

## Job description

<b>Duties: postdoctoral researcher in computer science</b>
<b>Occupation or type of job*: Postdoctoral researcher</b> <small>* REME, REFERENS, BIBLIOFIL</small>
<b>Fiche descriptive du poste</b>
<b>Category: A</b> <b>Status (tenure, non-tenure, open) : non tenure</b> <b>Field: computer science</b> <b>Quota: 100%</b> <b>Duration : 7 months</b>
<b>Affectation</b>
<b>Administrative : INSA Strasbourg</b> <b>Service or platform : plateforme savoirs en commun</b> <b>Geographic : INSA Strasbourg / 24 boulevard de la Victoire / 67084 Strasbourg Cedex</b>
<b>Main activities</b>
<b>Main Mission</b> <p>The postdoctoral researcher will work within the European ENERGETIC project, dedicated to developing the next generation of Battery Management Systems (BMS) to optimize the use of Li-ion batteries in both first life (mobility) and second life (stationary storage).</p> <p>Their mission will consist of developing multimodal approaches for understanding Li-ion battery aging, integrating heterogeneous data (electrochemical, electrical, thermal, usage history, etc.) together with advanced artificial intelligence methods.</p> <p>The main objectives are to:</p> <ul style="list-style-type: none"> <li>➔ design and experiment with multimodal AI models to improve the diagnosis and prediction of battery aging;</li> <li>➔ explore and integrate the use of Large Language Models (LLMs), LLM agent, Agentic AI models and automated reasoning approaches for the interpretation of complex data, the analysis of experimental protocols, and the generation of structured knowledge;</li> <li>➔ contribute to the development of tools relevant to next-generation BMS within the ENERGETIC consortium.</li> </ul>
<b>Management : no</b> <b>project management : yes</b> <b>travel: occasional</b> <b>salary: according french national pay scale for postdoctoral researchers</b>

### skills

#### Knowledge

- Solid understanding of machine learning, deep learning, and modern AI techniques
- Knowledge of multimodal data processing (time series, text, signals, etc.)
- Familiarity with Large Language Models (LLMs), natural language processing, and reasoning-based AI
- Understanding of electrochemical systems or Li-ion battery fundamentals (or strong willingness to learn)
- Experience with data analysis and scientific computing
- Proficiency in Python and common ML frameworks (PyTorch, TensorFlow, etc.)

#### Knows-how:

- Design, implement, and evaluate machine learning and deep learning models, including multimodal architectures
- Process, clean, and integrate heterogeneous datasets (electrical, thermal, textual, usage data, etc.)
- Develop reproducible data pipelines and experimental workflows

### Application profile

#### Level of study (with possible specification of the specialty): doctoral degree

(electrical engineering, chemistry, physics, materials science, computer engineering, industrial engineering).

**Level of experience:** young doctor.

**Language (and level required):** English and French.

### Follow-up and application procedures

**Vacancy date:** 1st January 2026.

**Publication dates (1 month for a permanent position):** 3 December 2025

Application will be received until the position is filled

Application requirements:

- Copy of identity document and diplomas
- Curriculum vitae
- Cover letter
- Any other relevant documents

**Application mail address :** [srh.recrutement@insa-strasbourg.fr](mailto:srh.recrutement@insa-strasbourg.fr)

Person to contact for the position : [ahmed.samet@insa-strasbourg.fr](mailto:ahmed.samet@insa-strasbourg.fr)

### INSA Strasbourg

The National Institute of Applied Sciences (INSA) of Strasbourg is a public institution of a scientific, cultural, and professional nature. It hosts 2,000 engineering and architecture students on its campus located in the Esplanade district, close to the city center. It employs 270 permanent and contractual staff members.

Its missions include:

- initial training of engineers and architects, scientific and technological research, continuing education for engineers and technicians, and the dissemination of scientific and technical culture.

INSA Strasbourg offers:

- 7 engineering specialties: civil engineering, surveying, electrical engineering, mechanical engineering, plastics engineering, mechatronics, and thermal, energy, and environmental engineering
- 6 apprenticeship-based programs (FIP, FISA)
- 1 architecture program

INSA Strasbourg received extended responsibilities and competencies on 1 January 2013.

The institute has implemented a system to address psychosocial risks (RPS), structured around three objectives: preventing risks, identifying them, and taking action to address them.

INSA Strasbourg has also set up a dedicated mechanism to address sexist, sexual, homophobic, or transphobic violence, intended for both staff and students.

Furthermore, INSA Strasbourg has established a professional equality plan, demonstrating its strong commitment to real and sustained progress toward gender equality.

The institution has been awarded the HRS4R (Human Resources Strategy for Researchers) label since 15 March 2022.

The school provides access to the nearby CROUS collective catering services, local sports facilities, and university libraries.

As part of its sustainable development policy, INSA contributes to the financing of soft mobility for its staff (reimbursement of 50% of public transportation costs and a sustainable mobility allowance for cycling, carpooling, shared mobility services, etc.).

Finally, eligible staff members may access teleworking according to the rules set by the school's governing bodies.