



IEEE International Symposium on
Mixed and Augmented Reality

Call for Papers

Note: all submissions are made via the PCS system (<https://new.precisionconference.com/submissions>). Please see the [Submission Guidelines \(http://ismar20.org/submission-guidelines/\)](http://ismar20.org/submission-guidelines/) for additional details.

ISMAR 2020, the premier conference for Augmented Reality (AR) and Mixed Reality (MR), will be held on November 9-13 as a virtual conference.

ISMAR is responding to the recent explosion of commercial and research activities related to AR and MR and Virtual Reality (VR) by continuing the expansion of its scope over the past several years. ISMAR 2020 will cover the full range of technologies encompassed by the MR continuum, from interfaces in the real world to fully immersive experiences. This range goes far beyond the traditional definition of AR, which focused on precise 3D tracking, visual display, and real-time performance.

We specifically invite contributions from areas such as Computer Graphics, Human-Computer Interaction, Psychology, Computer Vision, Optics, and in particular VR, and how these areas contribute to advancing AR / MR / XR / VR technology.

Download the Call for Papers in pdf (http://ismar20.org/wp-content/uploads/2020/04/ismar_20_cfp-updated.pdf).

COVID-19 Update

Because of the major challenges that everyone faces at the moment due to COVID-19, ISMAR will extend the paper submission deadline by four more weeks. We understand that a lot of researchers are currently facing major challenges with regards to in-person user evaluation. Thus we encourage authors to consider alternative ways for validation instead of canceling a submission. We will also point this out in the reviewing guidelines and highlight that a user study is not the only way to validate results. We also urge all attendees to keep informed on risks, precautions, and symptoms: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public> (<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>).

Important Deadlines

- Abstract Submission Deadline: March 30, 2020 (23:59 AoE)
- Paper Submission Deadline: April 6, 2020 (23:59 AoE)
- Abstract Submission Deadline: April 13, 2020 (23:59 AoE)
- Paper Submission Deadline: April 20, 2020 (23:59 AoE)
- Notification: June 15, 2020
- Camera-ready version: July 17, 2020
- Abstract Submission Deadline: May 11, 2020 (23:59 AoE)
- Paper Submission Deadline: May 18, 2020 (23:59 AoE)
- Reviews sent to authors: June 26, 2020
- Rebuttals due: June 30, 2020
- Rebuttals due: July 1, 2020
- Notification: July 15, 2020
- Notification: July 17, 2020
- Camera-ready version: August 17, 2020

Submission Details

In ISMAR 2020, review process will be double-blind. Please be anonymous during submission (one should not mention author name, affiliation or acknowledgments in the submission).

There is only one paper submission category, from 4 to 10 pages (excluding references). Papers ready for journal publication will be directly published in a special issue of IEEE Transactions on Visualization and Computer Graphics (TVCG). Other accepted papers will be published in the ISMAR proceedings. Paper quality versus length will be assessed according to a contribution-per-page judgment.

- All accepted papers will be orally presented at the ISMAR conference.
- All accepted papers will have the opportunity to be presented as a demo.
- All accepted papers will have the opportunity to be presented as a poster.
- All accepted papers will be archived in the IEEE Xplore digital library.

Detailed submission and review guidelines are available on the conference website and the **Guidelines section** (<http://ismar20.org/call-for-participation/>). Poster submissions will be accepted as usual with a submission date to be announced later.

Topics of Interest

All topics relevant to AR, VR and MR are of interest. Note that VR papers are also welcome regardless of their relevance to AR/MR. For brevity AR/MR/VR are subsumed under XR Topics of interest include, but are not limited to:

- AI for XR
- Camera and Projector-Camera Calibration
- Collaborative XR interfaces
- Computer Vision for XR
- Content creation / authoring and content management for XR
- Conversational and Speech Interfaces for XR
- Display technologies (e.g., eyewear, smart watches, projectors)
- Ethical issues
- Ergonomics and human factors
- Haptic and tactile interfaces, wearable haptics, passive haptics, pseudo haptics for XR
- Human augmentations
- Human-Computer Interaction for XR
- Immersive Visual Analytics
- Localization, spatial registration and tracking for XR
- Locomotion and navigation techniques
- Machine Learning for XR
- Mediated and Diminished Reality
- Multimodal input and output for XR
- Omnidirectional, 360, immersive Videos for XR
- Perception in XR
- Presence, body ownership, and agency
- Real-time performance issues
- Rendering techniques for XR
- Sensor fusion
- Spatial audio for XR, auditory perception and psychoacoustics
- Spatial AR, Projection mapping, Projector-camera systems
- System architectures for XR, distributed and online systems
- Touch, tangible and gesture interfaces
- Technology acceptance and social implications of XR
- Teleoperation and telepresence
- User experience, Usability studies and human-subjects experiments for XR
- Video processing and streaming for XR

- VR simulations of AR/MR/XR
- Visual effects / video processing
- Virtual Humans and Avatars
- Visualization techniques for XR
- XR applications from domains such as
 - Architecture
 - Art, cultural heritage, education and training
 - Automotive and aerospace
 - Entertainment, sports broadcast
 - Health, wellbeing, and medical applications
 - Industrial, military, emergency response
 - Therapy and rehabilitation
 - Further domains not listed above

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