

# AES Technical Committee on Spatial Audio



Notes from the meeting of the TC at the 147th AES Convention, New York City

**Date:** October 17, 2019, 10:00 am — 11:00 am

## Attendees:

James Johnston	Immersion
Richard King	McGill Montreal
Bozena Kostek	Gdansk University
Steve Philbert	Rochester University
Murat Kolak	composer, New Yorker
Jayson Grey	University of Michigan
Christof Faller	Illusonic, EPFL
Ville Pulkki	Aalto University
Jim Tippit ?	IRT? Montana
Marty Lick ?	IRT? Montana
Matthieu Parmentier	France Televisions
Jeff Levison	Barco
Nils Peters	Qualcomm Technologies

**Chair(s):** Matthieu Parmentier, Nils Peters

**Co-chair:** Sascha Spors (not present)

## Activities at current AES event:

- <http://www.aes.org/events/147/spatialaudio/?displayall>

## Report from recent Spatial Audio events:

- Headphone Technology, 2019 International AES Conference, San Francisco, CA, USA,
  - well attended - sold out
  - 30 contributions
  - Awards:
    - best technical paper: K. Mick: *The effective radiation area of midsize headphone drivers in the nonlinear working range*
    - best student paper: F. Denk et al.: *A one-size-fits-all earpiece with multiple microphones and drivers for hearing device research*
    - best demo: S. Peksi et al.: *A Unity Based Platform for Individualized HRTF Research and Development: From On-the-fly Fast Acquisition to Spatial Audio Renderer*
- 2019 AES Conference on Immersive & interactive Audio

- well attended - sold out
- 66 contributions
- Best paper: Gribben & Lee: *Increasing the Vertical Image Spread of Natural Sound Sources using Band-Limited Interchannel Decorrelation*

### Upcoming Spatial Audio events:

- 148th AES convention
  - Vienna, Austria
  - <http://www.aes.org/events/148/>
  - contribution deadlines: <http://www.aes.org/events/148/authors/cfc/>
  - Piotr Majdak is convention chair – talk directly with people such as Matthias Frank (TU-Graz) to push spatial audio sessions
- 2020 AES Conference On Audio For Virtual And Augmented Reality
  - Redmond, WA, US
  - <http://www.aes.org/conferences/2020/avar/>

### Proposals for Workshops/Tutorials/Special Sessions

ideas from last year:

- Workshop on Evaluation and Assessment of Spatial Audio without Reference (together with TC Perception?)
  - Attendees indicated that TC Perception may have a workshop for NYC
  - people are strongly invited to contribute
  - idea is to have a paper session prior such workshop
- Workshop on spatial microphones
  - Attendees suggested that Hyunkook Lee might be able to chair this.
- Personalized HRTFs estimation
  - Attendees noted that this would be well attended
  - Must have both pro and con perspectives
  - Patrick Flanagan (ThX), Karlheinz Brandenburg (FhG-IDMT), Yesenia Lacouture Parodi (Huawei) volunteered to work on this.
- Perceptual tuning of artificial reverbs
  - Karlheinz Brandenburg (FhG-IDMT) will investigate this topic. Wieslaw Woszczyk (McGill University) and Jonas Braasch (RPI) would also be able to help
- Spatial Audio for AR, 6DOF
- MPEG-I workshop
- MPEG-H tutorial
- Workshop on capturing room information and and apply them into virtual worlds

New ideas:

- A tutorial on the basics of spatial audio would be needed
  - Ville Pulkki has material
- More tutorials or workshops focused on immersive site-specific installations:

- China's shows, Radio France multi-immersive productions, museums and other specific experiences like escape rooms
  - contact Jeff Levison
- impact of low-rate codecs on spatial audio properties
  - joined workshop with TC for SA
- Workshop on new findings in spatial perception
  - Externalization/Distance
  - Multimodal spatial perception
  - screen size vs. immersion
  - hearing loss and spatial perception
  - Christof Faller is interested in this

## **Other business**

### **Spatial Audio Glossary**

- still work in progress
- Members of the TC are invited to contribute
- please contact Sascha Spors

### **Awards (Reminder)**

- Please submit recommendations for AES awards and fellowships
- further information under [www.aes.org/awards](http://www.aes.org/awards)

### **Technical Council Forum (Reminder)**

For the TC, a discussion forum is provided on the website of the AES. You can reach the forum via "My Member Portal" when logged in on the AES website or by the direct link <https://secure.aes.org/forum/tc/sa/>.