Job description

Engineer position in scientific computing

Jacques-Louis Lions Laboratory, UMR7598

Mission

Your mission will be to develop and optimize algorithms for matching shapes (curves, meshes) and images. It will require to use high performance computing tools, including parallelization and GPU programming. You will also need to manage the stability of these algorithms, their deployments, and the possible integration of Python libraries.

Activities

- Implement methods of mathematical analysis and intensive computing to meet a research need and exploit data from experiments or observations
- Install scientific computing tools and software on computing resources
- Advise researchers on the choice of software and mathematical methods to use depending on the problem to be addressed and the architecture of the computing resources used
- Develop codes to deal with specific problems
- Optimize calculation codes for new architectures
- Manage the life cycle of data input and output calculations
- Provide documentation, maintenance and publication of methods and tools developed
Skills

- Mastering the Python programming language
- Knowledge of GPU Programming
- General knowledge of high performance computing and methods of parallelization
- Knowledge of tools and techniques for scientific calculus
- Comprehension and written expression of English
- (Mathematics)

Context

You will work under the scientific direction of Barbara Gris, Jacques-Louis Lions laboratory on the site Pierre and Marie Curie, 4 place Jussieu. The Jacques-Louis Lions Laboratory, UMR7598, created in 1969, is a joint research unit between Sorbonne University, Paris Diderot University and the National Center for Scientific Research (CNRS). It also has close ties with Inria and Carnot Smiles. Its researches focus on the analysis, modeling and high-performance scientific computing of phenomena represented by partial differential equations.

The position is a 2-year fixed-term contract, from January 1, 2019 to December 31, 2020. The remuneration follows the CNRS salary scales and depends on the experience of the recruited person.

For more information and to apply: contact Barbara Gris gris@ljll.math.upmc.fr (join your CV).