

Web3D 2022 Call for Papers

Web3D



The 27th International Conference on 3D Web Technology

Nov 2-4 in a hybrid format (in-person and online) Telecom SudParis, in Evry-Courcouronnes, Paris, France

Search engines trends show that the world, at large, discovered the concept of metaverse in October 2021. Since then, more and more people and organizations use the term as a buzzword, connecting it with various types of innovative products and services. Still, what is commonly agreed in many of these communications is the reference to 3D representation of content and to the online nature of exchanges.

The 27th International Conference on 3D Web Technology (Web3D 2022) sponsored by [ACM SIGGRAPH](#), in-Cooperation with the [Web3D Consortium](#), hosted by [Institut Mines-Telecom](#), will address an extensive range of research, development, and practices related to several 3D application domains including the metaverse. The concept of metaverse with all its facets is not new to the Web3D community. It was one of the reasons why Web3D was created. Starting from the initial idea of immersive and interactive websites using 3D, Web3D has evolved into a rich set of technologies for creating, transmitting, accessing, interacting, sharing and visualizing 3D universes.

The goal of the conference is to review the foundations and recent technologies for connected 3D universes and to share original and impactful ideas, providing new visions on how the metaverse may become a game-changer for future communication. These new ideas will cover 3D applications and services implemented on a full range of devices, from low-powerful devices, mobile phones, AR/VR handsets to complex ones, such as caves, multi-projection and massively populated universes, especially the ones connected through high bandwidth and low latency networks. Works related to various application domains, including education, healthcare, e-commerce, informatics, cultural heritage/tourism, entertainment, mass media, military, and construction (and many others) are welcome.welcome.

Topics and areas of interest:

Use the following list of the topic areas as a reference rather than a limitation. We welcome all topics related to Web/mobile 3D content creation, immersive realities, 3D compression, publishing technology, tools, and related studies.

- VR/AR/MR/XR: virtual, augmented, mixed, cross and extended realities
- 3D content creation and modeling, 3D content scanning, reconstruction, compression, printing, visualization
- Artificial Intelligence AI technologies for 3D processing and any 3D use cases
- Algorithms for shape modeling, optimization, analysis, and processing
- Novel APIs, toolkits, and frameworks for 3D web and associated application domains
- 3D technologies for Digital humans
- 3D technologies for Medical and Health Data
- Cloud-based rendering, services, interoperability for large-scale models, animations, virtual worlds and metaverses
- End to end systems for streaming, compression, and transmission of 3D content
- Motion capture for composition and streaming of behaviors and expressions
- HTML5 3D, WebGL, glTF, MPEG and other languages and formats that support the 3D Web
- Semantic Web for 3D objects and scenes
- X3D application examples
- Multi-modal 3D interaction paradigms, including spatial UI, gesture and voice
- Diffusion and adoption of 3D Web technologies, comparative studies, historical perspectives, www integration
- Novel interactive 3D web applications in all areas and sectors such as entertainment, education, training, cultural heritage, digital twins, medicine, military, smart-manufacturing / industry 4.0, information & data visualization, science, geographic information systems, digital globes, subsurface exploration and mining, integrated marine data management and visualization, smart city, building information modeling, and architecture.
- Mobile 3D applications and usability studies, smart city, navigation performance, immersion impact

The accepted papers and poster summaries will be published in the Web3D 2022 Conference Proceedings, available in the ACM Digital Library.

Submission Guidelines

All papers must be original and not simultaneously submitted to another journal or conference. Instructions for authors are available here: <https://www.siggraph.org/learn/instructions-authors/>.

The following paper categories are welcome:

- **Full or short papers** presenting original work in 3D Web research and applications may be submitted in long or short form (up to 9 or 4 pages, EXCLUSIVE of the page(s) devoted

to bibliographic references and short appendices). Do include a full citation list. Submissions will be peer-reviewed.

- **Posters** present results of ongoing or recently completed work in 3D web research and application. The poster format offers the opportunity to interactively present and discuss interesting results to the Web3D community. Posters should be submitted in the form of abstracts (2 pages). Posters must be formatted using the document templates for conferences. Upon acceptance, the final revised poster is required in paper and electronic format. Acceptable poster printing and formatting guidelines are here. Printing and delivery of the poster is the author's responsibility.
- **Tutorials** are an opportunity to present introductory and advanced applications of 3D Web technologies to students and to experienced practitioners. Tutorial subjects can include practices for authoring interactive 3D scenes and using 3D graphics in diverse application areas. Especially welcome are tutorials in the use of open-source software and Web applications which can be presented in hands-on sessions at the conference. Submission should include names, affiliations, and contact information, title of the tutorial, and a short summary including: the topic of interest, subjects covered, learning objectives, intended audience, prerequisites, and level of difficulty.
- **Workshops** provide a forum for researchers and practitioners from both the Web and 3D multimedia communities to discuss and exchange positions on current and emergent 3D Web topics. Workshops may take the form of presentation sessions moderated by workshop organizers or open discussions of new knowledge on a specific topic of interest. Each session will last 90 minutes with presentations and discussions. Submission should include names, affiliations, and contact information, title of the workshop, and a short summary including: the topic of the emergent technology and its use cases and challenges.
- **Demonstrations** enable artists, content designers, and developers to share their innovative 3D work at the conference. Artwork and applications developed for various platforms, including the Web, desktop, mobile, and VR/AR systems, are welcome. Submission should include names, affiliations, and contact information, title of the demonstration, and a short summary including: technology and tools used, use case and market readiness.
- **Industrial Use Cases** enable practitioners to demonstrate how 3D Web technologies may be used in industrial applications. A special track during Web3D 2022 will be devoted to industrial use cases to share best practices, and requirements of using 3D in various application domains. Each presentation will last 20 minutes with 5-10 minutes for discussions. Submission should include names, affiliations, and contact information, title of the presentation, and a short summary including: Application domain and industry use case.
- **Standards Sessions** provide a meeting for researchers and practitioners from both the Web and 3D multimedia communities to discuss and exchange standardization issues on current and emergent 3D Web topics. Submission should include names, affiliations, and contact information, title of the presentation, and a short summary including: 3D emergent Standardization topic and status.

Accepted proposers of Tutorials, Workshops, Demonstrations and Industrial use cases will be asked to provide a biography paragraph for each presenter, a representative image and

publishable course notes suitable for use on the conference proceedings, web site and promotional materials.

Important dates:

- **Paper Submission: July 23rd, 2022**
- **Notification of acceptance: September 15th, 2022**
- **Final paper version: October 1st, 2022**
- **Conference dates: November 2nd to 4th, 2022**
- Submission <https://easychair.org/my/conference?conf=web3d>

Questions about the CFP, program and conference should be emailed to program2022@web3d.org.

Additional information on the conference is available at: <https://web3d.siggraph.org>

Preliminary organization committee:

General Chair : **Christophe Mouton, EDF**

Steering Committee:

- **Donald Brutzman, NPS**
- **Nicholas Polys, Virginia Tech**
- **Anita Havele, Web3d**

Program Chair: **Marius Preda, Telecom SudParis – Institut Mines-Telecom**

Organization Chair: **Patrick Horain, Telecom SudParis – Institut Mines-Telecom**

Webmaster: **Christian Tulvan, Telecom SudParis – Institut Mines-Telecom**