Chicago Meeting Special Sessions			
Primary Sponsoring Committee	**Cosponsors**	**Session Titles**	**Descriptive Sentences**
Acoustical Oceanography	UW, SP	Memorial Session for Jeffrey A. Nystuen Organized by: Jennifer Miksis-Olds, Kai Gemba, Jie Yang	Focus on research related to ocean-acoustic ambient noise to honor the accomplishments of Jeffrey A. Nystuen. Characterization of ambient noise include omni-directional and beam noise, using ocean observatory system for detection/ estimation of rainfall over the ocean, surface generated noise, discrete sources such as marine mammals, and shipping traffic
Animal Bioacoustics	AO, NS, UW, SP	Climate Change and Sound: How the Sound of the Planet Reflects the Health of the Planet Organized by: Ed Walsh, Megan Ballard, Laura Kloepper	The role that tracking climate-induced changes in the soundscape of ecosystems as a means of monitoring ecological degradation, changing migration patterns, and anticipated decline in species richness will be considered, along with techniques to measure physical changes in the environment such as ocean temperature and ocean acidity
Animal Bioacoustics		Contributions of Expert Subjects to Animal Bioacoustics Organized by: James Finneran, Dorian Houser	Highlighting the lives and scientific contributions of individual animals that have made significant contributions to our understanding of animal bioacoustics
Animal Bioacoustics	PP, SP	Session in Honor of James A. Simmons Organized by: Laura Kloepper, Alyssa Accomando	James ("Jim") A. Simmons, recipient of ASA's Silver Medal in Animal Bioacoustics for his contributions to understanding bat echolocation, has conducted research on bat behavior and neurophysiology for over 50 years. This session will honor all the work his research has inspired with echolocating animals
Architectural Acoustics	NS, ASACOS, EA, SA	Application and Development of Standards Used in Architectural Acoustics and Noise Organized by: Matthew Golden, Evelyn Way, Mike Raely	Review of the current status, recent updates and planned changes to key ASTM, ASA/ANSI, and other standards used in architectural acoustics and noise control
Architectural Acoustics	SP, CA	Application of Statistical and Computational Methods in Building Acoustics Organized by: Samantha Rawlings, Benjamin Shafer	Evaluation of the built environment and acoustical challenges using statistical and/or computational solutions
Architectural Acoustics	SP, CA, PA, SA, NS	Artificial Intelligence and Machine Learning Organized by: Semiha Yilmazer, Dick Botteldooren, Andrew Mitchell	Development and application of AI models, including feature extraction, model training, data creation, and model uses. Papers related to Architectural Acoustics (TCAA) and Noise (TCNS) are welcome to join this session
Architectural Acoustics	NS, ASACOS, SA	Classroom Acoustics Organized by: David Woolworth, David Manley	A review of how we got here and charting a path forward, improving the classroom environment for all types of learners.

Architectural Acoustics	CHRG, MU, NS	Evaluation of Completed Performance Spaces: Goals and Methods Organized by: Jonah Sacks, Robin Glosemeyer Petrone	What are we looking for when we evaluate the acoustics of a completed performance space? How do we collect this information, and what do we do with it? Submitters may discuss measurements or other methods. Performance spaces may include those for any form of music, theatre, or other performance type
Architectural Acoustics		Heavy-Handed Recommendations: When Less is More Organized by: Shane Kanter, Brandon Cudequest	The threshold between acceptability and dissatisfaction can be a fine line. Other times, best practice can lead to potentially heavy-handed designs. This session will explore the situational appropriateness of design recommendations and challenge general rules of thumb. Examples may include antiquated guidelines for vibration isolation of newer equipment typologies, errors in modeling approaches that lead to overdesign, or aural demonstrations where the acceptable result is counter to general criteria
Architectural Acoustics	NS, ASACOS, EA	Sound Data for Sound Design Organized by: Derrick Knight, Evelyn Way	Manufacturers provide sound data to customers in many ways. Most often, data is intended to facilitate good sound design by knowledgeable practitioners on behalf of the end user. However, practical limitations in the quality and quantity of testing makes providing data for all product variations, evaluating lab variation, and presenting data in formats appropriate for multiple uses a significant challenge. Manufacturers will share how they have overcome these challenges, giving practitioners a more thorough understanding of how these data are provided which is not evident by simply reading the relevant test standards
