187th MEETING OF THE ACOUSTICAL SOCIETY OF AMERICA-VIRTUAL TECHNICAL SESSIONS

Session Type	Title	Description	Cosponsor	Organizers
ACOUSTICAL OCEANOGRAPHY				
Traditional	Acoustical Oceanography: Teaching Curriculum and In-class Demos	Presentation of current AO courses offered across institutions, including presentation of in-class demonstrations.		David Barclay
Panel Discussions Invited Submissions Only	Careers in Underwater Sound	First-hand accounts of the various career paths that involve underwater sound, followed by a Q&A	AB, UW	TBD
Lightning Round Student Submissions Only	Degree in Progress: Student Led Research	Rapid presentations with priority on student presentations, with senior members evaluating the talks.	AB, UW	Elizabeth Weidner
Panel Discussions Invited Submissions Only	Program Managers Roundtable	Program managers will discuss their perspective on AO research, followed by a Q&A.	UW	Lauren Freeman
Lightning Round	What's That Sound?	Collaborative discussion where members help each other identify possible sources of sound in underwater recordings. Audio samples will be posted online before the meeting. Presenters will provide context.		David Barclay
ANIMAL BIOACOUSTICS				
Competitive/Cooperative Activities Invited Submissions Only	Acoustical DJ: Mixed & Matched Research Topics on Sound	This session will be similar to other societies Power Point Roulettes where speakers will sign up to present an unknown-to-them set of slides and give extemporaneous talks. This is a great exercise for impromptu public speaking practice, or stand-up improv, if that's your jam. The session chair will curate the slides ahead of time for participants. No promise that topics will be divided among technical committees lines (that would be too easy). Bring your funny bone and your best impressions of whatever animal you may be saddled to sound like		Kerri Seger
Traditional	Animal Bioacoustics Virtual Lab Tours	Behind the scenes of the animal bioacoustics labs! Participants will give virtual lab tours, either through live walk-though sessions or pre-recorded videos.		Micheal Dent, Laura Kloepper
Traditional	Climate Change and Animal Bioacoustics	Showcasing the latest research intersecting animal bioacoustics and climate change		Ed Walsh
Panel Discussions Invited Submissions Only	Spanning the Career Stages--A Conversation About Work in Bioacoustics	A candid conversation about managing a career in animal bioacoustics--the panel will contain representatives spanning career stages and research fields.		Laura Kloepper
Lightning Round Students/Early Career Only	Students and Early Career Animal Bioacoustics Lightning Talks	This session will highlight the animal bioacoustics research of students and early-career professionals (postdocs or similar career rank)	Student Council	Marissa Garcia, Laura Kloepper
ARCHITECTURAL ACOUSTICS				
Traditional	Acoustics of Sustainable Building Assemblies and More	Presentations on the latest work done by professionals in building acoustics to with issues in building sustainability - a potpourri session in sustainability.		Arthur van der Harten, Jonathan Broyles, Kristen Murphy, Adam Bettcher
Lightning Round	Heating Ventilating and Air Conditioning (HVAC) Noise Challenges and Solutions	Unique approaches for estimating, controlling, and solving building systems noise and vibration issues. Topics may include noise prediction software and their limitations, emerging equipment typologies, or unexpected perceptual responses to mechanical noise, tones, and vibration.	NS, ASACOS	Brandon Cudequest, Joe Keefe
Traditional	Improved Low Frequency Absorption Testing techniques for 100Hz and below	How to obtain accurate absorption material parameters that extend below 100Hz	NS	Ronald Sauro

Panel Workshop Invited Submissions Only	Modeling Techniques and Computer Tools	This session will give a hands-on demonstration of several computer tools for architectural acoustics applications, with a focus on early career and student attendees.	CA	Laura Brill, Ana M Jaramillo
Traditional/Panel Invited Submissions Only	The Unknown Unknowns: A Deep Look at Uncertainty and Precision in Architectural Acoustics	You can't compare shoe sizes with a tape measure marked in feet; this session aims to dig into uncertainty in architectural acoustics measurements, with discussion of the philosophy of data, uncertainty, precision, and a panel discussion of statistical methods	NS, SA	Ben Shafer, Evelyn Way, Mike Raley
BIOMEDICAL ACOUSTICS				
