



Journal of the AUDIO ENGINEERING SOCIETY

CALL for PAPERS SPECIAL ISSUE SPATIAL AUDIO



We are pleased to invite contributions to the special issue on Spatial Audio to appear in the Journal of the Audio Engineering Society (<http://www.aes.org/journal/>).

Immersive and augmented spatial audio have received increasing attention in the last few years, becoming one of the most important topics branches of audio engineering. This special issue intends to give a thorough overview of the latest research conducted in this area from all around the scientific community. Contributions are encouraged for this special issue on all the aspects of spatial audio analysis: new recording and sensing methods combining multichannel microphone arrays, focusing on new theory or models, including mathematical descriptions, 3D audio reproduction systems, binaural technology, analysis of sound source localization, six-degrees-of-freedom (6DoF) analysis and synthesis, spectral effects, wave-field synthesis, and high-order ambisonics.

In this special issue we welcome unpublished work presenting advanced methodologies and new theories about spatial audio, ranging from the development of new methodologies and multichannel systems to the development of new playback systems, which might be applied to 3D audio-based tools, which contribute to expanding the frontiers of immersive audio feature research on—but not restricted to—the topics listed below:

- New theories on spatial audio,
- Multichannel array microphone systems,
- Multiple degrees of freedom in immersive audio methodologies,

- 3D audio in automotive industries,
- New loudspeaker array design,
- Multi-input and multi-output acoustic analysis,
- Binaural capture and rendering over headphones and loudspeakers (dummy head equalization and crosstalk-cancellation),
- Head-related transfer function (HRTF) modeling and derivation from optical and/or acoustic measurements,
- Wave-field synthesis and high-order ambisonics applications,
- Virtual and augmented reality 3D audio in games,
- 3D sound field navigation including 6DoF, and
- Spatial-temporal and frequency characteristics of rooms for 3D virtual and augmented reality.

Submissions will be judged based on their academic quality, novelty, and relevance to the aforementioned topics. Authors of excellent contributions to relevant conferences, such as the Immersive and 3D Audio International Conference (I3DA 2021), will be invited to submit revised and extended versions of their papers to this special issue.

GUEST EDITORS

Lamberto Tronchin (University of Bologna, Italy)

Janina Fels (RWTH University, Germany)

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AUTHOR GUIDELINES

We welcome original research and review papers and revised and expanded versions of conference papers addressing the theme of this special issue. Please follow the Author Guidelines available at <http://www.aes.org/journal/authors/guidelines/>. Papers should be submitted online at <http://www.aes.org/journal/submit/>. When submitting a manuscript, please choose the category “Special Issue (Spatial Audio)” rather than Research Paper, Engineering Report, or Review Paper. All submissions will be peer-reviewed according to standard JAES review procedures. JAES offers an Open Access (OA) publishing option to its authors.

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