

Lendy Mulot

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🌐 <https://zegmx.github.io/> • 🐙 ZeGmX • 24 years old

Education

Ph.D. (Current position) IRISA and INSA Rennes, Rennes, France <i>Design of coupling schemes for vibro-tactile rendering in virtual reality</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-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

Student representative to the IEEE RAS Technical Committee on Haptics	2023 - Present
Reviewer 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), ACM International Conference on Tangible, Embedded and Embodied Interaction (TEI)	2022 - Present

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

[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 (early access)

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

[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, 2024, pp 1-11 (early access)

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

[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, INSA Rennes, University of Rennes)

Co-supervised with C. Pacchierotti and 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 programming and algorithmic

2024-2025

INSA Rennes, STPI department, 2nd year

Practical sessions • Design of innovative applications for health

2022-2024

INSA Rennes, CS department, 4th and 5th years

Lecture-tutorial and practical sessions • Initiation to Java programming

2023

INSA Rennes, STPI department, 1st year

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

★★ 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