**Arthur Maneuvrier**
arthur.maneuvrier@protonmail.fr
Born in 1994 in Normandie, France

## Academic positions

- **Post-doctoral researcher**
  - Université de Bretagne Occidentale (France)
  ANR – DEEC: Determining Effictiveness of Experimentally Controlled studies

- **Associated researcher**
  - Université du Québec en Outaouais (Canada)
  *Laboratoire de cyberpsychologie*

  - Institut national de psychiatrie légale Philippe-Pinel de Montréal (Canada)
  *Laboratoire d'Immersion Forensique*

  - Université de Caen Normandie (France)
  *Centre Interdisciplinaire de Réalité virtuelle*

## Previous position

- **Temporary research and teaching assistant** 2020 - 2022
  Université de Bretagne Occidentale – Brest (France)
  *Department of psychology, cognitive psychology.*
  *Laboratoire Lab-STICC, pôle Interaction, équipe Commedia*
  *(Cognition, Models and Machines for Engaging Digital Interactive Applications)*

## Formations et diplômes

- **Ph.D in Psychology** 2017 – 2020
  Université de Caen-Normandie & Université de Montréal Highest honors
  International cotutelle, speciality cognitive and computational neurosciences

  Co-director : Philippe Fleury (CIREVE)
  Co-director : Patrice Renaud (LIF)
  Advisor : Leslie Decker (INSERM -COMETE)

  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
  Advisors : Leslie Decker, Stéphane Besnard
  Laboratoire U1070 – Inserm – Unicaen – COMETE
  Interdisciplinary Center for Virtual Reality

  Thesis:
  - « Sense of presence in virtual reality analyzed by behavioral sciences »

- « Impact of cognitive style on cybersickness and posture in virtual reality »

- **Bachelor degree in psychology** 2012 – 2015
  Université de Caen-Normandie With Honors
  Ethology, pharmacology, psychobiology

## Academic prizes

- French winner of the France-Quebec international co-supervision thesis prize of the Consulate General of France in Quebec and the Ministry of International Relations and Francophonie of Quebec (2020-2021), in partnership with the Association Canadienne-Française pour l'Avancement des Sciences (ACFAS)

## Publications

- Maneuvrier, A., Nguyen, N.-D.-T., & Renaud, P. (2023). Predicting VR cybersickness and its impact on visuomotor performance using head rotations and field (in)dependence. Frontiers in Virtual Reality, 4. https://www.frontiersin.org/articles/10.3389/frvir.2023.1307925

- Maneuvrier, A., Ceyte, H., Renaud, P., Morello, R., Fleury, P., & Decker, L. M. (2022). Virtual reality and neuropsychological assessment: An analysis of human factors influencing performance and perceived mental effort. *Virtual Reality*. https://doi.org/10.1007/s10055-022-00698-4

- Maneuvrier, A., & Westermann, H. (2022). The Phi Angle: A Theoretical Essay on Sense of Presence, Human Factors, and Performance in Virtual Reality. *PRESENCE: Virtual and Augmented Reality*, 141–169. https://doi.org/10.1162/pres_a_00359

- Costa, S., Madeleine, S., & Maneuvrier, A. (2022). Apport de la réalité virtuelle pour l'appropriation de l'aléa submersion marine. *Bulletin de l'association de géographes français. Géographies*, *98*(3/4), 514–529. https://doi.org/10.4000/bagf.8609

- 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. (2020). *Le sentiment de présence en réalité virtuelle: Rôle modérateur des facteurs humains sur la performance* [Phdthesis, Normandie Université ; Université de Montréal]. https://tel.archives-ouvertes.fr/tel-03198706

- 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.

**Work in progress**

- [In review] Maneuvrier, A. Interaction effect of experimenter and participant gender/sex on virtual reality self-reported measures.

- Maneuvrier, A. Effect of different video games types on cybersickness symptoms in virtual reality.

- Maneuvrier, A., Sammour, K., Renaud, P., Verjut, B., Fleury, P. Virtual reality for cultural heritage teaching : impact of human factors on learning performance.

**Communications**

- Maneuvrier, A., (2022). « La réalité virtuelle en sciences cognitives » – Conférence organisée par les étudiants de psychologie de l'Université de Bretagne Occidentale.

