

## Postdoctoral

Ecole/Institution/Société:

**University of Luxembourg, Luxembourg / Esch-sur-Alzette**

Discipline:

**Engineering Education**

Type d'emploi::

**Full-time**

Date de publication:

**2022-04-16**

Personne à contacter:

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

### **PhD Candidates / Spontaneous Applications**

SnT is a leading international research and innovation centre in secure, reliable and trustworthy ICT systems and services. We play an instrumental role in Luxembourg by fueling innovation through research partnerships with industry, boosting R&D investments leading to economic growth, and attracting highly qualified talent.

We're looking for people driven by excellence, excited about innovation, and looking to make a difference. If this sounds like you, you've come to the right place!

The University of Luxembourg is continuously seeking to hire highly motivated and outstanding doctoral researchers to work on different enabling technologies for the next generation (Beyond 5G/6G) wireless communications networks for its Interdisciplinary Centre of Security and Trust (SnT), within the Signal Processing and Communications (SigCom) research group, led by Prof. Björn Ottersten and Prof. Symeon Chatzinotas.

The SigCom research group at the SnT carries out research activities in the areas of signal processing for wireless communication systems including satellite communications and radar systems, and is rapidly expanding its research areas to various enabling technologies for beyond 5G/6G wireless networks. For details, you may refer to the following: <https://www.uni.lu/snt/research/sigcom>

### **Your Role**

**The successful candidate is expected to perform the following tasks:**

- Carrying out novel research works in one of the following predefined areas
- Novel communications technologies for Beyond 5G/6G networks and services
- Cellular, UAV, IoT, Tactile Internet, MEC, V2X, D2D, M2M, eMBB, mMTC and URLLC
- Machine learning/deep learning techniques and Artificial Intelligence for wireless communications
- Reinforcement learning, active learning, transfer learning, federated learning and interpretable/explainable AI
- Software defined networking, network virtualization and network slicing for wireless networks
- Energy-efficient communication technologies
- Energy harvesting, SWIPT, backscatter communications and reconfigurable intelligent surfaces

- Advanced multi-antenna technologies for B5G/6G wireless networks
- Massive MIMO, cell-free massive MIMO, beamspace massive MIMO, active antennas, smart antennas, precoding, hybrid analog-digital beamforming and 3D beamforming
- Communications technologies at the higher frequencies
- mmWave, TeraHertz and optical
- Communication technologies for Tactile Internet applications including wireless augmented/virtual reality and teleoperation systems
- Quantum-assisted communication technologies for 6G wireless networks
- Disseminating results through scientific publications
- Presenting results in the well-known international conferences and workshops

## **Your Profile**

The candidate should possess an [M.Sc./M.Eng.](#) Degree in Telecommunication Engineering, signal processing, machine learning or a closely related field in Electronic, Electrical and Computer Engineering.

The ideal candidate should have been within top 10% of class during his/her graduation, and should have published at least one authored conference paper in an international conference or one authored journal paper in an international journal.

**Experience:** The candidate should have some knowledge and experience in some of the following topics/tools:

- 5G wireless communications technologies
- Wireless Internet of Things (IoT) technologies
- Unmanned Aerial Vehicles (UAVs)
- Resource allocation and optimization
- Network virtualization and network slicing
- MAC techniques/protocols for wireless systems
- Graph signal processing
- Machine learning (supervised, unsupervised and reinforcement) and tools (TensorFlow, PyTorch, Keras and GreyCat)
- Deep learning (deep neural network, recurrent neural network, LSTM)
- Optimization theory
- Stochastic geometry
- Programming skills: MATLAB, Python or C++.
- Language Skills: Fluent written and verbal communication skills in English are mandatory.

## **Here's what awaits you at SnT**

Exciting infrastructures and unique labs. At SnT's two campuses, our researchers can take a walk on the moon at the LunaLab, build a nanosatellite, or help make autonomous vehicles even better

The right place for IMPACT. SnT researchers engage in demand-driven projects. Through our Partnership Programme, we work on projects with more than 45 industry partners

Be part of a multicultural family. At SnT we have more than 60 nationalities. Throughout the year, we organise team-building events, networking activities and more

## **Find out more about us!**

- Contract Type: Fixed Term Contract ,3 years - extendable up to 4
- Work Hours: Full Time 40.0 Hours per Week
- Employee and student status

- Location: Kirchberg
- Job Reference: UOL03167

## **How to apply**

- Applications, written in English should be submitted online and include:
- Curriculum Vitae (including your contact address, work experience, publications)
- Cover letter indicating the research area of interest and your motivation
- A research statement (max. 1 page)
- Contact information for 3 referees
- All qualified individuals are encouraged to apply.

The applications will be evaluated on a monthly rotating basis and candidates will be invited for interview, in case of a vacant position matching their profile. Please apply ONLINE formally through the HR system. Applications by Email will not be considered.

In addition, applicants are invited to apply to all SIGCOM positions they find relevant.

The University of Luxembourg embraces inclusion and diversity as key values. We are fully committed to removing any discriminatory barrier related to gender, and not only, in recruitment and career progression of our staff.

## **About the University of Luxembourg**

University of Luxembourg is an international research university with a distinctly multilingual and interdisciplinary character. The University was founded in 2003 and counts more than 6,700 students and more than 2,000 employees from around the world. The University's faculties and interdisciplinary centres focus on research in the areas of Computer Science and ICT Security, Materials Science, European and International Law, Finance and Financial Innovation, Education, Contemporary and Digital History. In addition, the University focuses on cross-disciplinary research in the areas of Data Modelling and Simulation as well as Health and System Biomedicine. Times Higher Education ranks the University of Luxembourg #3 worldwide for its "international outlook," #20 in the Young University Ranking 2021 and among the top 250 universities worldwide.

## **Job details**

**Title:** PhD Candidates / Spontaneous Applications

**Employer:** University of Luxembourg

**Location:** 6, rue Richard Coudenhove-Kalergi , Luxembourg

**Job type:** PhD

**Field:** Artificial Intelligence, Artificial Neural Network, Communication Engineering, Computational Engineering, Computer Communications

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