

SENSE-XR Workshop - The Feeling of Virtual: XR, Haptics, and 3D Graphics

Preface

The SENSE-XR Workshop - The Feeling of Virtual: XR, Haptics, and 3D Graphics, held in conjunction with the 16th Biannual Conference of the Italian SIGCHI Chapter (CHIItaly 2025), explored the expanding frontiers of multisensory interaction and embodied experience in Extended Reality (XR). The workshop examined how haptics, sensory feedback, and immersive 3D technologies can deepen users' sense of presence, agency, and emotion across domains such as education, healthcare, industry, and entertainment.

In recent years, XR has evolved from a primarily visual medium to a multimodal platform capable of engaging the full spectrum of human perception. The ongoing convergence of visual, auditory, and haptic technologies—together with advances in spatial computing and affective interfaces—is transforming how people learn, collaborate, and connect in digital environments. Yet, achieving truly immersive experiences requires addressing not only technical and design challenges but also questions of ethics, accessibility, and inclusivity.

A total of eight submissions were received, each undergoing two double-blind reviews and a meta-review. Following this process, six papers were accepted for presentation and inclusion in these proceedings. The accepted contributions span diverse applications of XR and haptic interaction:

- Amorosini et al. present *XRTwinScape*, an open-source digital-twin platform enabling immersive industrial training aligned with the principles of Industry 5.0.
- Noro and Gaggi introduce *NumbersPlayRoom VR*, a serious game designed for inclusive education in developmental dyscalculia, demonstrating how VR can foster accessibility and engagement.
- Paulesu et al. propose *Beyond Appearances*, a serious game challenging gender stereotypes in STEM through narrative role-play and avatar design.
- De Marco et al. explore *CyberSecVR*, an immersive cybersecurity learning experience blending gamification, storytelling, and AI-generated knowledge prompts.
- Cecere et al. discuss *Metaverse Museums*, analyzing multi-level interactions and cultural engagement in virtual cultural spaces.
- Giammetti et al. present *VR Hands Recording*, an OpenXR-based tool for capturing and exporting hand motion data, offering a cost-effective solution for XR prototyping.

We extend our sincere gratitude to the authors for their inspiring work, to the Program Committee and reviewers for their careful evaluations, and to all participants for their enthusiasm and collaboration throughout the event.

The Organizers

- Ignacio Aedo Cuevas, University Carlos III of Madrid, Spain
- Ilaria Amaro, University of Salerno, Italy
- Paola Barra, University of Naples Parthenope, Italy
- Attilio Della Greca, University of Salerno, Italy

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