In summary, we aim at paving the way for a pervasive use of visualizations and thus a better and more nuanced understanding of scenarios. For example, visualizations can be used to track elevation profiles, or mobile phone visualizations used in emergency response work environments, furthering the research agenda of "beyond-the-desktop" visualizations. Ultimately, this research direction aims to empower people to use visualizations outside a typical office or laboratory setting.

Our focus on small or moving displays is novel and timely while supporting realistic usage scenarios. It is still unclear to which extent our knowledge of desktop-sized visualizations transfers to contexts where visualizations are used "on the go," while walking, riding a vehicle, or running. Can any type of visualization be read when on the move? What types of visualizations can be used for tasks such as navigation while jogging or other activities when the arms are shaking (e.g., while jogging or moving in a vehicle)?

It is still unclear to which extent our knowledge of desktop-sized visualizations transfers to contexts where visualizations are used "on the go," while walking, riding a vehicle, or running.

**Impact**

Our focus on small or moving displays is novel and timely while supporting realistic usage scenarios. Ultimately, this research direction aims to empower people to use visualizations outside a typical office or laboratory setting. Small or moving displays challenge traditional visualization paradigms and require new research directions.

In summary, we aim at paving the way for a pervasive use of visualizations and thus a better and more nuanced understanding of the complex world around us.

**Principales activités**

**Main activities (5 maximum):**

- Designing and implementing small visualizations for smartwatches or fitness trackers
- Running human subject experiments to analyze the effectiveness of these visualizations
- Writing research papers on the results
- Literature analysis

**Additional activities (3 maximum):**

- We expect students to take part in team meetings and help occasionally with tasks associated with running a team (e.g., organization of activities)
- There are no teaching requirements associated with this position

**Compétences**

We are in particular looking for students with the following expertise (or a significant subset):

- A highly motivated student with past experience in visualization, HCI, or related computer science areas

---

**Informations générales**

**Type de contrat:** CDD de la fonction publique

**Niveau de diplôme exigé:** Bac + 5 ou équivalent

**Function:** Doctorant

**A propos du centre ou de la direction fonctionnelle**

Located at the heart of the main national research and higher education cluster, member of the Université Paris Saclay, a major actor in the French Investments for the Future Programme (Idex, Labex, IRT, Equipex), and partner of the main establishments present on the plateau, the centre is particularly active in three major areas: data and knowledge, safety, security and reliability; modelling, simulation, and optimization (with priority given to energy).

The 450 researchers and engineers from Inria and its partners who work in the research center's 28 teams, the 50 research support staff members, the high-level equipment at their disposal (image walls, high-performance computing clusters, sensor networks), and the privileged relationships with prestigious industrial partners, all make Inria Saclay Île-de-France a key research center in the local landscape and one that is oriented towards Europe and the world.

**Contexte et atouts du poste**

This PhD position is part of a joint Franco-German project between the Aviz team at Inria and the Visualization research group at the University of Stuttgart. The work will take place in the Aviz team about 20km south of Paris, France but regular travel to Stuttgart is part of the position.

You can find more information on the Aviz team as well as the position on our website: https://www.aviz.fr/Research/JobsMicroVis

**Mission confiée**

The PhD student will study very small data visualizations, micro visualizations, in display contexts that can only dedicate minimal rendering space for data representations. The increasing demand for data visualizations on small mobile devices such as fitness tracking armbands, smart watches, or mobile phones drives this research direction. Given this usage context, the goal is to focus on situations in which visualizations are used "on the go," while walking, riding a vehicle, or running.

**Research Goals**

It is still unclear to which extent our knowledge of desktop-sized visualizations transfers to contexts that involve minimal display space, diverse viewing angles, and moving displays. We want to understand how visualizations can be read when they are worn on a person. On certain types of visualizations, it is not clear how visualizations can be read when they are worn on a person.

**Impact**

Our focus on small or moving displays is novel and timely while supporting realistic usage scenarios. Ultimately, this research direction aims to empower people to use visualizations outside a typical office or laboratory setting. Small or moving displays challenge traditional visualization paradigms and require new research directions.

In summary, we aim at paving the way for a pervasive use of visualizations and thus a better and more nuanced understanding of the complex world around us.
experience running user studies with human participants,
experience with Android/Wear OS software development,
experience with graphic design,
ability to communicate on a regular basis with and receive and incorporate feedback from research advisors,
ability to clearly and concisely communicate in English in written and spoken form.

If you are interested in this PhD position, please send your application to Petra Isenberg (petra.isenberg@inria.fr) and Jean-Daniel Fekete (jean-daniel.fekete@inria.fr). To apply for the position provide a CV detailing your past experience as well as a motivation letter that described why you are interested in this position in particular.

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 (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

Rémunération
Monthly gross salary: 1,982 euros (1st and 2nd year), 2,085 euros (3rd year)