



Offer #2025-09622

PhD Position F/M SPORTSVIZ: Advanced Situated Visualizations for Sports Videos

Contract type : Fixed-term contract

Level of qualifications required : Graduate degree or equivalent

Fonction : PhD Position

About the research centre or Inria department

The Inria Saclay-Île-de-France Research Centre was established in 2008. It has developed as part of the Saclay site in partnership with **Paris-Saclay University** and with the **Institut Polytechnique de Paris** .

The centre has 40 [project teams](#) , 27 of which operate jointly with Paris-Saclay University and the Institut Polytechnique de Paris; Its activities occupy over 600 people, scientists and research and innovation support staff, including 44 different nationalities.

Context

Location & Duration

- The PhD student will enroll at the [Universite-Paris Saclay](#) (12th worldwide in the Shanghai ranking in 2024 and the top ranking French university) in the [computer science graduate school](#) . The student will be hosted in the Aviz team at Inria, which is the French national research institute dedicated to digital science and technology.
- Location: Bât 660, Digiteo Moulon, Université Paris-Saclay, 91190, Gif-Sur-Yvette
- The PhD funding is available for a duration of three years. While the previous page lists September as the starting date, the money for the project is available from now and therefore **earlier start dates are possible**.

Benefits package

- Subsidized meals
- Partial reimbursement of public transport costs

- Vacation: around 40 days a year + 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
- Social security coverage

Remuneration

- Gross salary : ~2.200 euros/month

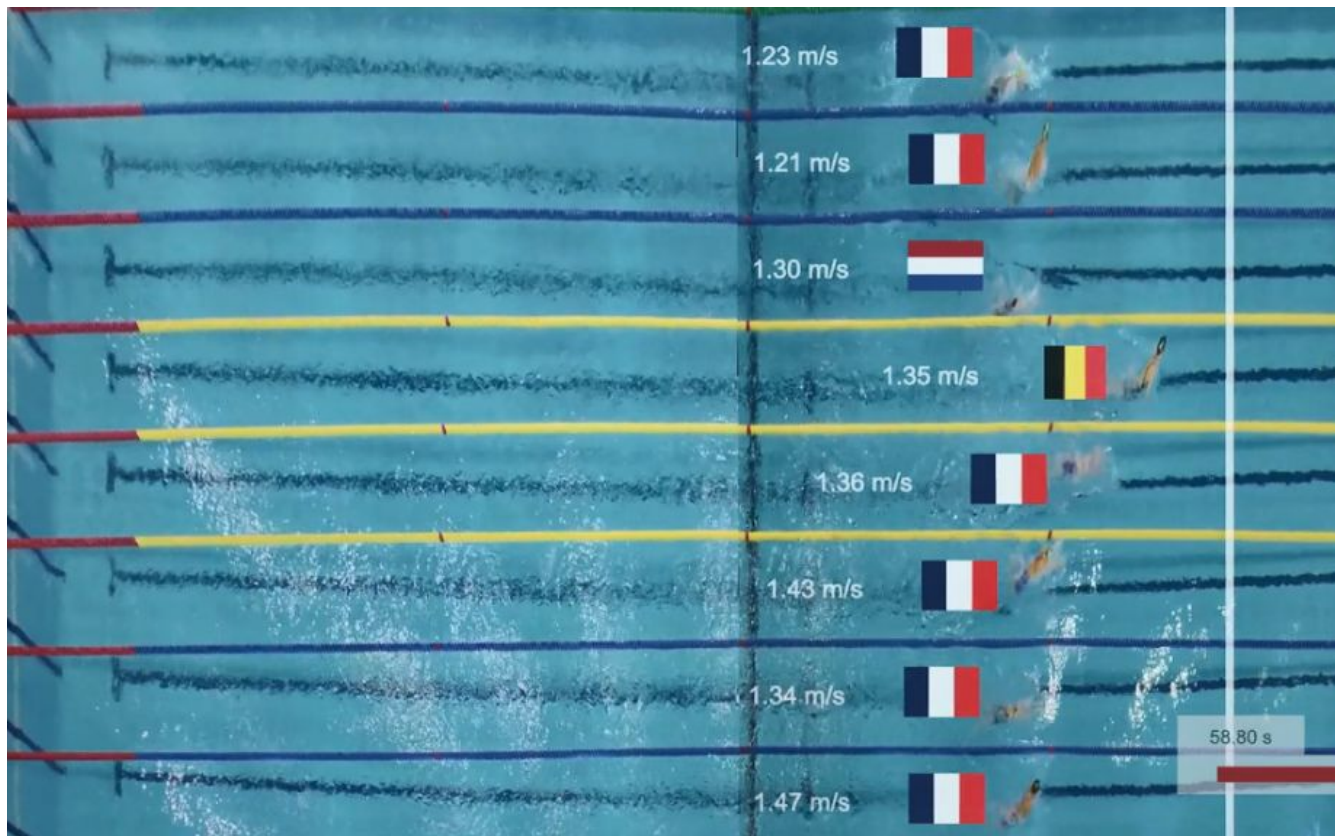
Collaboration

- The project is part of a nationally funded research project [SportsViz](#) in which we collaborate with the Ecole Centrale de Lyon and Inria Grenoble.

