VAMR 2020

12TH INTERNATIONAL CONFERENCE ON VIRTUAL, AUGMENTED AND MIXED REALITY

Jointly held under one management and one registration with HCI International 2020

http://2020.hci.international/vamr

Chairs
Jessie Y.C. Chen (yun-sheng.c.chen.civ@mail.mil)
Gino Fragomeni (gino.f.fragomeni.civ@mail.mil)

HCI International 2020

19-24 July 2020, AC Bella Sky Hotel and Bella Center, Copenhagen, Denmark

With the recent emergence of a new generation of displays, smart devices and wearables, the field of Virtual, Augmented and Mixed Reality (VAMR) is rapidly expanding, transforming and moving towards the mainstream market. At the same time, VAMR applications in a variety of domains are also reaching maturity and practical usage. From the point of view of the user experience, VAMR promises possibilities to reduce interaction efforts and cognitive load, while also offering contextualized information, by combining different sources and reducing attention shifts, and opening the 3D space. Such scenarios offer exciting challenges associated with underlying and supporting technologies, interaction and navigation in virtual and augmented environments, as well as design and development.

The 12th International Conference on Virtual, Augmented and Mixed Reality, an affiliated conference of the HCI International Conference, provides a forum for researchers and practitioners to disseminate and exchange scientific and technical information on VAMR-related topics in various applications. The presentations cover a wide range of topics, centered on themes related to interaction techniques, development issues, underlying technologies, and user experience and performance. With recent advances in robotics and artificial intelligence-based systems, topics of interest have expanded to include VAMR-based techniques for human-robot interaction and human interaction with intelligent systems.

The related topics include, but are not limited to:

- **Applications**
  - Consumer products and experience
  - Education and training
  - Entertainment
  - Gaming
  - History and culture
  - Human-robot interaction and remote systems
  - Industrial
  - Medical and healthcare
  - Military
  - Rehabilitation
  - Social computing
  - Virtual worlds and long-term persistent environments

- **Issues in development and use of VAMR**
  - Distributed environments
  - Embodiment
  - Fidelity
  - Occlusion
  - Performance measurement
  - Platform requirements
  - Presence in VAMR (Criteria and measurement; Design issues)
  - Sensory and perception
  - Simulator sickness
  - Situational awareness

- **Interaction and navigation in VAMR**
  - Avatar instantiation
  - Human factors
  - Immersion
  - Locomotion
  - Orientation and navigation
  - Teleoperation, puppeteering, and autonomy

- **Underlying & supporting technologies**
  - Alternative computing environments (Wearable; Pervasive computing)
  - CAVE and multi-participant environments (Head mounted displays; Field of view; Resolution; Rendering speed; Parallax and perspective)
  - Mobile systems
  - Multimodal interfaces
  - Sensory substitution
  - Telepresence systems
  - Tracking technologies
  - Visualization and image rendering

Conference proceedings published by

Springer