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  
**Fonction:** Temporary scientific engineer  
**Level of experience:** From 3 to 5 years

**Context**
- Collaboration with hospitals 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)
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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). Authorisation 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.