POSTION 1 : HARDWARE RESEARCH ENGINEER IN NEUROMORPHIC SPINTRONICS

Company: Spin-Ion Technologies

Location: Palaiseau - FRANCE

Type: Permanent (CDI), Full-time

Spin-Ion Technologies is a cutting-edge start-up company at the forefront of spintronic technologies, which has developed an innovative manufacturing solution to create the next generation of intelligent and energy-efficient neuromorphic chips.

To bring powerful AI solution to the edge, Spin-Ion Technologies is looking for a talented scientist to participate to the development of an Artificial Neural Network demonstrator (https://www.spin-ion.com/eic-project/) composed of magnetic devices based synapses. This demonstrator involves both hardware & software developments, which will bridge computational neuroscience and deep learning while generating strong impact for future embedded and neuromorphic systems. The project involves working with leading international teams in artificial intelligence and major industrial partners.

Position Overview

Spin Ion Technologies is seeking a high-level junior or senior scientist to join our dynamic team. The ideal candidate will have a very good knowledge in experimental and theoretical aspects of spintronics and neuromorphic computing. The candidate should be willing to open new directions in applications of neuromorphic computing as well as to contribute to business activities within the start-up.

Candidates should hold a PhDs with a desirable post-doctoral experience (2+ years). The ability to conduct successful R&D activity in a deep tech start-up environment is essential.

Responsabilities

- Conduct innovative research in the field of neuromorphic spintronics including modification of PMA materials by ion irradiation, magnetic characterization, device fabrication, electrical measurement of individual devices and neural network, simulations and data analysis.
- Collaborate and brainstorm with the Spin-Ion's team on the software and hardware aspects to contribute to the development of innovative neuromorphic systems.
- Stay abreast of the latest developments in spintronics, neuromorphic computing, and related fields to contribute to the advancement of the company's goals.
- File patents and generate know-how to contribute to the assets of Spin-Ion Technologies.
- Publish research findings and present at conferences to contribute to the external scientific community.
- Contribute to the development of business activities within the start-up.

- Manage research collaborations with academic and industrial partners.

Qualifications

While no candidate will embody every quality, the successful candidate will have experience with some of the following aspects :

- Ph.D. in Physics, Electrical Engineering and Materials Science.
- Expertise in Microelectronics, Spintronics, MRAM, neuromorphic computing.
- Expertise in MTJs materials and nanofabrication.
- Expertise in characterizations of magnetic materials and devices.
- Manage research collaborations with academic and industrial partners.
- Experience in neural network programming (Pytorch,..).
- Experience with data processing and analysis (Python,..).
- Good English communication skills.
- Enthusiastic to the work and strong team spirit.
- Good at managing projects and multiple tasks.
- Ability to be proactive and flexible.

Benefits

- Competitive salary.
- Incentive plan for patent submission.
- Opportunities for professional development and career advancement.
- Collaborative and innovative work environment.
- Flexible work schedule and remote work options.
- Professional development opportunities.

If you are passionate about pushing the boundaries of neuromorphic spintronics and contributing to groundbreaking research, we invite you to apply for this exciting opportunity. To apply, please send your resume and cover letter to dafine.ravelosona@spin-ion.com

Spin Ion Technologies is an equal opportunity employer and encourages candidates from all backgrounds to apply.

Application Deadline : March 31st, 2024

Salary : >50 k€ brut depending on experience