Offre n°2025-08987

R&D Engineer - Computer Graphics Developing a Blender Add-on for 3D Design Drawing

Le descriptif de l'offre ci-dessous est en Anglais

Type de contrat : CDD

Niveau de diplôme exigé : Bac + 5 ou équivalent

Fonction : Ingénieur scientifique contractuel

A propos du centre ou de la direction fonctionnelle

The Inria centre at Université Côte d'Azur includes 42 research teams and 9 support services. The centre's staff (about 500 people) is made up of scientists of di?erent 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 regiona 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 Inria 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.

Contexte et atouts du poste

Context and objective:

Designers draw extensively to externalize their ideas and communicate with others. However, drawings are currently not directly interpretable by computers. To test their ideas against physical reality, designers have to create 3D models suitable for simulation and 3D printing. But while drawing is visceral and quick, 3D modeling requires careful planning, precision and constraints to manipulate 3D shapes on screen.

The ambition of our research group is to bring the power of 3D engineering tools to the creative phase of design by allowing designers to create 3D models by drawing. To this end, we have developed a technology capable of automatically lifting design drawings to 3D (https://ns.inria.fr/d3/SymmetrySketch/). Our goal is

now to demonstrate how this technology can streamline the Computer-Aided-Design workflow by interfacing it with the popular 3D modeling software Blender.

Location:

The project will be developed at Inria Sophia Antipolis, in the GraphDeco group (https://team.inria.fr/graphdeco/). The group does research on image synthesis and computer-aided design. Salary will follow the Inria grid and depends on experience.

Mission confiée

We have already developed a first Blender add-on that allows users to draw using the Grease Pencil drawing interface and to obtain a 3D reconstruction of their drawing thanks to our technology (https://gitlab.inria.fr/D3/blender-addon-symmetry-sketch). Our next objective is to compare this approach with emerging data-driven methods based on deep learning, and to combine our algorithm with these methods to achieve higher robustness and generality.

See more details here: https://www-sop.inria.fr/members/Adrien.Bousseau/erc/blender_pluginv2.pdf

Principales activités

The candidate will be in charge of designing and implementing the Blender add-on based on our technology, and of planning and conducting testing sessions with end users (professional designers and 3D modelers).

Compétences

The candidate must have experience in Python programming and in developing 3D graphics applications. Knowledge of Blender, geometry processing and/or machine learning libraries is a plus, although those skills can be acquired as part of the mission.

Avantages

- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking and flexible organization of working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training
- Contribution to mutual insurance (subject to conditions)

Rémunération

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

Informations générales

- **Thème/Domaine :** Interaction et visualisation
  Ingénierie logicielle (BAP E)
- **Ville :** Sophia Antipolis
- **Centre Inria :** Centre Inria d'Université Côte d'Azur
- **Date de prise de fonction souhaitée :** 2025-09-01
- **Durée de contrat :** 12 mois
- **Date limite pour postuler :** 2025-07-31

Contacts

- **Équipe Inria :** GRAPHDECO
- **Recruteur :**
  Bousseau Adrien / Adrien.Bousseau@inria.fr

A propos d'Inria

Inria est l'institut national de recherche dédié aux sciences et technologies du numérique. Il emploie 2600 personnes. Ses 215 équipes-projets agiles, en général communes avec des partenaires académiques, impliquent plus de 3900 scientifiques pour relever les défis du numérique, souvent à l'interface d'autres disciplines. L'institut fait appel à de nombreux talents dans plus d'une quarantaine de métiers différents. 900 personnels d'appui à la recherche et à l'innovation contribuent à faire émerger et grandir des projets scientifiques ou entrepreneuriaux qui impactent le monde. Inria travaille avec de nombreuses entreprises et a accompagné la création de plus de 200 start-up. L'institut s'e?orce ainsi de répondre aux enjeux de la transformation numérique de la science, de la société et de l'économie.

L'essentiel pour réussir

The successful candidate should have knowledge in computer graphics and/or computer vision, and be interested in 3D modeling and related topics (geometry processing, human-computer interaction, numerical optimization, machine learning).

The candidate should also be interested in developing tools to support designers, and in interacting with such expert users.

Attention: Les candidatures doivent être déposées en ligne sur le site Inria. Le traitement des candidatures adressées par d'autres canaux n'est pas garanti.

Consignes pour postuler

Applications must be submitted online on the Inria website. Collecting applications by other channels is not guaranteed.

Sécurité défense :
Ce poste est susceptible d'être affecté dans une zone à régime restrictif (ZRR), telle que définie dans le décret n°2011-1425 relatif à la protection du potentiel scientifique et technique de la nation (PPST). L'autorisation d'accès à une zone est délivrée par le chef d'établissement, après avis ministériel favorable, tel que défini dans l'arrêté du 03 juillet 2012, relatif à la PPST. Un avis ministériel défavorable pour un poste affecté dans une ZRR aurait pour conséquence l'annulation du recrutement.

Politique de recrutement :
Dans le cadre de sa politique diversité, tous les postes Inria sont accessibles aux personnes en situation de handicap.