

## **Arthur Maneuvrier**

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Né en 1994 en Normandie, France

### **Current Position**

- **Temporary research and teaching associate**  
Université de Bretagne Occidentale – Brest (France)  
*Department of psychology – Cognitive psychology*  
*Laboratory Lab-STICC, Interaction, team Commedia*  
*(Cognition, Models and Machines for Engaging Digital Interactive Applications)*
- **Associate researcher**  
Institut national de psychiatrie légale Philippe-Pinel de Montréal (Canada)  
*Laboratoire Applications de la Réalité Virtuelle en Psychiatrie Légale (ARViPL)*
- **Associate researcher**  
Université de Caen Normandie - Caen (France)  
*Centre Interdisciplinaire de Réalité virtuelle (CIREVE)*

### **Education and qualifications**

- **Ph.D in Psychology – cognitive neurosciences** 2017 – 2020  
Université de Caen-Normandie & Université de Montréal  
Highest Honors  
*International cotutelle France - Canada*  
  
Supervisors: Philippe Fleury (ERLIS-CIREVE), Patrice Renaud (ARViPL)  
Advisor: Leslie Decker (INSERM -COMETE)  
  
Doctoral Thesis: "Sense of presence in virtual reality :  
moderating roles of human factors on performance"
- **Master Neurosciences & Behavioral Sciences** 2015 – 2017  
Université de Caen-Normandie  
With Honors  
Supervisors: Leslie Decker, Stéphane Besnard  
Laboratoire U1070 – Inserm – Unicaen – COMETE  
Centre Interdisciplinaire de réalité virtuelle  
  
Theses :  
- « Sense of presence in virtual reality studied by behavioral sciences »  
- « Effect of cognitive style on cybersickness in virtual reality »
- **Bachelor's Degree in Psychology** 2012 – 2015  
Université de Caen-Normandie  
With Honors  
Ethology, pharmacology, neurobiology

## **Academic rewards**

- French laureate of the France-Quebec international cotutelle thesis prize of the Consulate General of France in Quebec and the Ministère des Relations internationales et de la Francophonie du Québec (2020-2021).

## **Published papers**

- Maneuvrier, A., Decker, L. M., Renaud, P., Ceyte, G., & Ceyte, H. (2021). Field (In)dependence Flexibility Following a Virtual Immersion Is Associated With Cybersickness and Sense of Presence. *Frontiers in Virtual Reality, 2*, 110. <https://doi.org/10.3389/frvir.2021.706712>
- Maneuvrier, A., Decker, L. M., Ceyte, H., Fleury, P., & Renaud, P. (2020). Presence promotes performance on a virtual spatial cognition task: Impact of human factors on virtual reality assessment. *Frontiers in Virtual Reality, 1*. <https://doi.org/10.3389/frvir.2020.571713>
- Madeleine, S., Grieu, J., Lecroq, F., Galinho, T., Boukachour, H., et al.. Virtualia 2016. La réalité virtuelle au service de la recherche : Actes du séminaire organisé par le CIREVE à Caen (19 octobre 2016). France. 2018. hal-01760241
- Dupuy, E. G., Maneuvrier, A., Besnard, S., Bienvenu, B., & Decker, L. M. (2016). Le syndrome d'Ehlers-Danlos type hypermobile (SEDh) : Évolution des stratégies posturales en réponse à un programme de rééducation à visée proprioceptive. *Neurophysiologie Clinique/Clinical Neurophysiology, 46*(4), 256.

## **Submitted papers**

- Maneuvrier, A., Ceyte, H., Renaud, P., Morello, R., Fleury, P., Decker, L. M. (2021). Virtual reality promotes men's executive control performance but not women's : how human factors could explain this phenomenon.
- Maneuvrier, A., Sammour, K., Renaud, P., Verjut, B., Fleury, P. (2021). Virtual reality learning environment for cultural heritage teaching : impact of presence, human factors and distance from the stereoscopic reference point on learning performance
- Maneuvrier, A., Westermann, H. (2021) The Angle Phi: new musings on sense of presence, human factors and in virtuo performance
- Costa, S., Madeleine, S., Maneuvrier, A. (2021) De l'appropriation par les acteurs de villes côtières normandes de l'aléa de submersion marine : de l'intérêt de la réalité virtuelle.

