2018-01123 - Analysis of light transport operator using three-point approaches

Contract type: Public service fixed-term contract
Level of qualifications required: PhD or equivalent
Fonction: Post-Doctoral Research Visit
Level of experience: Recently graduated

Context
The job takes place within the framework of a partnership funded by the French National Research Agency (ANR) and using the common tools developed by and used in the CALiTrOp consortium (such as PBRT V3).
Some regular travels for the consortium and for presenting the scientific results are foreseen.

Assignment
Assignments:
Under the supervision of Xavier Granier, the recruited person will have to develop tools to generate light-transport operators with the three-points formalism. Furthermore, she will have to develop tools to analyse the generated data.

For a better knowledge of the proposed research subject:
The recruited person needs to be well trained on the integration methods (stochastic and deterministic) for the light transport operator (“The Rendering Equation”). Furthermore, some knowledge on PBRT V3 is welcomed.

Collaboration:
The recruited person has to interact with all the members of the French consortium CALiTrOp.

Main activities
Main activities (5 maximum):
- Develop software
- Test, change up until validation
- Propose numerical and algorithmic solutions
- Present the works' progress to partners
- Distribute the results via scientific publications

Additional activities (3 maximum):
- Analyse the requirements of partners
- Write reports

Skills
Technical skills and level required:
C++; 3D; Rendering Equation; Numerical techniques
Languages: French and English
Other valued appreciated: easy contact person

Benefits package
- Subsidised catering service
- Partially-reimbursed public transport
- Social security
- Paid leave

Remuneration
Gross monthly salary: 2632,00 €

General Information
About Inria

Inria, the French national research institute for the digital sciences, promotes scientific excellence and technology transfer to maximise its impact. It employs 2,400 people. Its 200 agile project teams, generally with academic partners, involve more than 3,000 scientists in meeting the challenges of computer science and mathematics, often at the interface of other disciplines. Inria works with many companies and has assisted in the creation of over 160 startups. It strives to meet the challenges of the digital transformation of science, society and the economy.

The keys to success

The recruited person need to be pationated by the propagation of light inside 3D environment. She/he has to be fast in the development of software. Furthermore, she/he need to have the sense of service toward the common success.

Conditions for application

Please send the following documents:
- CV containing a list of publications
- motivation letter
- letter(s) of recommendation

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.