



Maison de la Simulation

Engineer in High Performance Computing

In order to reinforce its « Software engineering, parallelism and application development » team, la Maison de la Simulation is seeking for an engineer in High Performance Computing.

The successful candidate will coordinate and contribute to application software development in the fields of research of the laboratory. This work will be carried out within pluridisciplinary teams on mid and long term projects. The goal is to produce and use high-end simulation tools designed for the largest supercomputers for various scientific communities. He/she will be involved in the EoCoE project (www.eocoe.eu).

He/she will be part of teams of HPC experts from Maison de la Simulation and will work in collaboration with an international scientific community. He/she will have the opportunity to work on several production level HPC codes running on the most powerful supercomputers.

Required skills :

- PhD or master's degree in a scientific domain strongly connected to HPC ;
- Operational knowledge of techniques and programming language (Fortran90, C or C++) for application development;
- Strong experience in application parallelization (MPI, OpenMP) and scientific codes optimization on various architectures (SMP, MPP) running in Unix environment ;
- Skills to work in a team.

In addition, knowledge or experience in one of the following domain will be appreciated:

- Usage of performance analysis and debugging tools on parallel applications ;
- Knowledge of computer architectures
- Knowledge of scripting languages (Python, bash, ...).
- Knowledge of computer architecture
- Teaching experience

Localisation :

La Maison de la Simulation is situated on the Saclay research campus in the Paris area in the Digitéo building of the CEA/Saclay.

Please send your application (CV, motivation letter et references) as well as your potential requests for additional information to info@maisondelasimulation.fr. Applications will be examined starting from September 30, 2016 and until the position is filled.



La Maison de la Simulation :

La Maison de la Simulation (<http://www.maisondelasimulation.fr>) is a joint laboratory between five research institutions (CEA, CNRS, INRIA, University of Orsay and University of Versailles-StQuentin) whose aim is to support and stimulate the scientific community in order to get the best out of supercomputers, in particular those managed by the French GENCI and the European PRACE programs. La Maison de la Simulation promotes the emergence in France of a HPC community, and develops the strong synergies between researchers and engineers from various fields necessary for the important scientific breakthroughs expected from HPC to materialize. These initiatives are targeted to the current HPC users, as well as to the research of new application fields for the HPC.

To fulfil its missions, la Maison de la Simulation is organized around three axes:

- A multidisciplinary research centre focused on numerical simulation. La Maison de la Simulation hosts multidisciplinary research teams working on projects strongly linked to HPC, from mathematics, numerical methods, algorithms, computer science, software engineering to the physics of the studied phenomenon. These teams lead their own research activities and foster the emergence and the usage of common numerical tools.
- A service and expertise unit opened to scientific communities. La Maison de la Simulation hosts also a team of HPC specialists able to provide expertise and support to high level application developments to accepted projects. This expertise concerns parallel algorithms, development and optimisation of codes as well as data post-treatment and visualisation.
- A HPC training centre and scientific animation hub. La Maison de la Simulation is a HPC training centre and a scientific animation hub on the Saclay research campus that spans, thanks to its regional partners, from initial studies in partnership with universities to in-service training programs.

In order to fulfil its missions, La Maison de la Simulation is made of multidisciplinary teams gathering researchers, assistant professors, engineers, PhD students and post-docs working together on long term activities.