Lightning Round Student/Early-Career Preference	Bubble-Based Therapies	Lightning talks on bubble-based therapies, including monitoring of those therapies. Preference will be given to students and early career.		Mitra Aliabouzar, Eric Rokni
Panel Discussions Invited Submissions Only	Debate: Nanobubbles–Can They Do Anything?	A debate about the future of nanobubbles in biomedical acoustics.		Eleanor Stride
Traditional	Show Me Your Lab Crib!	Video tours of biomedical acoustics labs, including possible demos and experiments!		Timothy Hall, Ellen Yeats
Panel Discussions Invited Submissions Only	Transitioning Technology from Idea to Industry	This session will be a panel discussion on how to move ideas in the lab to a commercial product.		Thomas Matula
Webinar with Panel Discussions Invited submissions Only	Tutorial: Hydrophones and Cavitation Monitoring	This session will have two components. 1) Hydrophone measurement methods for biomedical ultrasound and 2) Methods and uses of passive cavitation detection (PCD, cavitation vs. time) and passive acoustic mapping (PAM, 2D/3D cavitation spatiotemporal imaging). The session will cover best practice and is meant for students learning about the topics and as a refresher.		Jeffrey Ketterling
COMPUTATIONAL ACOUSTICS				
Panel Discussions Invited Submissions Only	Artificial Intelligence vs. Human Listening to Music: Problems and Solutions	This panel discussion opens a conversation about the current AI research on listening and psychoacoustic research on listening; problems and solutions.	ED, MU	Andrea Calilhanna
Panel Discussions	High-Performance Computing and Parallelization	High-performance computing and parallelization methods and applications in acoustics		Ralph Muelheisein, Alex Higgins
Traditional Student/Early-Career Priority	Innovations in Computational Acoustics	Recent innovations, significant developments, and novel applications in computational acoustics. This technical session will prioritize opportunities for students and early career acousticians to showcase their work.		Laura Brill, Ralph Muehleisen, Jennifer Cooper
Lightning Round	Interactive Computational Acoustics Demonstrations	Showcasing interactive online demos that can help users gain insight into the effects of various knobs that can be turned in the computational models	ED, EA, PA, UW	Jennifer Cooper, Michelle Swearingen, Subha Maruvada
Panel Discussions	Managing Machine Learning Datasets Across Acoustics	This panel discussion aims to inform the development of best practices for preparing, maintaining, and distributing the large datasets needed to train and validate machine learning models across the technical areas of acoustics.	NS, SC	Brandon Lee, Tyler Flynn
ENGINEERING ACOUSTICS				
Lightning Round	Engineering Acoustics Lightning Round	Lightning round contributions by early career researchers on electro-acoustic transducers, device design, industrial applications, as well as cross-disciplinary and emerging areas of engineering acoustics.		Michael Haberman

Panel Discussions Invited Submissions Only	Frugal Acoustics: Panel Discussion	The advent of inexpensive flexible low-power electronics and additive manufacturing have made it possible to build cost-effective experimental apparatuses for laboratory and point-of-need data acquisition, making research and engineering in acoustics more accessible than ever before. Contributions that describe the design and/or demonstrate the use of cost-effective hardware for research or instructional use are encouraged. Emphasis is made on new acoustics science and education enabled by frugal solutions as well as creative applications of existing methods.	PA	Randy Williams, Luz Sotelo
Traditional	General Topics in Engineering Acoustics	Contributions on unique and emerging topics in engineering acoustics		Ahmed Allam
Panel Discussions Invited Submissions Only	Show Your Work: Lab Visits and Demos	Demonstrations and lab tours of unique measurement capabilities.		Gary Elko, Michael Haberman
Traditional	Transducer Design and Characterization	Recent research on acoustical and vibrational transducers design and characterization for all areas in acoustics.		Thomas Blanford
EDUCATION IN ACOUSTICS				
Lightning Round Students Only	5-minute Elevator Pitches	Students present their research in 5-minutes by following the specific format of five slides, in order, a Title/Author/Affiliation slide, an Outline slide, a Problem Description/Motivation slide, a Proposed Approach/Alternative slide, and a Summary/Conclusion slide (https://alert.northeastern.edu/diy-project/give-a-5-minute-presentation/).	Student Council	Daniel Russell, Keeta Jones
