



SENIOR R&T ASSOCIATE SPECIALISED IN OPTIMISATION & MACHINE LEARNING (M/F)

Permanent contract | Fulltime/40h | Belval

Your work environment

The Luxembourg Institute of Science and Technology (LIST) is a Research and Technology Organization (RTO) active in the fields of materials, environment and IT. By transforming scientific knowledge into technologies, smart data and tools, LIST empowers citizens in their choices, public authorities in their decisions and businesses in their strategies.

<https://www.list.lu/>

You will be part of the LIST IT for Innovative Services department

The "IT for Innovative Services" (ITIS) department, with its 110 researchers and engineers, focuses on the digital transformation of operations occurring in organizations within traditional environments and digital ecosystems with the aim of improving their performance and innovation capacity. ITIS's common thread is to develop the most efficient use of big data to ensure the most appropriate decision-making process.

The TSS unit is a multidisciplinary team performing applied research in the field of trustworthy service systems (e.g. in Logistics and supply chain management, Telecommunication, as well as in Fintech and Industry 4.0) from the perspectives of big data, optimization, and IT security.

The successful applicant will take the role of a Leader in the Optimisation & Machine Learning group of TSS (ORISON), which presently counts 7 highly motivated researchers. The group is active research, development and innovation projects in the field of Optimisation and Machine Learning applied to the domains of Distributed Supply Chains, Mobility and Industry.

What you will be doing

The Luxembourg Institute of Science and Technology (LIST) is looking for an Optimisation and Machine Learning Senior R&T Associate. The successful candidate's main challenges will be to strengthen a work environment conducive to a constant bubbling of ideas that will allow developing innovative solutions to societal and industrial problems. He/she will be participating in fostering a positive work environment, enhancing good collaboration and teamwork, and for finding relevant synergies with other research groups at LIST and external partners at the national and international levels.

The selected candidate will have to further develop and lead some research topics in order that the ORISON becomes a nationally renowned and internationally visible research group, reaching a critical size and impact within 3/4 years. To this aim, and depending on her/his previous experience, the Leader will leverage different funding schemes at national and EU levels. Therefore, the successful Leader will have to write and submit research proposals for national and international competitive funding and has to manage some of these projects as the primary investigator. To that respect, he or she shall demonstrate a proven track record of funded proposals, ideally from European programs like H2020. As part of the RDI activities, results should be disseminated, valorised and transferred as patents, licenses, prototypes, publications, and technical reports and should build the foundation for future projects.

Job reference: IT IS-2020-006

Application file:

- A CV
- A motivation letter
- References names of two or three referees

Apply online:

<https://www.list.lu/en/jobs/it-job-opportunities/job-offer/itis-2020-006/>

Your working environment

The research department

<https://www.list.lu/en/research/itis/>

<https://www.list.lu/en/jobs/researchers/>



Successful candidates will develop research projects that will allow Operational Research meet future challenges such as those emerging from Big Data Analytics, Cyber-physical systems, Industry 4.0, Digital Twins and Smart environments.

Examples of related topics of interest for the ORISON group of TSS are:

- Robust and efficient algorithms for large scale stochastic optimization problems, including approaches based on hyper heuristics.
- Integrated optimization machine learning frameworks for large scale problems, big data and related analytics, in particular with respect to industrial and/or value chain problems.
- Adaptive responses and decision making processes under uncertainty through machine learning techniques such as reinforcement learning.
- Distributed Simulation in Operational Research.

Which profile we are looking for

Educational background

- PhD in areas including: Computer science & machine learning, operations research, industrial engineering, electrical engineering, or a related discipline

Required seniority

- Minimum 10-year RDI experience after the completion of PhD

Technical skills

- Excellent programming skills (Python/R/Matlab/C/C++/Java)
- Strong background in at least one of the following areas: machine learning, stochastic optimization, development of algorithms for large scale optimization, artificial intelligence, or big data and analytics
- Experience in the writing of large national and/or EU projects proposals
- Be used to set-up new academic and industrial collaborations
- Have a proven experience in the acquisition and management of RDI projects (EU and/or national)
- Demonstrate a strong experience in developing innovative products and services and bringing to the market new technological solutions
- Challenge and results-oriented mind-set
- Capacity to generate new ideas, concepts, and solutions
- Ability to collaborate within an interdisciplinary team
- Excellent communication skills (oral, written, presentation)

Language skills

- Excellent command of English
- Good command of any national language is also an asset

Interested ? Please apply online

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