The 2021 IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA 2021) will be held simultaneously online and at the Mohonk Mountain House in New Paltz, New York, and is supported by the Audio and Acoustic Signal Processing technical committee of the IEEE Signal Processing Society. The objective of this workshop is to provide an informal environment for the discussion of problems in machine learning and signal processing techniques applied to audio and acoustics, leading to novel solutions. Technical sessions will be scheduled throughout the day. Afternoons will be left free for informal meetings among workshop participants. Papers describing original research and new concepts are solicited for technical sessions on, but not limited to, the following topics:

**Acoustic Signal Processing**
- Source separation: single- and multi-microphone techniques
- Acoustic source localization and tracking
- Signal enhancement: dereverberation, noise reduction, echo reduction
- Microphone and loudspeaker array processing
- Acoustic sensor networks: distributed algorithms, synchronization
- Acoustic scene analysis: event detection and classification
- Room acoustics: analysis, modeling and simulation

**Audio and Music Signal Processing**
- Content-based music retrieval: fingerprinting, matching, cover song retrieval
- Musical signal analysis: segmentation, classification, transcription
- Music signal synthesis: waveforms, instrument models, singing
- Music separation: direct-ambient decomposition, vocal and instruments
- Audio effects: artificial reverberation, amplifier modeling
- Upmixing and downmixing

**Audio and Speech Coding**
- Waveform and parametric coding
- Spatial audio coding
- Sparse representations
- Low-delay audio and speech coding
- Digital rights

**Hearing and Perception**
- Hearing aids
- Computational auditory scene analysis
- Auditory perception and spatial hearing
- Speech and audio quality assessment
- Speech intelligibility measures and prediction

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**Important dates**
- Paper submission deadline: April 28, 2021
- Notification of acceptance: July 7, 2021
- Camera ready & Demos: July 27, 2021
- Early registration until August 22, 2021