

Remi Cambuzat

ENGINEER IN MIXED REALITY, ROBOTIC AND HAPTICS

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“Experienced engineer in the development of demanding, innovative immersive solutions,
I support your company in successfully meeting strategic technological challenges.”

Skills

Programming	C++, C#, Python
3D Development	Unreal Engine, Unity3D, AR, VR, XR, Haptics devices
Ergonomics	Human factors analysis, UI-UX design, HCI user stories, User-centered design
System engineering	Windows, Linux, GIT CI-CD, Docker
Languages	French (Native, C2) English (Fluent, C1) German (Academic, B2)
Power skills	Creative & Critical thinking, Research & Innovation, Diplomacy & Teamwork

Experience

XR Project Manager : IEEEVR 2025 XR Gallery Chair

Saint-Malo, France

IEEEVR 2025 - CONFERENCE ON VIRTUAL REALITY AND 3D USER INTERFACES

February 2024 - March 2025

- Chaired the first *IEEEVR 2025 XR Gallery*, leading efforts to bridge digital artists and XR researcher
- Management of submission, evaluations and organization, ensuring the event's success with 1,200+ attendees and positive feedback.
- International context, A* conference, with significant constraints on deliverables.

XR research engineer : Immersive crowd research

Rennes, France

INRIA RENNES, VIRTUS TEAM

December 2022 - December 2024

- Developed immersive VR/XR environments and features for the *CrowdMP* software, used in virtual crowds studies in Unity3D.
- Maintained team's XR hardware and integrated C++ library (*UMANS*) ensuring smooth deployment through continuous integration.
- Coaching of new team members, encouraging skills development and experience sharing.
- Contributed to the dissemination of research findings through presentations and showcases at public event

XR research engineer : Caduta dall'Alto & Robot Teleoperativo 2 projects

Genova, Italy

ISTITUTO ITALIANO DI TECNOLOGIA, ADVANCED ROBOTICS, VICARIOS LAB

May 2021 - December 2022

- Development of a virtual reality training simulator using Unreal Engine to simulate and prevent falls from heights.
- Development of an immersive teleoperation platform (*HyQReal*) using ROS for tasks in difficult and hazardous environments.
- Collaborated with multidisciplinary teams and industry partners to align developments with safety standards and practical applications.
- Contributed to the dissemination of research findings and scientific mediation through presentations and showcases at public event

PhD student : Immersive teleoperation of telepresence robots for social navigation

Grenoble, France

GIPSA-LAB, UNIV. GRENOBLE-ALPES / INRIA GRENOBLE

October 2016 - August 2019

- Developed immersive control interfaces for intuitive gaze-based robot navigation in remote environments.
- Engineered the innovative *SGCS* gaze-based control paradigm for immersive humanoid robot teleoperation via pilot's head and eyes.
- Implemented *YARP* and *ROS* frameworks for immersive telepresence and navigation on remote robotic platforms.

VR developer : Characterizing postural control through visual stimuli

Paris, France

ISIR - INSTITUTE OF INTELLIGENT SYSTEMS AND ROBOTICS (UPMC)

February 2016 - June 2016

- Characterized vision's role in postural control using VR and a Wii Balance Board for balance analysis.

VR developer : Immersive visio-haptic interaction with native CAD data

Orsay, France

LIMSI - LABORATOIRE D'INFORMATIQUE POUR LA MÉCANIQUE ET LES SCIENCES DE L'INGÉNIEUR

May - Sept 2014 / Feb - Sept 2015

- Developed new haptic paradigms for immersive CAD modification (*Haptic Abacus*) within CAVE-like environments.

Education

PhD in immersive telepresence

2016-2019 : UNIVERSITÉ GRENOBLE ALPES - GRENOBLE INP

Master's Degree in robotic : M2 SDI-SAR

2016 : UNIVERSITÉ PIERRE-ET-MARIE-CURIE / ARTS ET MÉTIERS PARISTECH

Research Master's Degree in Human Computer Interaction : M2R "interaction"

2015 : UNIVERSITÉ PARIS SUD - PARIS SACLAY

Engineer Degree in computer sciences

2015 : ÉCOLE FRANÇAISE D'ÉLECTRONIQUE ET D'INFORMATIQUE - EFREI

IEEEVR 2025 XR Gallery

Saint-Malo, France IEEEVR 2025

Organization and inauguration of the first edition of a new Arts&Sciences track within the leading international conference IEEEVR (17 artworks, 1.200 participants, very positive feedback).

Technical environment : Project management, Event management, Logistic, Digital art, A* international scientific reference conference

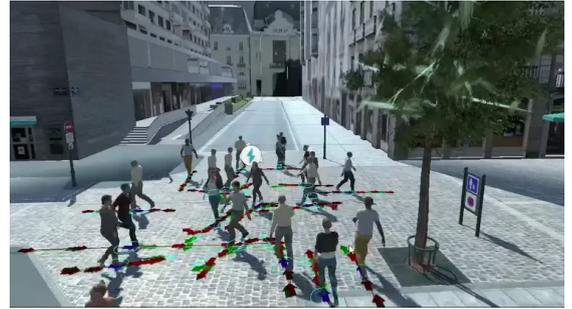


Immersive crowd simulator

Rennes, France INRIA RENNES, VirtUS Team 2024

Creation of immersive spaces and scenarios (VR/XR) for immersive crowd simulation and experimental research.

Technical environment : Unity3D, Unreal Engine, Various VR devices (Vive, Quest), C++, C#, Continuous Integration



Robot Teleoperativo 2:

Immersive Search & Rescuce robotic platform

Genova, Italy ISTITUTO ITALIANO DI TECNOLOGIA (IIT), VICARIOS Team 2022

Design of immersive interfaces and scenarios for a robotic platform for remote manipulation and rescue in hazardous environments.

Technical environment : Unreal Engine (blueprints & C++), HTC VIVE, R.O.S, HyQRealRobotic platform (IIT)



Caduta dall'Alto:

Immersive simulator to prevent the risk of falls from heights

Genova, Italy ISTITUTO ITALIANO DI TECNOLOGIA (IIT), VICARIOS Team 2022

Creation of an immersive fall prevention simulator to raise awareness of the risks of falls from height in the construction industry.

Technical environment : Unreal Engine (blueprints & C++), Oculus Quest, Haptic gloves



Robotic platform for social teleoperation

Grenoble, France GIPSA-LAB, INRIA GRENOBLE 2019

Research work involving a robotic platforms controlled by a virtual reality headset for remote social interaction.

Technical environment : Unity3D, Various VR devices (Oculus Rift DK2, HTC Vive), C++, C#, SMI eyetracking, Icube & Pepper Robot

