Dr. Robin BRETIN

Human–Drone Interaction, Proxemics,
Mixed Reality Application to Research

Email: r.bretin.1@research.gla.ac.uk
Phone: +33646844346
Google Scholar: Robin Bretin

Profile

Robin is an all-rounder driven by curiosity. Cognitive Engineer and HCI Researcher, he is eager to use the skills and knowledge acquired throughout his life to create valuable experiences and answer unsolved questions. His creativity, problem-solving and quick learning capacities joined with his social intelligence and abnegation make him a precious resource in dynamic and changing working environments. He thrives when challenged and is looking forward to contributing to great projects.

He benefits from a diversified background and has hands-on experience with **designing** and **conducting** in-person **XR/Real-World user studies** and **analysing data** extracted from real users' behaviours with a focus on **Human–Drone Interactions**. It led to awarded publications in peer-reviewed top-tier conferences and journals.

Experiences

More papers (9) on Google Scholar, and under review to be published soon.

Presenter at 19th IFIP TC13 International Conference, INTERACT
August 28 - September 1 2023, York, UK.
"Do I Run Away?: Proximity, Stress and Discomfort in Human-Drone Interaction in Real and Virtual Environments"

IFIP TC13 Pioneers' Award for Best Doctoral Student Paper
Best Paper, Reviewers' Choice.

Presenter at ACM CHI Conference on Human Factors in Computing Systems April 30 - May 5 2022, New Orleans, LA, USA.
"Co-existing With a Drone: Using Virtual Reality to Investigate the Effect of the Drone's Height and Cover Story on Proxemic Behaviours"

- Presenting a published LBW paper in a top-tier conference (258 accepted LBW papers for 722 submissions).
- Developing a Network.

Trainee at Human Design Group company (HDG)
February - April 2020 (2 months/ interrupted Covid-19), Paris, France.
"Development of a methodology to quantify human reliability on train conduct functions as part of the Autonomous Train project of SNCF (French National Railway Company)"

- **Keywords:** Human Reliability Analysis methods, Group works with train conductors, Meetings with clients.

Trainee at the Armed forces Biomedical Research Institute (IRBA)
May - July 2019 (3 months) , Brétigny-sur-Orge, France.
"Investigate design issues within the virtual environment developed as part of the VICTEAMS project"

- **Keywords:** Ergonomic inspection of the VICTEAMS prototype, Gaze-based interaction and data collection in VR.

Education

PhD Student SOCIAL AI CDT, University of Glasgow
2020 - 2024, Glasgow, UK.
"Beyond Boundaries: Unveiling Human-Drone Proxemic Dynamics Using Virtual Reality" Supervised by Dr Mohamed Khamis and Prof. Emily Cross. Conducting in-person user studies using virtual reality to understand Human-Drone proxemics and inform Social Drone design.
Keywords: Human-Computer Interaction (HCI), User studies, Social Robotics, Proxemics, Virtual Reality, Cognitive Psychology.

- **Applied research:** In-person user studies to observe real users behaviours and extract data driven recommendations based on findings. See https://doi.org/10.1145/3491101.3519750
- **Collaborations:** Successful collaboration with colleagues in other fields. See https://doi.org/10.1145/3491101.3519838
- **Research Practice:** Experimental Design - Statistical Analysis of Quantitative and Qualitative data [using R] - Modeling and Development of VR Environments for Research [Unity 3D, C#] - Drone Programming [Python, DJI] - Paper Writing and Oral Presentations. Interns/Students' Project Supervision.

Research Visit - Chalmers University of Technology
May 2023 (1 month), Göteborg, Sweden.

The National Graduate School of Cognitive Engineering (ENSC)
2017- 2020, Bordeaux, France.
Cognitics aims to understand and improve the flow of human-machine symbiosis, in terms of performance, substitution, safety, ease and comfort, and augment human through technologies.
Fields of study:

- **Cognitics engineering :** Cognitive Sciences / Ergonomics / Psychology, User-Centred Design, UX Design, Human-Machine Interaction, Knowledge Management
- **Fundamental sciences:** Statistics, Signal Processing, Object-oriented Programming, Artificial Intelligence
- **Softwares :** Unity 3d/VR, MATLAB, R, Axure, Adobe XD, Figma, 3DS MAX, BLENDER, Tobii Pro
- **Programming Languages :** C#, Python, R, MATLAB, PHP
- **Methods for engineers:** Project Management, Human Resources Management, Information and Communication Technologies, English

Exchange Semester - University of LAVAL
January - May 2019, Québec, Canada.

Languages

French : Native language **English :** Fluent
Spanish : Intermediate level

Extracurricular activities

Communication supervisor of the ENSC Sports Office - 2018-2019
Hobbies: Self-taught pianist, guitarist and flutist, Sporty (Mountain Bike, Running, Badminton), Cinephile, Chess, Reading (Science, Dystopia)