

Hugo Brument

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PROFILE

- » PhD candidate in Computer Science at Univ. Rennes
- » Working in the field of Virtual Reality (VR) and looking for a PostDoc position

EDUCATION

- 📅 2018/10–present **PhD in Computer Science**
Univ. Rennes 📍 Rennes, France
 - » Towards User-Adapted Navigation Techniques in Virtual Environments: Study of Factors Influencing Users Behavior in Virtual Reality
 - » Multidisciplinary approach combining Virtual Reality and Perception
 - » Objective: having a better understanding of human behavior during navigation in VR
 - » Prospects: Improving users navigation in VR through user-adapted interactions
 - » Defense tentative date: 3rd December 2021
 - » Provisional jury: Frank Steinicke (TU Hamburg), Jean-Rémy Chardonnet (Institut Arts et Métiers de Chalon-sur-Saône), Guillaume Moreau (IMT Atlantique), Anouk Lamontagne (McGill University), Gerd Bruder (Univeristy of Central Florida), Ferran Argelaguet (Inria Rennes), Maud Marchal (Insa Rennes), Anne-Hélène Olivier (Univ. Rennes).
- 📅 2017/09–2018/06 **Master degree in Research in Computer Science**
Univ. Rennes 📍 Rennes, France
 - » Specialization in Computer Graphics and 3D interaction
- 📅 2015/09–2018/06 **Engineering Degree in Computer Science**
Institut National des Sciences Appliquées 📍 Rennes, France
 - » Three years studying Computer Science, with a big data speciality
- 📅 2013/01–2015/02 **Bachelor Degree in Computer Science**
IUT Caucriauville 📍 Le Havre, France
 - » Two-year university degree in technology in Computer Science

PROFESSIONAL EXPERIENCES

- 📅 2018/02–2018/06 **Master Thesis**
INRIA and Technical University of Vienna 📍 Rennes, France and Vienna, Austria
 - » Design of an experimental platform to study body segment behavior during navigation in VR with different techniques
- 📅 2017/07–2017/08 **Internship**
Tricount SA 📍 Bruxelles, Belgium
 - » Worked on the evolution of REST backend services
- 📅 2016/07–2016/08 **Internship**
FMCS 📍 Honfleur, France
 - » Design and implementation of a website and a wordpress blog for the company
- 📅 2014/12–2015/01 **Internship**
Editions Hogrefe 📍 Paris, France
 - » Embedding of psychometric tools in new compagny's software

SKILLS

- » Programming: Unity 3D, C#, Java, C++, Git
- » Design, implementation and assessment of user studies
- » Statistics: R, Matlab
- » Scientific writing (LateX)
- » Reviewing scientific articles in VR-related conferences and journals
- » Research ethics and scientific integrity

TEACHING ACTIVITIES

- » Introduction to programming for 1st year students in engineering school (104 hours)
- » Oriented Object Programming for 2nd year students in engineering school (42 hours)
- » One-year mentoring an autistic student to help completing a bachelor degree at the University of Le Havre

GRANTS

- » Grant from the Ministry of Higher Education and Research funding a PhD degree (High-selection process, top 10% of master students applying)
- » 3-month grant from the doctoral school of Brittany for scientific mobility at the University of Central Florida (top 25% of PhD students applying at Inria)

AWARDS

- » Best scientific paper award at EUROVR 2020
- » Best 3DUI Demo award at IEEE VR 2019

PUBLICATIONS

- » **Brument, H.**, Bruder, G., Marchal, M., Olivier, A. H., & Argelaguet, F. (2021). Understanding, Modeling and Simulating Unintended Positional Drift during Repetitive Steering Navigation Tasks in Virtual Reality. *IEEE Transactions on Visualization and Computer Graphics*. <https://doi.org/10.1109/TVCG.2021.3106504>
- » **Brument, H.**, Olivier, A. H., Marchal, M., & Argelaguet, F. (2021, November). Studying the Influence of Translational and Rotational Motion on the Perception of Rotation Gains in Virtual Environments. In *Symposium on Spatial User Interaction (SUI21)*. **To be presented in November 10th 2021.**
- » **Brument, H.**, Olivier, A. H., Marchal, M., & Argelaguet, F. (2020, December). Does the Control Law Matter? Characterization and Evaluation of Control Laws for Virtual Steering Navigation. In *International Conference on Artificial Reality and Telexistence & Eurographics Symposium on Virtual Environments (ICAT-EGVE)* (p. 10p). <https://doi.org/10.2312/egve.20201267>
- » **Brument, H.**, Marchal, M., Olivier, A. H., & Argelaguet, F. (2020, November). Influence of Dynamic Field of View Restrictions on Rotation Gain Perception in Virtual Environments. In *International Conference on Virtual Reality and Augmented Reality* (pp. 20-40). Springer, Cham. https://doi.org/10.1007/978-3-030-62655-6_2 **Best scientific paper award**
- » **Brument, H.**, Podkosova, I., Kaufmann, H., Olivier, A. H., & Argelaguet, F. (2019, March). Virtual vs. physical navigation in vr: Study of gaze and body segments temporal reorientation behaviour. In *2019 IEEE Conference on Virtual Reality and 3D User Interfaces (VR)* (pp. 680-689). IEEE. <https://doi.org/10.1109/VR.2019.8797721>


- » **Brument, H.**, Fribourg, R., Gallagher, G., Howard, T., Lécuyer, F., Luong, T., ... & Marchal, M. (2019, March). Pyramid Escape: Design of Novel Passive Haptics Interactions for an Immersive and Modular Scenario. In 2019 IEEE Conference on Virtual Reality and 3D User Interfaces (VR) (pp. 1409-1410). IEEE. <https://doi.org/10.1109/VR.2019.8797848> **Best 3DUI Demo Award**

LANGUAGES

French (native)

English (fluent) & German (A1)

REFEREES

Ferran Argelaguet  Research fellow


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Maud Marchal  Professor

 National Institute of Applied Sciences (INSA)

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Anne-Hélène Olivier  Associate Professor

 Univ. Rennes

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