, engineering and digital science.

Public establishment belonging to IMT (Institut Mines-Télécom), placed under the supervision of the Ministry of Industry, IMT Lille Douai has three main objectives: providing our students with ethically responsible engineering practice enabling them to solve 21st century issues, carrying out our R&D activities leading to outstanding innovations and supporting territorial development through innovation and entrepreneurship.

Located on two main campuses dedicated to research and education in Douai and Lille, IMT Lille Douai offers research facilities of almost 20,000m² in the following areas:

- Digital science
- Processes for industry and services
- Energy and Environment
- Process and Materials engineering applied to polymers, composites and civil engineering

For more information, see: www.imt-lille-douai.fr

1.3 Working environment

IMT Lille Douai aims at strengthening its Digital Sciences and Technologies Center both in education and training but also at developing cross-cutting research activities with the other Innovation and Research Centers (CERI) of our school. The central axes of the department are based on the study of digital science and processes for Industry and services in tackling environmental, digital and international challenges.

The selection committee will pay specific attention to cross-cutting proposals allowing the connection between the different Centers.

The required missions of the successful assistant professor position candidate are described below.

2. MISSIONS AND ACTIVITIES

2.1 Missions

Under the guidance of the Head of Digital Sciences and Technologies Center, the successful candidate will actively contribute to the teaching and research efforts of the Centre.

2.2 Activities

Teaching Missions and responsibilities:

- significant contribution to the delivery of teaching programs (courses, tutorials, practical works) of undergraduate and graduate students in his/her field of expertise : (signal processing, digital communications, advanced communication techniques : MIMO, massive MIMO, OFDM and millimeter wave communication) but also in common core courses related to Information and Communication Technologies. Some lectures can be delivered in English.
- develop and participate in the development of future innovative training methods/techniques (MOOC, inverted classroom...)
- participate in pedagogical supervision (projects, internships, competition juries). Experience in monitoring internships would be very much appreciated.

Research and technology-transfer Missions:

- Develop and conduct research projects that are aligned with IMT research focus areas to achieve success in attracting and securing public and private research funding.
- Work effectively with other academics and supervise master/PhD students and post-docs in one or several of the core business of the Research and Innovation Center: information theory, ultra-dense networks, multiple access methods (MOMA), cooperative communications, MIMO, OFDM, error check.



- initiate cross-cutting research activities to build bridges with other IMTLD innovation and research centers and remain in synch with the areas of excellence of our school and of the Institut Mines-Télécom.
- Prepare the French diploma Accreditation to Supervise Research (“Habilitation à Diriger des Recherches (HDR)” in French).
- implement contractual research and incentive actions and facilitate knowledge transfer in partnership with economic actors.
- promote the department’s activities and ensure its thematic development while enhancing the links with our research and innovation centers.
- undertake a scientific watch.
- participate to the activities of regional, national and international scientific groups, and organize scientific events.
- produce high quality scientific outputs: peer-review papers, patents, etc.

3. TRAINING AND SKILLS

3.1 Training

The candidate must hold a PhD degree in C in signal processing, telecommunications, electronics... This position is open to a candidate interested in teaching and research oriented towards industrial and societal issues. Work experience of post-doctoral research and of project management will be highly appreciated. The candidate should show cultural awareness and an aptitude for multi-disciplinary projects.

3.2 Skills

The successful candidate must have strong scientific background and technical skills, allowing her/him to carry out the aforementioned missions.

She/He should:

- have solid scientific and technological background and significant experience in information theory, NOMA, grant free access, resource allocation, cooperative communications, MIMO, massive MIMO or channel coding.
- be interested in one of the following fields of application: land and river transportation systems, intelligent buildings, industry of the future, interactive and robotic systems.
- have very good communication and teamwork skills.
- strong teaching experience is mandatory.
- have a good command of English (both oral and written) and show negotiation and communication skills, to:
 - demonstrate a marked integration into the international community, justify linguistic and cultural abilities to develop international training and research projects.
 - deliver online internet courses (MOOCS in English).
 - Attend working and discussion groups, international and national events (seminars, congresses...).



4. OTHER INFORMATION AND HOW TO APPLY

The administrative residence is located in Lille but teaching delivering will be done in both main locations.

Eligibility Conditions: European Nationality Holders (European Union) at the candidature submission date and possessed of a PhD degree.

Application Deadline: April 30th, 2020

Contact persons:

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To apply:

Required documents can be obtained by contacting

Human Resources Department

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