Grenoble INP - UGA is a renowned public institution of higher education and research, and a major player in the Grenoble ecosystem. It is the engineering and management institute of Grenoble Alpes University, and plays a leading role in the scientific and industrial community.

**Researcher in Mechatronics**

<table>
<thead>
<tr>
<th>Ad job reference</th>
<th>2023-RESEARCHMECAT-G2ELAB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research field</td>
<td>Power electronics, Mechatronics</td>
</tr>
<tr>
<td>Host laboratory</td>
<td>G2Elab (UMR 5269, Grenoble-INP, UGA and CNRS) / Website: <a href="https://g2elab.grenoble-inp.fr/">https://g2elab.grenoble-inp.fr/</a></td>
</tr>
<tr>
<td>Requested profile</td>
<td>First stage researcher (R1)</td>
</tr>
<tr>
<td>Location</td>
<td>Grenoble, France</td>
</tr>
<tr>
<td>Date of recruitment / contract term</td>
<td>08/01/2024 (12 months)</td>
</tr>
<tr>
<td>Contacts</td>
<td><a href="mailto:herve.chazal@g2elab.grenoble-inp.fr">herve.chazal@g2elab.grenoble-inp.fr</a>, <a href="mailto:robin.thomas@g2elab.grenoble-inp.fr">robin.thomas@g2elab.grenoble-inp.fr</a></td>
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Grenoble INP - UGA is a leading public institution accredited with the French label “Initiative d’excellence”. It offers innovative engineering and management programs, with an increasing internationalization of its course offers. The courses are grounded in sound scientific knowledge and linked to digital, industrial, organizational, environmental and energy transitions. The Engineering and Management Institute of Grenoble Alpes brings together more than 1300 staff members (teacher-researchers, lecturers, administrative and technical staff) and 8300 students, located on 8 sites (Grenoble INP - Ense3, Grenoble INP - Ensimag, Grenoble INP - Esisar, Grenoble INP - Génie industriel GI, Grenoble INP - Pagora, Grenoble INP - Phelma, Polytech Grenoble, Grenoble IAE and the INP Prepa). Grenoble INP is also a highly-ranked institution of higher education and research, leading the way in the fields of engineering and management on an international scale. It is a member of a large number of international academic and research networks. It is part of the European University UNITE!.

As part of Grenoble Alpes University, Grenoble INP has associated guardianship of 39 national and international research laboratories and of technological platforms. The research conducted there benefits both its socio-economic partners and its students. Grenoble INP is at the heart of the following scientific fields: physics, energy, mechanics and materials; digital; micronanoelectronics, embedded systems; industry of the future, production systems, environment; management and business sciences.

Grenoble INP - UGA is an equal opportunity employer committed to sustainability. Grenoble INP-UGA celebrates diversity and equity and is committed to creating an inclusive environment for all employees. All qualified applications will be considered without discrimination of any kind.

Research

The Grenoble Electrical Engineering Laboratory (G2Elab) covers a broad spectrum of skills in the field of electrical engineering research. Its activities can be summed up by the following key words: electrical energy, materials, innovative processes and systems, modelling and design. With more than 100 permanent staff, 110 PhD students and 50 Masters students, G2Elab is a major player in these fields at both national and international level.

Both aiming at improving the range and reducing the cost of electric vehicles, the SUMOT start-up project provides a solution for developing lighter, less material-intensive and less expensive motorization systems. Thanks to the implementation of an innovative power electronics device enabling the overfluxing of electric motors, we are able to massively increase their power density, while guaranteeing their performance.

You will join a team of researchers from the Grenoble Electrical Engineering Laboratory (G2Elab) in the SUMOT technology maturation phase, with a view to future start-up creation. This project is being carried out with the support of SATT Linksium.

Job description:

Your mission will be to directly take part in the development of an initial on-board proof of concept for the device. For this purpose:

- You will appropriate the in-house state-of-the-art on the power electronics device being developed.
- You will work on the development of device control strategies, their implementation and improvements (robustness, etc.).
- You will be directly involved in building a prototype of the device in collaboration with the laboratory’s technical team and an external subcontractor.
You will lead a phase of tests and validations of this prototype with the development of a motor test bench and then the integration of the prototype within a test vehicle.

You will directly participate in the generation of new intellectual property (patents...).

Profile requested:
You are an electrical engineer or equivalent, PhD needed, with a specialization in mechatronics (power electronics - control command - electrical machines).

An interest in setting up experiments (development and testing of prototypes, etc.) is appreciated, with experience of setting up prototypes and test benches during projects, internships or work experience.

You have a high degree of autonomy and initiative, demonstrated through internships or work experience.

Good communication skills and the ability to work as part of a team are also appreciated.

Specific requirements or conditions

Job details:
12-month fixed-term contract starting January 08th, 2024.

Gross monthly salary based on contractual salary scale: €2480 to €2930 (depending on experience).

You will have access to Linksium training courses (including those on entrepreneurship) and, at the end of this contract, depending on your motivation, you will have the opportunity to continue by participating in the creation of the startup resulting from the project.

Several ways of organizing teleworking according to the charter applicable to Grenoble INP

Consideration of different disability situations

Position in a restricted area: YES
(Protection of the nation's scientific and technical potential, requiring the authorization of the Defense Security Officer).

How to apply

To apply, send a RESUME and a COVER LETTER electronically before December 1st, 2023 to the following email address: robin.thomas@g2elab.grenoble-inp.fr

If you have any questions about the position, please contact: Hervé CHAZAL (herve.chazal@g2elab.grenoble-inp.fr) or Robin THOMAS (robin.thomas@g2elab.grenoble-inp.fr)