



2nd International Conference on Artificial Intelligence & Virtual Reality (AIVR 2019)

San Diego, California, USA, December 9-11, 2019
Co-located with [IEEE ISM 2019](#)

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Important dates

CALL FOR PAPERS (FULL & SHORT)

IEEE AIVR 2019 addresses researchers and industries from all areas of AI as well as Virtual, Augmented, and Mixed Reality. It provides an international forum for the exchange between those fields, to present advances in the state of the art, identify emerging research topics, and together define the future of these exciting research domains. We invite researchers from Virtual, as well as Augmented Reality (AR) and Mixed Reality (MR) to participate and submit their work to the program. Likewise, any work on AI that has a relation to any of these fields or potential for the usage in any of them is welcome.

Areas of interest include but are not limited to:

Systems, including techniques, performance, and implementation

- System components, virtual reality platforms
- AI platforms for VR/AR, cloud-based platforms
- Data generation, manipulation, analysis, and validation
- Tracking, physical environment mapping, registration

Sponsors



In cooperation





- Vision for VR/AR, deep learning for VR/AR
- Standards and theoretical models for AI and/or VR

Content creation and modelling

- Generation of immersive environments and virtual worlds
- Environments for gaming, simulation, training
- Visualization, optimized and realistic rendering
- Geometric modelling and design in immersive settings
- Animations, crowd-simulation, character modelling
- Customization and personalization (e.g., for training)

Cognitive aspects, perception, user behaviour

- Semantic and cognitive aspects of virtual reality
- Depth perception, multimodal perception
- Behaviour and activity generation
- Representations of self (avatars), embodiment, presence
- Virtual agents, conversational non-player characters (NPCs)
- Understanding and modelling human behaviour, emotions

AI technologies for VR/AR

- Search, planning, reasoning
- Knowledge representation
- Natural language processing
- Robotics and perception
- Multi-agent systems
- Statistical learning, deep learning

Interactions / interactive and responsive environments

- Multimodal interaction and experiences in VR/AR
- Machine learning for multimodal interaction
- Human-virtual user/agent interaction
- Human to human communication in virtual environments, collaboration and communication
- Dialogue modelling and generation, conversational and natural language interfaces, speech interaction for AR/VR
- Navigation and spatial orientation in VR
- Interaction devices, Brain-Computer Interfaces (BCI)

Applications and use cases

- Data and knowledge representation, problem solving
- Visualization concepts (including, e.g., spatial visualization, multimodality for visualization) and domains (e.g., scientific visualization)
- Arts, leisure, and entertainment
- Gaming and game narratives, immersive storytelling and gameplay
- Education, training, simulation
- Business, prototyping, productivity, design and architecture, evaluation
- Telepresence and collaboration, social interactions
- Healthcare and therapy
- Evaluation metrics and methodologies
- Quality of Experience (QoE)

Ethical and societal aspects of AI and VR/AR

PAPER SUBMISSIONS

Authors are invited to submit an 8-page (regular) or 4-page (short) technical paper manuscript in double-column IEEE format following the official [IEEE Manuscript Formatting guidelines](#). Review will be double-blind, so please remove all author information in the submissions. Also consider the [IEEE policies for publications](#) (i.e., you must own copyright to all parts and the manuscript must be original work and not currently under review elsewhere). The conference proceedings will be published by IEEE Computer Society Press and included in the **IEEE Xplore Digital Library**. Distinguished quality papers and posters presented at the conference will be selected for best paper awards and for publication in internationally renowned journals.

Electronic Submission System: Please [***submit your paper to AIVR via EasyChair***](#)

Reviews will be double-blind. Each full and short paper will be reviewed by at least three or two experts, respectively, from the international [program committee](#) and both will receive a meta review by an additional program or organization

committee member.

IMPORTANT DATES

- Submission deadline for full & short papers: ~~July 26, 2019~~
Due to various requests because of the vacation season,
the deadline has been **extended to August 9, 2019**
- Notifications: week of Sep 23
- Final camera ready deadline: Oct 28, 2019
- **Conference: December 9-11, 2019**

IEEE AIVR 2019