## **Communications**

- Maneuvrier, A., Morello, R., Fleury, P., Renaud, P., Decker, L.M. (2019). Style cognitif, cybermalaises, genre et présence : impact sur la performance en réalité virtuelle. Journées scientifiques du Département de Psychologie de l'Université de Montréal
- Decker, L., Belghali, M., Dupuy, E.G., Maneuvrier A., (2016) : « La réalité virtuelle : Nouvelles perspectives pour le diagnostic et le traitement thérapeutique des pathologies neurologiques ou extraneurologiques à expression motrice » Virtualia, la réalité virtuelle au service de la recherche

## **Teachings**

- **Temporary research and teaching associate** 2021 - 2022  
Université de Bretagne Occidentale - 12 mois (provisionnel)  
*UFR de Psychologie*
  - 24h Licence 1 - Experimental methodology
  - 24h Licence 2 - Experimental methodology
  - 34h Licence 2 - Experimental methodology (resp. UE, CM)
  - 48h Licence 3 - Cognitive psychology
  - 24h Licence 1 - Cognitive psychology
  - 36h Licence 3 - Experimental processes (resp. UE)
  - 4h Master 1 - Cognitive sciences and virtual reality
  - 22h advising graduates students Master 1 - Workshop, seminary
- **Temporary research and teaching associate** 2021 - 2021  
Université de Bretagne Occidentale - 6 mois  
*UFR de Psychologie*
  - 24h Licence 1 - Experimental methodology
  - 48h Licence 2 - Experimental methodology
  - 48h Licence 3 - Cognitive psychology
  - 4h Master 1 - Cognitive sciences and virtual reality
- **Doctoral teachings** 2017 - 2020  
Université de Caen Normandie
  - 28h Licence 1 - Social psychology
  - 16h Master 1 - Using virtual reality in research
  - 4h Master 1 - Virtual reality and rehabilitation
  - 2h Licence et Master - Cyberpsychology and virtual reality

## **Vulgarisation**

- Maneuvrier, A., (2021) : « La réalité virtuelle en sciences cognitives » - Conférence publique pour les étudiants de Licence en psychologie de l'Université de Bretagne Occidentale.
- Maneuvrier, A., (2018) : « Réalité virtuelle, immersion et neurosciences » - A la découverte de la recherche en sciences humaines et sociales. Conférence publique au Dôme de Caen.

## **Administration and responsibilities**

- Supervisor of 8 graduate students 2021 - 2022  
Master CAER, Cognition, Apprentissage, Évaluation, Remédiation  
Supervised research on the themes of psycho-physiology of virtual reality
- Responsible for two teaching units 2021 - 2022  
Experimental processes, Experimental psychology,  
from content creation to evaluations.
- Co-webmaster of the Centre Interdisciplinaire de Réalité Virtuelle, 2017 - 2020  
Member of the maintenance and troubleshooting team of the virtual virtual  
reality room, consulting member of the research projects.
- Member of the organizing committee of the conference cycles 2017 - 2020  
« Les Nocturnes du Plan de Rome » and the international colloquium  
« Topographie et Urbanisme de la Rome antique ».

## **Skills**

- French native, English fluent (1 year in Canada, 4 months in the USA), good level in Spanish (international highschool).
- General computing, hardware and software. Mastery of Windows and Linux / GNU operating systems, as well as various office automation, graphic design and audio-video editing software. Creation and management of websites and servers.
- Data science, statistics, machine learning.
- Immersive environments, hardware (Use and maintenance of CAVE, networks, clusters, active and passive stereoscopy, virtual reality headsets) and software (Unity3 development in C#, use of SDKs and APIs for OpenVR, SteamVR, VRTK, MiddleVR, Oculus Integration, 3D modeling and animation on Blender, spatialized sound development 5.1 and 7.1). Excellent knowledge of Unity3D.
- Human computer interaction and behavioral evaluations (Virtual reality, motion capture VICON, trademill GRAIL and virtual environments, biofeedback, initiated to the eyes-tracking, NIRS, EEG and EMG).
- Mastered languages : C#, HTML, CSS, JASS.  
Intermediate level : Python, R, Javascript, Bash script  
Beginner level: PHP/Mysql, Matlab, C++

## **Other**

- Idea, design, coordination and programming of "Starwalker" 2018 - 2020  
A virtual reality video game for the rehabilitation of kinesiophobic children.  
In collaboration with the CIREVE and the CHU of Caen Normandie  
[www.arthurmaneuvrier.com/starwalker.html](http://www.arthurmaneuvrier.com/starwalker.html)

## **References**

- [Administration, tech] Philippe Fleury, University of Caen Normandy. Thesis director : *philippe.fleury@unicaen.fr*
- [Research, teaching] Leslie Decker, University of Caen Normandy. Thesis supervisor : *leslie.decker@unicaen.fr*
- [Research, tech] Patrice Renaud, University of Quebec in Outaouais. Thesis director : *patrice.renaud@uqo.ca*
- [Teaching, Research] Nathalie Le Bigot, University of Bretagne Occidentale. *nathalie.lebigot@univ-brest.fr*