Webinar and Discussion Invited Submissions Only	Teaching and Learning Acoustics with Jupyter Notebooks	Webinar by Dr. Matthew Wright (Professional Fellow in Education at the Univeristy of Southampton) on the use of browser compatible documents (using code in JuPytR = Julia, Python, or R) that he uses to teach students how to program, and how to learn mathematical acoustics. A Discussion will follow.		Daniel Russell
Webinar and Discussion Invited Submissions Only	Tones, Tines, and Tings–Virtual Demonstration Show by David Cotton.	David Cotton (@Newmanphyscis on Twitter/X) is a recent awardee of the Anthony Waterhouse Fellowship from the Institute of Physics (IOP). This webinar will showcase a number of acoustics, sound, and vibration demonstrations, many of which utilize relatively simple apparatus.		Daniel Russell
Lightning Round	What's That Sound? (Sounds of my Research)	What does your research SOUND like? Play the sound, then briefly explain what causes it, how it relates to your research project, why that sound is relevant, what the sound reveals about your topic of study. Two rounds of 5-mniute lightning talks. First hour — for STUDENTS only. Second hour for FACULTY / INDUSTRY. At the end of each hour we'll have a "Guess that Mystery Sound".		Daniel Russell, Keeta Jones, Andrew Morrison
Lightning Round	Where Do You Get Your Inspiration?	Share a book, blog, paper, video, talk, etc. that influenced you or inspired you to make changes to your teaching or your approach to the classroom. 5-minute talks. Two 45-minute lightning rounds with 15 minutes of discussion.		Daniel Russell, John Buck
MUSICAL ACOUSTICS				

Traditional	Artificial Intelligence Applied to Musical Instrument Design	Development and application of AI models, including—but not limited to: generative design algorithms to optimize acoustics, ergonomics, or material properties of musical instruments; methods for collecting and curating training data for machine learning techniques; and feature extraction to identify characteristics associated with acoustical properties that affect the sound of an instrument in relation to design elements. Papers related to Computational Acoustics (TCCA) are welcome to join this session	CA	Michael Prairie
Competitive/Cooperative Activities Invited Submissions Only	Demonstrations of Measurement Techniques	Live or recorded tutorials on how to measure variables typically used in musical acoustics research or in the design and construction of musical instruments. Emphasis can be on best practices, novel approaches, or small-budget hacks, featuring equipment, facilities, software, and/or techniques.		Andrew Piacsek, Gary Scavone
Competitive/Cooperative Activities	Evolving Technologies for Telematic Music Connections	This session address the use of telematic technologies and video conference capabilities in areas pertaining to Musical Acoustics. The session focuses on collaborative music played over the internet but goes well beyond this topic.		Jonas Braasch, Samuel R.V. Chabot
Lightning Round	General Topics in Musical Acoustics	Session without a defined topic authors across all areas in musical acoustics can contributed to.		Montserrat Pàmies-Vilà, Jonas Braasch
Lightning Round	Interactive Workshop on Simulations of Musical Acoustics	Quick demonstrations of original software, or customized application of commercial platforms, that provides visualization and/or auralization that aids the understanding of sound generation in musical instruments. Presentations followed by a panel discussion. Presenters are encouraged to upload software to a repository accessible to session attendees.		Andrew Piacsek
NOISE				
Traditional	A World of Vehicle Noise	In a world in which modified exhausts, aftermarket mufflers, straight pipes, loud sound systems, and drag racing thrive, and beleaguered citizens request noise cameras, the proposed session A World of Vehicle Noise seeks papers that examine vehicle noise problems and potential solutions, successes and failures, without limits as to the type of vehicle noise.		Jeanine Botta, Daniel Fink
Traditional	Advanced Noise Control Design and its Benefits to Humans and Society	Covering broad topic of noise control and society. Will include traditional papers plus a panel discussion.		Tracy Yat Sze Choy, Ning Xiang
