General Information

- **Theme/Domain**: Vision, perception and multimedia interpretation
- **Town/city**: Villers-lès-Nancy
- **Inria Center**: CRI Nancy - Grand Est
- **Starting date**: 2018-11-01
- **Duration of contract**: 1 year, 4 months
- **Deadline to apply**: 2018-06-06

Contacts

- **Inria Team**: MAGRIT
- **Recruiter**: Kerrien Erwan / erwan.kerrien@inria.fr

The keys to success

**Application deadline**

June 6th, 2018 (Midnight Paris time)

**How to apply**

Upload your file on jobs.inria.fr in a single pdf or zip file, and send it as well by email to erwan.kerrien@inria.fr. Your file should contain the following documents:

- **CV** including a description of your research activities (2 pages max) and a short description of what you consider to be your best contributions and why (1 page max and 3 contributions max); the contributions could be theoretical or practical. Web links to the contributions should be provided. Include also a brief description of your
reconstruction algorithm of the vascular surface from patient data. The third module will develop a collision and friction management method. It will exploit the properties of implicit surfaces to integrate them continuously along the curve, in order to formulate mechanical stresses both efficiently and mathematically accurately. Finally, a fourth module will cover the tasks of evaluation and validation of the model developed. The recruited person will be involved in the first two modules and responsible for the latter two.

References


Main activities

The recruited person will pursue research activities on computer models of 1D mechanical structures. A particular focus will be put on contact management: exact force computation and application, response (e.g. deformation) of contact surface, self-contact. The proposed solutions will rely on the basis of Solid Mechanics but will harvest the field of Computer Graphics to efficiently leverage implicit surfaces. A second focus will be placed on validation, and the evaluation of the physical accuracy of the proposed simulation framework. In that context, we’ve been collaborating for many years with physicians at the local University Hospital.

Skills

Technical skills and level required: PhD in computer science or applied mathematics; solid knowledge in computer graphics; good to excellent level in C++ programming; knowledge in solid mechanics as well as skills in computer vision and experience in designing and carrying out experimentations will be appreciated.

Languages: French or English

Relational skills: readiness to work in a team, in a multicultural environment; ease in communicating research work; eagerness to convey new research ideas

Benefits package

- Subsidised catering service
- Partially-reimbursed public transport
- Social security
- Paid leave
- French courses

Remuneration

Salary: 2653€ gross/month

scientific and career projects, and your scientific positioning regarding the proposed subject. The report(s) from your PhD external reviewer(s), if applicable.

If you haven't defended yet, the list of expected members of your PhD committee (if known) and the expected date of defense (the defense, not the manuscript submission).

In addition, at least one recommendation letter from your PhD advisor should be sent directly by their author(s) to erwan.kerrien@inria.fr.

Applications are to be sent as soon as possible.

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.