Travel

- Regular travel is foreseen for this post to present research results and/or talk to athletes or coaches. Travel expenses are covered within the limits of the project.

Assignment



This PhD thesis is part of a nationally project in which we aim to improve audience engagement through advanced situated visualizations in sports videos. Specifically, we envision to embed large volume of heterogeneous, performance-related sports data with innovative data visualizations directly into sports videos. While data as visualization have a strong narrative and analytical power for sports analysis they currently are not integrated where and when they are relevant in videos. The standard way scientists or broadcasters display data is using visualizations inserts superimposed on the video rather than situated into the sports 3D scene e. g. on the wall, leveraging the physical context to show the progress, emphasize key performance factors (e. g. forces, speed) and put them in perspective with competitors. The resulting situated visualization would enable an informed decision-making process to make strategic choices, but also would engage a broader audience such as sports fans while preserving and enhancing the viewing experience.

Main activities

For more details [see the project description](#).

This phd project is part of a project in which we aim to improve audience engagement through advanced situated visualizations in sports videos. Specifically, we envision to use the narrative power of data visualization to engage a broader audience such as sports fans. We want to show them additional data about athletes of interest while preserving and enhancing their viewing experience.

As part of this research there are multiple possible topics to start with.

1. **Design oriented:** Situated visualization onboarding. When audiences watch situated visualizations embedded in video online such as for the Olympics ([examples here](#)) it is unclear what designs should look like to be read and understood the most easily. This project involved creating and testing multiple design alternatives.
2. **Qualitative research oriented:** Elicit requirements for when and how situated visualizations should appear and disappear in sports videos. Test different alternatives in an online user study. We expect from this line of research to build a series of guidelines on best design practices for situated visualizations.
3. **Perception oriented:** Run perceptual studies with participants to learn how well they are able to read situated visualizations in sports videos. You can compare specific designs according to: how many different types of data viewers can track, what kind of changes they will perceive, or for how long a visualization should be visible to be useful.
4. **User experience evaluation:** Run user experience evaluations with a general population of sports fans experiences seeing situated visualization in sports videos. Create guidelines on what to improve for a general audience.

The phd project is expected to lead to high-quality scientific publications in the domain of visualization and/or human-computer interaction (IEEE VIS, IEEE TVCG, ACM CHI, etc) and present in relevant conferences. In addition, the students will be involved in dissemination activities around the constructed

prototypes in public forums such as open research days, workshops, etc.

Skills

We are looking for someone interested in sports, motivated, and with a background in visualization and/or human-computer interaction.

Plus:

- Some data analysis experience (Python, R)
- Experience working with video data
- Experience with empirical user studies
- Interest in a future publication
- Experience implementing data visualizations

Language: As Aviz is a very international research team, the student should be comfortable speaking in English with his/her colleagues and have good competences writing and presenting research results in English (or be highly motivated to improve his/her competences).

Benefits package

- 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 (after 6 months of employment) 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
- Social security coverage

Remuneration

Gross salary : 2.300 euros/Month

General Information

- **Theme/Domain** : Interaction and visualization Information system (BAP E)
- **Town/city** : Gif-Sur-Yvette
- **Inria Center** : [Centre Inria de Saclay](#)
- **Starting date** : 2026-09-01
- **Duration of contract** : 3 years
- **Deadline to apply** : 2026-03-17

Contacts

- **Inria Team :** [AVIZ](#)
- **PhD Supervisor :**
Isenberg Petra / Petra.Isenberg@inria.fr

About Inria

Inria is the French national research institute dedicated to digital science and technology. It employs 2,600 people. Its 200 agile project teams, generally run jointly with academic partners, include more than 3,500 scientists and engineers working to meet the challenges of digital technology, often at the interface with other disciplines. The Institute also employs numerous talents in over forty different professions. 900 research support staff contribute to the preparation and development of scientific and entrepreneurial projects that have a worldwide impact.

The keys to success

The student should have a keen interest in research, reading the scientific literature, engaging in research discussions, but also writing and communicating their findings.

The student is expected to write high-quality scientific publications in the domain of visualization and/or human-computer interaction (IEEE VIS, IEEE TVCG, ACM CHI, etc) and present them in relevant conferences. In addition, the student will be involved in dissemination activities around the constructed prototypes in public forums such as open research days, workshops, etc.

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.

Instruction to apply

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.