This workshop will explore the challenges and methodology of producing a realistic binaural ATMOS experience of Henry Brant’s spatially composed, Pulitzer Prize winning “Ice Field” - a full orchestra work with organ solo that involved the computation of Head-related Transfer Functions Using Graphics Processing Units and a Perceptual Validation of the Head-Tracked Control of Spatial Sound Polyrhythmic Metronome in an Augmented Reality Scene Using Bose Frames. Hooke Verse: the first wireless headphones capable of capturing pro grade binaural audio Open Your Ears to MEMS – New Speaker Technology for In-Ear Headphone Systems High frequency ear coupler A Comparison of Radio Power Consumption of True Wireless Earbuds Spatial Audio Renderer Influence of Binaural Processing on Objective Perceptual Quality Assessment Evaluating intermittent and concurrent feedback during an HRTF measurement HRTF modelling and rendering Objective Measurements of Headphone Active Noise Cancelation Performance The Effect of Active Noise Cancellation on the Acoustic Impedance of Headphones Acoustic transparency of earphones and headphones

**PAPERS - XR & Misc.**

**Demo 9**
Electroacoustic simulation of headphones and earphones with open source software

**Demo 8**
Web-based and Mobile Binaural Audio and Sonic Narratives

**Demo 7**
Subjective sound quality evaluation of an acoustically transparent hearing device Externalization Enhancement for Headphone-Reproduced Virtual Frontal and Rear Sound Images

**Demo 6**
A one-size-fits-all earpiece with multiple microphones and drivers for hearing device research Objective Measurements of Headphone Active Noise Cancelation Performance

**Demo 5**
A workshop featuring an overview of the Nx™ technology, interactive demos, a behind-the-scenes look at modeling a complex real-world environment, and a deep dive into the technical challenges and solutions involved in the creation of the Nx™ technology.

**Demo 4**
Acoustic Validation of Electrostatic All-Silicon MEMS-Speakers

**Demo 3**
Design and electroacoustic analysis of a piezoelectric MEMS in-ear headphone

**Demo 2**
A workshop on the development and optimization of MEMS drivers for hearing aid applications, including the latest advancements in MEMS technology and practical applications in hearing device design.

**Demo 1**
A workshop on the design and implementation of custom binaural audio experiences for immersive and interactive applications, featuring hands-on demonstrations of the latest binaural audio technologies and techniques.

**Posters & Demo & Activities: Industrial Contributing**

- **Poster 48**: A one-size-fits-all earpiece with multiple microphones and drivers for hearing device research
- **Poster 47**: Objective Measurements of Headphone Active Noise Cancelation Performance
- **Poster 46**: The Effect of Active Noise Cancellation on the Acoustic Impedance of Headphones
- **Poster 45**: Acoustic transparency of earphones and headphones
- **Poster 44**: A Comparison of Radio Power Consumption of True Wireless Earbuds
- **Poster 43**: Spatial Audio Renderer
- **Poster 42**: Influence of Binaural Processing on Objective Perceptual Quality Assessment
- **Poster 41**: Evaluating intermittent and concurrent feedback during an HRTF measurement
- **Poster 40**: HRTF modelling and rendering
- **Poster 39**: Objective Measurements of Headphone Active Noise Cancelation Performance
- **Poster 38**: The Effect of Active Noise Cancellation on the Acoustic Impedance of Headphones
- **Poster 37**: Acoustic transparency of earphones and headphones
- **Poster 36**: A Comparison of Radio Power Consumption of True Wireless Earbuds
- **Poster 35**: Spatial Audio Renderer
- **Poster 34**: Influence of Binaural Processing on Objective Perceptual Quality Assessment
- **Poster 33**: Evaluating intermittent and concurrent feedback during an HRTF measurement
- **Poster 32**: HRTF modelling and rendering
- **Poster 31**: Objective Measurements of Headphone Active Noise Cancelation Performance
- **Poster 30**: The Effect of Active Noise Cancellation on the Acoustic Impedance of Headphones
- **Poster 29**: Acoustic transparency of earphones and headphones
- **Poster 28**: A Comparison of Radio Power Consumption of True Wireless Earbuds
- **Poster 27**: Spatial Audio Renderer
- **Poster 26**: Influence of Binaural Processing on Objective Perceptual Quality Assessment
- **Poster 25**: Evaluating intermittent and concurrent feedback during an HRTF measurement
- **Poster 24**: HRTF modelling and rendering
- **Poster 23**: Objective Measurements of Headphone Active Noise Cancelation Performance
- **Poster 22**: The Effect of Active Noise Cancellation on the Acoustic Impedance of Headphones
- **Poster 21**: Acoustic transparency of earphones and headphones
- **Poster 20**: A Comparison of Radio Power Consumption of True Wireless Earbuds
- **Poster 19**: Spatial Audio Renderer
- **Poster 18**: Influence of Binaural Processing on Objective Perceptual Quality Assessment
- **Poster 17**: Evaluating intermittent and concurrent feedback during an HRTF measurement
- **Poster 16**: HRTF modelling and rendering
- **Poster 15**: Objective Measurements of Headphone Active Noise Cancelation Performance
- **Poster 14**: The Effect of Active Noise Cancellation on the Acoustic Impedance of Headphones
- **Poster 13**: Acoustic transparency of earphones and headphones
- **Poster 12**: A Comparison of Radio Power Consumption of True Wireless Earbuds
- **Poster 11**: Spatial Audio Renderer
- **Poster 10**: Influence of Binaural Processing on Objective Perceptual Quality Assessment
- **Poster 9**: Evaluating intermittent and concurrent feedback during an HRTF measurement
- **Poster 8**: HRTF modelling and rendering
- **Poster 7**: Objective Measurements of Headphone Active Noise Cancelation Performance
- **Poster 6**: The Effect of Active Noise Cancellation on the Acoustic Impedance of Headphones
- **Poster 5**: Acoustic transparency of earphones and headphones
- **Poster 4**: A Comparison of Radio Power Consumption of True Wireless Earbuds
- **Poster 3**: Spatial Audio Renderer
- **Poster 2**: Influence of Binaural Processing on Objective Perceptual Quality Assessment
- **Poster 1**: Evaluating intermittent and concurrent feedback during an HRTF measurement

**Keynote 5**: Externalization for Headphone-Reproduced Virtual Frontal and Rear Sound Images

**Keynote 4**: Real-time Hear Through for Augmented Reality Headphones

**Keynote 3**: A workshop on the development and optimization of MEMS drivers for hearing aid applications, including the latest advancements in MEMS technology and practical applications in hearing device design.

**Keynote 2**: A workshop on the design and implementation of custom binaural audio experiences for immersive and interactive applications, featuring hands-on demonstrations of the latest binaural audio technologies and techniques.

**Keynote 1**: A workshop featuring an overview of the Nx™ technology, interactive demos, a behind-the-scenes look at modeling a complex real-world environment, and a deep dive into the technical challenges and solutions involved in the creation of the Nx™ technology.