Lightning Round Invited Submissions Only	Career Paths in Noise Control	Invited panel will talk about their career paths and answer questions	Practitioners and Industry	James Phillips
Panel Discussions Invited Submissions Only	International Aircraft Noise Regulation	Current state and challenges of aircraft noise regulations across the world. Panel speakers will each be invited to give a 10-minute live talk, and a panel discussion with Q&A will follow.		Alexandra Loubeau, Victor Sparrow
Panel Discussions Invited Submissions Only	Interventions in Soundscape	Following an introduction presentation the panel will focus on the future of soundscape in discussing examples of applied expertise and experience using the soundscape method in city planning and interventions.	AA, ASACOS	Brigitte Schulte-Fortkamp, Bennett Brooks, David Woolworth
PHYSICAL ACOUSTICS				
Competitive/Cooperative Activities Invited Submissions Only	Acoustics at the Beamline	Experiments and demos streaming from the beamline at the Advanced Photon Source		Ross Hrubiak, Blake Sturtevant

Panel Discussions Invited Submissions Only	Ask Me Anything	Spicy discussions with leaders in acoustics		Christopher Kube
Traditional	Frugal Acoustics	The advent of inexpensive flexible low-power electronics and additive manufacturing have made it possible to build cost-effective experimental apparatuses for laboratory and point-of-need data acquisition, making research and engineering in acoustics more accessible than ever before. Contributions that describe the design and/or demonstrate the use of cost-effective hardware for research or instructional use are encouraged. Emphasis is made on new acoustics science and education enabled by frugal solutions as well as creative applications of existing methods.	EA	Luz Sotelo, Randy Williams
Traditional Invited Submissions Only	Hot Topics in Physical Acoustics	This session highlights major discoveries and high impact research in the field of physical acoustics.		Andrea Arguelles, Lauren Katch
Competitive/Cooperative Activities Student Participation Only	Student Video Competition	Students only. Students will submit recorded 5 minute videos about their research project. Top 12 will be selected. 1 hr for undergrad/1 hr for graduate	EA	Joseph Turner
PSYCHOLOGICAL AND PHYSIOLOGICAL ACOUSTICS				
Lightning Round	My Favorite Graph in Psychological and Physiological Acoustics	Present a graph from a classic or recent paper. Perhaps a graph that you love to teach, or one that changed your conceptions in a fundamental way. Explain what makes it exceptional. There may be discussion and/or judging of presentations.		Sunil Puria, Dan Tollin
Panel Discussions	Panel on Remote Testing	Panel will discuss approaches advances in remote testing for psychological and physiological acoustics. Panel members will be invited but submissions from interested participants will be considered for inclusion.		Ellen Peng, Erol Ozmeral
Traditional	Psychological and Physiological Acoustics I	This session invites submissions for traditional (but virtual) presentations on any topic within psychological and physiological acoustics.		Andrew Oxenham
Traditional	Psychological and Physiological Acoustics II	This session invites submissions for traditional (but virtual) presentations on any topic within psychological and physiological acoustics.		Chad Bullard
Lightning Round Trainees, Postdocs, Students, Medical Students	Lightning Round Competition	Trainees only (i.e., all students, postdocs, medical student trainees). Brief presentations on current research. A committee will judge and select the top 6 presentations for inclusion in a special invited session at ASA/ICA New Orleans		Varsha Rallapalli, Greg Ellis

SIGNAL PROCESSING IN ACOUSTICS				
Lightning Round Invited Submissions Only	Explainable Artificial Intelligence	This session will focus on techniques that explain the reasoning behind machine learning methods. This may be through examining input features and explaining their significance (pre-training), analyzing model choices during or after training, or any method that explains why conclusions have been made in a machine learning model.	CA	Bernice Kubicek, Ananya Sen Gupta
Traditional	Signal Processing for Autonomous Vehicles	Environmentally-aware autonomous platforms hold promise for the scientific community and will be reliant on a variety of in-situ observations (i.e. active and passive sonar, camera observations, etc.). This session aims to identify techniques through signal processing and ML to advance the autonomy of the vehicle platforms through sound to sense and react in a non-stationary environment.	AO, UW	Ryan McCarthy
