2018-00817 - Temporary scientific engineer / Biologie et santé, Sciences de la vie et de la terre / Modeling and Control for Life Sciences

Contract type : Public service fixed-term contract
Renewable contract : Oui
Level of qualifications required : Graduate degree or equivalent
Function : Temporary scientific engineer
Level of experience : From 3 to 5 years

Context

- Collaboration with a hospital and other biomedical institutions in France and Germany.
- Funding by public institution.
- Co-supervision by two experienced INRIA researchers (Dirk Drasdo & Irene Vignon-Clementel)

Assignment

Assignments:
The objective of the project in close collaboration with clinical and biological partners is simulation of blood/bile flow and transport over many spatial scales ranging from micro-vessel networks up to entire body circulation. The task of the candidate is the implementation of the models in different codes and running simulations that will directly be compared to data. The position also requires analysis of images to reconstruct network architectures.

For a better knowledge of the proposed research subject:
PhD thesis on request. (x@inria.fr ; x: “dirk.drasdo” or “irene.vignon-clementel”)

Collaboration:
The recruited person will be in connection with Hopital Paul Brousse (Villejuif), Leibniz Institute IfADo (Germany), University Clinics & German Cancer Center Heidelberg (Germany).

Main activities

Main activities:
- Implementation of flow and transport models in C++ in existing software packages (TiSim, LumpedFlow by INRIA)
- Testing and executing flow simulations
- Analysis of biological data, mainly image data
- Communication with biological / clinical partners
- Writing of documentation and report

Skills

Technical skills and level required: Computational fluid dynamics, transport
Languages: English necessary, French welcome

Benefits package

- Subsidised catering service
- Partially-reimbursed public transport

Remuneration

Poste localisé Paris 12ème.
Rémunération selon profil et expérience.

General Information

- Theme/Domain: Modeling and Control for Life Sciences Biologie et santé, Sciences de la vie et de la terre (BAP A)
- Town/City: Paris
- Inria Center: CRI de Paris
- Starting date: 2018-08-01
- Duration of contract: 5 months
- Deadline to apply: 2018-07-31

Contacts

- Inria Team: MAMBA
- Recruiter: Drasdo Dirk / dirk.drasdo@inria.fr

About Inria

Inria, the French National Institute for computer science and applied mathematics, promotes “scientific excellence for technology transfer and society”. Graduates from the world's top universities, Inria's 2,700 employees rise to the challenges of digital sciences. With its open, agile model, Inria is able to explore original approaches with its partners in industry and academia and provide an efficient response to the multidisciplinary and application challenges of the digital transformation. Inria is the source of many innovations that add value and create jobs.

The keys to success

- Background in computational fluid mechanics
- Engineering, physics or mathematics degree
- Open in communicating with people from other scientific disciplines
- Flexible and open to acquisition of know skills and knowledge

Conditions for application

Defence Security:
This position is likely to be situated in a restricted area (ZRR), as defined in Decree No. 2011-1425 relating to the protection of national scientific and technical potential (PPST). Authorization to enter an area is granted by the director of the unit, following a favourable Ministerial decision, as defined in the decree of 3 July 2012 relating to the PPST. An unfavourable Ministerial decision in respect of a position situated in a ZRR would result in the cancellation of the appointment.

Recruitment Policy:
As part of its diversity policy, all Inria positions are accessible to people with disabilities.

Warning: you must enter your e-mail address in order to save your application to Inria. Applications must be submitted online on the Inria website. Processing of applications sent from other channels is not guaranteed.