

Lendy Mulot

☎ +33 (0)7 84 09 04 96 • ✉ lendy.mulot@irisa.fr
🌐 <https://zegmx.github.io/> • 🐙 ZeGmX • in [lendymulot](#) • 25 years old

Education

Ph.D. (Current position) IRISA and INSA Rennes, Rennes, France <i>Advancing ultrasound mid-air haptics: perception studies, rendering methods, and design of virtual reality interactions</i> Supervised by M. Marchal and C. Pacchierotti	2022 - 2025
Master of research University of Rennes 1, Rennes, France Computer Science (SIF) curriculum, graduated <i>summa cum laude</i>	2020 - 2022
Bachelor University of Rennes 1, Rennes, France Computer Science (SIF) curriculum, graduated <i>summa cum laude</i>	2019 - 2020
Magistère École Normale Supérieure de Rennes, Rennes, France Computer science department	2019 - 2022
Preparatory classes MPSI/MP* Lycée Carnot, Dijon, France Computer science specialty	2017 - 2019

Professional experience

Research Visit Sensory neural response of single tactile units to ultrasound mid-air haptic stimulation In the context of my PhD - collaboration with S. McIntyre - LHTMR - Linköping University, Sweden	May 2025
Research-oriented internship Ultrasound haptic rendering for bimanual interactions in virtual reality Supervised by T. Howard, M. Marchal and C. Pacchierotti - Rainbow team - IRISA Rennes, France	February - July 2022
Research-oriented internship https://gitlab.com/h-reality/dolphin/-/tree/ultraleap_sensation - C++ Adapting DOLPHIN (framework for the design and evaluation of ultrasound mid-air haptic stimuli, developed during my research project) to a new API enabling the control of the haptic interfaces by Ultraleap Supervised by W. Frier - Ultraleap - Bristol, United Kingdom	May - July 2021
Research project https://gitlab.com/h-reality/dolphin - C++, Python Software for the study of the perception of geometric shapes rendered using ultrasound haptic interfaces Supervised by T. Howard, G. Gicquel, M. Marchal and C. Pacchierotti - Rainbow team - IRISA Rennes, France	September 2020 - May 2021
Research-oriented internship https://github.com/ZeGmX/facial_capture_stereo - Python Implementing a multi-view stereo method for temporally consistent facial capture Supervised by A. Boukhayma - MimeTIC team - IRISA Rennes, France	May - July 2020

Research and teaching experience

Service

Communication and web co-chair for EuroHaptics 2026	2025-2026
Student representative to the IEEE RAS Technical Committee on Haptics	2023 - 2025

Reviewer

2022 - Present

Reviewing for international journals: IEEE Transactions on Visualization and Computer Graphics (TVCG), IEEE Transactions on Haptics (ToH)

Reviewing for international conferences: IEEE International Conference on Virtual Reality and 3D User Interfaces (VR), IEEE International Symposium on Mixed and Augmented Reality (ISMAR), IEEE World Haptics (WHC), IEEE Haptics Symposium (HAPTICS), EuroHaptics, ACM Conference on Human Factors in Computing Systems (CHI), IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), ACM International Conference on Tangible, Embedded and Embodied Interaction (TEI)

Conference student volunteer

July 2021

Helping the participants use the online conference tools

IEEE World Haptics (WHC), online (initially planned to be at Montréal, Canada)

Publications

[Journal] "Bimanual Ultrasound Mid-Air Haptics for Virtual Reality Manipulation"

L. Mulot, T. Howard, G. Gicquel, C. Pacchierotti, M. Marchal

IEEE Transactions on Visualization and Computer Graphics, 2025, vol. 31, no. 9, pp 4821-4832

<https://doi.org/10.1109/TVCG.2024.3417343>

[Conference] "Designing 3D Object Rendering Techniques for Ultrasound Mid-Air Haptics using Intersection Strategies"

L. Mulot, T. Howard, S. Emery, C. Pacchierotti, M. Marchal

ACM Symposium on Applied Perception, 2024, pp 1-8.

<https://doi.org/10.1145/3675231.3675235>

[Journal] "Improving the Perception of Mid-Air Tactile Shapes With Spatio-Temporally-Modulated Tactile Pointers"

L. Mulot, T. Howard, C. Pacchierotti, M. Marchal

ACM Transactions on Applied Perception, 2023, pp 1-16

<https://doi.org/10.1145/3611388>

[Journal] "Ultrasound Mid-Air Haptics for Hand Guidance in Virtual Reality"

L. Mulot, T. Howard, C. Pacchierotti, M. Marchal

IEEE Transactions on Haptics, 2023, pp 1-6

<https://doi.org/10.1109/TOH.2023.3269521>

[WiP] "Can We Increase the Perceived Intensity of Mid-Air Haptic Shapes Rendered With Dynamic Tactile Pointers?"

L. Mulot, T. Howard, C. Pacchierotti, M. Marchal

IEEE World Haptics, 2023, pp 1-1

<https://2023.worldhaptics.org/wp-content/uploads/2023/06/1148-doc.pdf>

[Conference] "DOLPHIN: A Framework for the Design and Perceptual Evaluation of Ultrasound Mid-Air Haptic Stimuli"

L. Mulot, G. Gicquel, Q. Zanini, W. Frier, M. Marchal, C. Pacchierotti, T. Howard

ACM Symposium on Applied Perception, 2021, pp 1-10

<https://doi.org/10.1145/3474451.3476232>

[WiP] "Curvature Discrimination for Dynamic Ultrasound Mid-Air Haptic Stimuli"

L. Mulot, G. Gicquel, W. Frier, M. Marchal, C. Pacchierotti, T. Howard

IEEE World Haptics, 2021, pp 1-1

<https://doi.org/10.1109/WHC49131.2021.9517247>

Supervision

Tactile Perception of Circles Generated using Ultrasound Mid-Air Haptics	2025
E. Mathey, graduate student (M2 SIF, year 5 at INSA Rennes, University of Rennes) Co-supervised with C. Pacchierotti and M. Marchal	
Visualization of Ultrasound Mid-Air Haptic Stimuli	2025
V. Nithianantham, undergraduate student (year 3 at INSA Rennes, University of Rennes) Co-supervised with M. Marchal	
Dolphin3D: Rendering 3D objects using ultrasound haptic interfaces	2022-2023
S. Emery, graduate student (M1 SIF, ENS Rennes, University of Rennes 1) Co-supervised with T. Howard	

Teaching

Lecture-tutorial and practical sessions • Java programing and algorithmic	2024-2025
INSA Rennes, STPI department, 2nd year	
Practical sessions • Design of innovative applications for health	2022-2025
INSA Rennes, CS department, 4th and 5th years	
Lecture-tutorial and practical sessions • Initiation to Java programming	2023
INSA Rennes, STPI department, 1st year	
Project • Internet of things	2022
INSA Rennes, CS department, 4th and 5th years	

Skills

Languages

French	Mother tongue
English	C1
○ TOEIC: 955 / 990 in 2021	
○ Cambridge certification - B1 level in 2015	
Spanish	Beginner level

Programming and others

- ★ Arduino, \LaTeX , OCaml, R, Scala, Matlab
- ★★ C++, C#, C, Unity, Java
- ★★★ Python

First-aid

Workplace first-aider	Since 2023
Mental health first-aider	Since 2023

Other interests

Cinema and series

Fishing

Robotics and automatisisation

- Arduino beginner

Aeronautics

- Aeronautical initiation certificate obtained in 2013