Traditional	Signal Processing Potpourri	Open session for general topics in acoustic signal processing.		Kendal McCain Leftwich, Natalia Sidorovskaia
Lightning Round Student Submissions Only	Signal Processing Student Showcase!	This session will combine "lightning" talks by students for any working falling under the broad category of Signal Processing in Acoustics for the first hour with a second hour of each student being in a "virtual room" with on-line slides and people can come and go from the rooms and engage in a conversation and show-and-tell with the student. The intent is to mimic an in-person session where each student will give a short talk "advertising" their poster followed by a poster session. The short talks will be 3 to 5 minutes long depending on the number of student submissions. Award for best paper to be given.		James Preisig, John Buck
Webinar Invited Submissions Only	Tutorial on Machine Learning for Acoustics	Acoustic data provide scientific and engineering insights in fields ranging from biology, speech, communications, to ocean science. This overview will explain and apply the transformative potential of machine learning (ML), including deep learning, to the field of acoustics. We first introduce ML, then highlight ML key developments in acoustics research.	CA	Peter Gerstoft, Ryan McCarthy, Mike Bianco
SPEECH COMMUNICATION				
Lightning Round	Choose-Your-Own-Adventure Lightning Round	A contributed Lightning round session for researchers to present their research and for participants to choose what they want to interact with.		Benjamin Tucker
Webinar Invited Submissions Only	Guest Tutorial on State of the Art Tools in Phonetics	A state of the art tutorial on a relevant speech science tool.		Benjamin Tucker
Traditional	In Honor of Ken Stevens' 100th Birthday	Session in honor of Ken Stevens		Stephanie Shattuck-Hufnagel, Abeer Alwan, Gabriella Di Benedetto
Lightning Round	Student Choose-Your-Own-Adventure Lightning Round	A session dedicated to student contributed presentations that participants can choose to view in whatever sequence they would like.		Benjamin Tucker
Competitive/Cooperative Activities Student Subissions Only	Student Led Tutorials	Short (30 min) tutorials on new or advanced methods is speech communication led by advanced graduate students or early career members.		Benjamin Tucker
STRUCTURAL ACOUSTICS AND VIBRATION				
Traditional	Acoustic Metamaterials	Exploring design and properties of acoustic metamaterials	EA, PA	Christina Naify, Alexey Titovich, Bogdan Popa, Bhisham Sharma

Lightning Round	Blue Sky Ideas in Structural Acoustics and Vibrations	This session invites radical, outrageous, or transformational ideas that explore the future of structural acoustics and vibration.		Bisham Sharma, Nathan Geib
Traditional	General Topics in Structural Acoustics and Vibrations	A session of general talks related to structural acoustics and vibration		Robert Koch, Micah Shepherd
Competitive/Cooperative Activities Invited Submissions Only	Lab Tours in Structural Acoustics and Vibrations	The lab tour session will consist of virtual visits to several structural acoustics and vibrations labs to explore what research or commercial activities these labs are engaged in.		Michael Dickerson, Chengzhi Shi
Panel Discussions Invited Submissions Only	Panel Discussion–Structural Acoustics and Vibrations	Panel discussion on structural acoustics and vibrations career paths with panelists representing academia, government, and industry		Christina Naify, Benjamin Beck, Alexey Titovich, Feruza Amirkulova
UNDERWATER ACOUSTICS				
Competitive/Cooperative Activities Invited Submissions Only	Instrumentation/Lab Show and Tell	Instrumentation/Lab Show and Tell from scientists and future scientists	AO, EA	Jie Yang, Aubrey Espana
Panel Discussions Invited Submissions Only	Invited Speaker Talk Outside the Field of Underwater Acoustics	Distinguished speaker talk from field outside of UW	AO	David Dall'Osto
Lightning Round	Lightning Round Led by Students	Interesting research highlights from the students	AO	Natalie Kukshtel
Competitive/Cooperative Activities Invited Submissions Only	Trivia Among AO/AB/UW	Trivia among TC AO/AB/UW	AO, AB	Robert Drinnan
Webinar Invited Submissions Only	Webinar on Python and Data Analysis	Python and data analysis	AO, EA	Tracianne Neilsen, Tyler J. Flynn