- Maneuvrier, A., (2021). Studying the psychophysiology of Virtual Reality – Séminaire du Lab-STICC

- Maneuvrier, A., (2021). Réalité virtuelle, douleur & rééducation – Séminaire BEaChild

- Maneuvrier, A. (2020). Présentation des travaux de thèse de doctorat – Séminaire COMETE

- 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

- 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.

- 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

## Teaching

- **Temporary research and teaching assistant** 2020 – 2022
  Université de Bretagne Occidentale – 12 mois
  *Department of psychology*
  - 30 hours Licence 1 – Experimental methodology
  - 86 hours Licence 2 – Experimental methodology
  - 32 hours Licence 1 – Experimental methodology (resp. UE)
  - 18 hours Licence 3 – Cognitive psychology
  - 36 hours Licence 1 – Cognitive psychology
  - 36 hours Licence 1 – Developmental psychology
  - 36 hours Licence 3 – Experimental methodology
  - 8 hours Master 1 – Cognitive sciences & virtual reality
  - 22 hours Master 1 – Research project

- **Teaching addendum to the doctoral contract** 2017 – 2020
  Université de Caen Normandie
  - 28 hours Licence 1 – Social psychology
  - 16 hours Master 1 – Techniques of virtual reality
  - 4 hours Master 1 – Virtual reality and rehabilitation
  - 4 hours Master - Cyberpsychology & Virtual reality

## Administration and responsibilities

- Master thesis advisor for 9 graduated students 2021 - 2022
  Master CAER, Cognition, Apprentissage, Évaluation, Remédiation
  Creation, implementation and coordination of a virtual reality experiment

- Responsible for two teaching units 2021 - 2022
  Conducting experiment, L3, experimental methodology, L2
  From course creation to evaluation management.

- Co-webmaster of the Interdisciplinary Center for Virtual Reality 2017 – 2020
  Member of the maintenance and troubleshooting team of the virtual
  virtual reality room, consulting member of research projects.

- Member of the organising committee of the virtual lecture series 2017 – 2020
  "The Nocturnes of the Plan of Rome" and the international colloquium
  "Topography and Urbanism in Ancient Rome".

## Technical skills

- Native French speaker, fluent English, good level of Spanish.

- General computing, hardware and software. Mastery of Windows and Linux / GNU operating systems, as well as various office automation, graphics and audio-video editing software. Creation and management of websites and servers.

- Data science & statistics (variance analysis, factor analysis, machine learning...) on R and JASP. Critical & epistemological reflection and use of statistics in science.

- Advanced programming: C#, R, HTML/CSS, JASS. Beginner/intermediate level: Python, Javascript, GNU/Linux shell. PHP/Mysql, Matlab. Initiated to collaboration platforms. Immersive environments, hardware (CAVE and virtual reality headsets) and software (Unity3 development, 3D modeling and animation, spatialized sound).

- Measurement and analysis of human behaviour in experimental sciences. Randomised trials, subjective (quantitative as well as qualitative) & behavioural measures (motion capture and VICON software, GRAIL mat and immersive environment coupling, bio-marker analyses, introduction to eye-tracking, NIRS, EEG and EMG) Data management protocols and ethical procedures.

**Volunteering**

Idea, design, coordination and programming of "Starwalker" 2018 - ...
a free virtual reality video game platform for the rehabilitation of kinesiophobic children,
in collaboration with CIREVE and the University Hospital of Caen Normandy.
https://arthurmaneuvrier.com/starwalker.html

**Referrals**

- [Administration, technology] Philippe Fleury, Professor Emeritus of the University of Caen Normandy, former director of the Interdisciplinary Centre for Virtual Reality, thesis supervisor: philippe.fleury@unicaen.fr

- [Research, Technology] Patrice Renaud, full professor at the University of Quebec in Outaouais, associate professor at the University of Montreal, director of the Laboratoire d'Immersion Forensique, thesis director: patrice.renaud@uqo.ca

- [Teaching, Research] Nathalie Le Bigot, Lecturer in Cognitive Psychology at the University of Western Brittany nathalie.lebigot@univ-brest.fr

- [Teaching, Technologyl] Hervé Guyon, Senior Lecturer in Statistical Psychology at the University of Western Brittany herve.guyon@univ-brest.fr