2023-06653 - Software Engineer for Development on 3D Gaussian Splatting

**Contract type:** Fixed-term contract.
**Level of qualifications required:** Graduate degree or equivalent.
**Other valued qualifications:** PhD, Master.
**Function:** Temporary scientific engineer.
**Level of experience:** Recently graduated.

**Remuneration**
From 2692 € gross monthly (according to degree and experience).

**Benefits package**
- Access to vocational training.
- Social, cultural and sports events and activities.
- Possibility of teleworking and flexible organization of working hours.
- Possibility of part-time work or reduction in working hours.
- Possibility of exceptional leaves (sick children, moving home, etc.).
- Possibility of teleworking and flexible organization of working hours.
- Access to vocational training.
- Access to mutual insurance (subject to conditions).

**Assignment**
The work will include the development of new features for 3DGS, including porting to other rendering APIs/platforms, integrating the viewer with python, optimizing the method by removing pytorch overhead, optimizing pose estimation and handling exposure correctly. Some such features may come from requests from industrial partners. Other tasks will also include assisting Ph.D. students and postdocs in their research projects on software engineering tasks of various kinds.

**Skills**
The ideal candidate will have a Masters in Computer Graphics (including courses in interactive/real-time rendering), and have taken some courses in Machine Learning, knowledge of OpenGL, and other real-time rendering APIs (Vulkan, DirectX, Metal) is required, as well as experience in C++ and python, together with (at least basic) knowledge of pytorch. Experience in work in moderately complex software systems is essential. The specific background requirements are listed below.

**Remuneration**
From 2692 € gross monthly (according to degree and experience).

**Contact**
If you apply, 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.

**General Information**
- **Theme/Domain:** Interaction and visualization.
- **Software engineering (Bachelor's degree):**
- **Town/Office:** Sophia Antipolis.
- **Inria Centre:** Côte d’Azur.
- **Starting date:** 2023-10-01.
- **Duration of contract:** 1 year.
- **Deadline to apply:** 2023-11-12.

**About Inria**
Inria is the French national research institute dedicated to digital science and technology. It is part of the exciting projects in a team of motivated researchers and engineers working to meet the challenges of digital technology. Inria employs numerous talents in over forty fields of expertise, and engineers working to meet the challenges of digital technology. Inria employs numerous talents in over forty fields of expertise, and the French national research institute dedicated to digital science and technology. It is part of the exciting projects in a team of motivated researchers and engineers working to meet the challenges of digital technology.

**About the research centre or Inria department**
The Inria centre at Université Côte d’Azur includes 37 research teams and 8 support services. The centre’s staff (about 500 people) is made up of scientists of different nationalities, engineers, technicians and administrative staff. The teams are mainly located on the university campuses of Sophia Antipolis and Nice as well as Montpellier, in close collaboration with research and higher education laboratories and establishments (Université Côte d’Azur, CNRS, INRAE, INSERM...), but also with the region’s economic players.

With a presence in the fields of computational neuroscience and biology, data science and modeling, software engineering and certification, as well as collaborative robotics, the centre at Université Côte d’Azur is a major player in terms of scientific excellence through its results and collaborations at both European and international levels.

**Context**
Our recent method “3D Gaussian Splatting for Real-Time Radiance Field Rendering” is currently the state of the art method for real-time rendering of captured environments. The method has been tested by hundreds of users, and shown to have top-notch performance for applications varying from industrial rendering to e-commerce.

The are seeking to hire a highly motivated candidate who will join the team, start as junior, and develop alongside the GRAPHDECO group that is continuing the advancement of new research ideas on this project. This position is a great opportunity to be part of a world-class research lab on exciting and timely problems.

The successful candidate will acquire top-notch first-hand knowledge and experience in radiance field rendering with extremely high demand today, providing excellent skills for careers in both industry and academia.

**The keys to success**
The ideal candidate will be familiar with the main concepts of computer graphics and real-time/interactive rendering, and will have experience with moderately large software system development. The ability to work and interact well with a team of motivated researchers is essential. The specific background requirements are listed below.

**Instruction to apply**
- **Deadline to apply:** 2023-11-12.
- **Starting date:** 2023-10-01.
- **Duration of contract:** 1 year.
- **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 (PST). 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 PST. 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.