Permanent Research Engineer specializing in innovation for HPC

Reference	AD-JL-COOP-2024
Location	Cerfacs ALGO-COOP, Up to 2 days/week of remote working
Address	42 ave. G. Coriolis 31057 Toulouse, Toulouse.
Salary	From 40 to 60 K€/year gross depending on experience and qualifications
Period	Permanent position starting from Feb. 2024
Supervisor	Antoine Dauptain dauptain@cerfacs.fr
Required Level	Master's degree with 3 years of experience or PhD

The Host Organization

Cerfacs is a center for fundamental and applied research, specialized in modeling and numerical simulation. With its high-performance computing resources and expertise, it addresses major scientific and technical issues in public and industrial research. Cerfacs teams develop innovative software methods and solutions to meet the needs of the aerospace, climate, energy, and environment sectors. Cerfacs works closely with its seven partners: **Airbus, Cnes, EDF, Météo France, Onera, Safran, and TotalEnergies.**

The Host Team

In the **ALGO-COOP** team, the COOP department focuses on cross-functional activities aimed at improving, optimizing, and deploying scientific codes at a sustainable pace. It collaborates with scientific groups of European projects, Associates R&D teams, and Cerfacs teams themselves. Most of our projects are open-source and can be found on Cerfacs' GitLab: https://gitlab.com/cerfacs. You can learn more about the COOP team's objectives for 2023 on our team blog: https://cerfacs.fr/coop.

Description

- You ensure techological watch on HPC architectures and make the codes from CERFACS (including the CFD code AVBP) ready for their future use.
- You represent CERFACS on the topic of HPC : exchanges with associates, relationship with actors of the HPC field (GENCI, Computing centers, providers), taking part in or setting up national and international projects.
- You oversee the commissioning of CERFACS's codes on HPC architectures when they are bound to become available for their users in the short term.
- You provide operational support and training of CERFACS's people around HPC topics.

Desired Profile

- You have a Master's degree and 3 years of work experience or a PhD related to scientific computing or HPC.
- You have experience in the study and optimization of performance of scientific codes on massively parallel computers.
- You have experience in altleast two of those paradigms currently used in HPC : GPU programming, code generation, domain-specific languages (Kokkos, SYCL,...)
- You enjoy teamwork and keeping up with the various technologies involved with HPC.
- You master software engineering tools for HPC : Git/Gitlab, debuggers, profilers.
- You are capable of presenting collective results in internationally recognized conferences.

What we offer at Cerfacs:

- Broad access to HPC technologies, a rich relational environment, internationnaly recognized internal skills.
- A genuinely inclusive and equitable work environment.
- An individual health insurance policy ("mutuelle") that offers an excellent health coverage in addition to the state health insurance system known as "sécurité sociale" with the option of enrolling family members (partner and children).
- 6 weeks annual leave (with the possibility of 22 extra days of vacation per year if you opt for a 39-hour instead of a 35-hour work week)
- Flexible working arrangements with possibility to work from home up to two days per week
- A sustainable mobility package that allows the employer to cover home-to-work commuting costs of employees who commute to work by bike.

How to Apply?

You can discover our selection process on https://cerfacs.fr/coop/join-us. To apply, please send your CV and cover letter to the following email: dauptain@cerfacs.fr.
See you soon at CERFACS!