Biomedical Acoustics	EA, PA, SA, SP	Advances in Elastography Organized by: Thomas Royston, Matthew Urban	Focus on advances in elastography techniques
Biomedical Acoustics	ED	Best Practices in Mentoring for Biomedical Acousticians Organized by: Kevin Haworth, Julianna Simon	Opportunity for biomedical acousticians to hear about high quality mentoring practices, including those currently use in biomedical acoustics and those that might be imported to the field
Biomedical Acoustics	PA	Clinical Perspective of Biomedical Acoustics Organized by: Tyone Porter, Flordeliza Villanueva	Review of current clinical perspectives of therapeutic ultrasound
Biomedical Acoustics		Lung Ultrasound Organized by: Libertario Demi	The potential of lung ultrasound (LUS) has become manifest in the light of the COVID-19 pandemic. The need for a point-of care, quantitative, and widely available assessment of lung condition is critical. However, conventional ultrasound imaging is limited to the subjective and qualitative interpretation of artifacts and imaging patterns visible on LUS images. This special session will focus on in silico, in vitro, and in vivo studies (preclinical animal studies and pilot clinical studies on human subjects), aimed at understanding, modelling and leveraging the physical phenomena involved in ultrasound propagation to extract semi-quantitative and quantitative information relevant to estimate changes in lung structure

Biomedical Acoustics	SP, PA	Making and Using Cavitation Images for Therapeutic Ultrasound Organized by: Kevin Haworth, Meaghan O'Reilly, Michael Gray	Recent advances in the imaging of cavitation for guidance and analysis of ultrasound-mediated therapies
Biomedical Acoustics	EA, PA	New Technology Developments for Use in Focused Ultrasound Therapy Organized by: Lawrence A. Crum	New technology such as transducers, HIFU delivery systems, methodologies, and other approaches to improve the clinical application and potential for focused ultrasound therapy
Biomedical Acoustics		Ultrasound Brain and Super-Resolution Imaging Organized by: Chengzhi Shi	All topics on ultrasound brain imaging and super-resolution imaging
Biomedical Acoustics		Ultrasound for Ocular Therapy Organized by: Maxime Lafond	Assess the use of therapeutic ultrasound for the treatment of ocular disease
Biomedical Acoustics	PA	Ultrasound Induced Cell Responses Organized by: Yun Jing, Qifa Zhou, Costas Arvanitis	Focused on research development on ultrasound induced cell response, including but not limited to ultrasound neuromodulation and sonogenetics
Computational Acoustics	AA, PA, UW, SA, EA	Boundary Conditions Across Acoustics Organized by: Jennifer Cooper, Michelle Swearingen	Exploring the similarities and differences in the boundary conditions used for computational methods across all the disciplines in acoustics
Computational Acoustics	CA, SA, PA	Computational Methods for Modeling Acoustic Damping Organized by: Shung H. Sung, D. Keith Wilson, Kuangcheng Wu	Acoustic damping is often used to control interior or radiated sound from vibrating structural surfaces or sound sources. Computational methods such as FEM, CMA, SEA and others are solicited in this session to model acoustic damping coupled with structural or structural-acoustic analytical models to predict either interior or radiated sound over a wide frequency range. Also of interest are computational methods to model acoustic damping using experimental data to predict its effects on interior or radiated sound. Various damping methodology to be considered are absorption materials, structural-acoustic damping, acoustic radiation damping, acoustic black holes, Helmholtz resonators, active noise control, etc.
Computational Acoustics	AA, MU, PA	Real-Time Computing Organized by: Michael Vorländer, Jonas Braasch	In various applications, real-time performance in computation is the key to obtain the desired goal. Examples are system control and human-computer interaction. The session will highlight algorithms, acceleration strategies and evaluations of real-time technology
Computational Acoustics	SA, PA, SP, MU, UW, EA, BA	Showcases of HPC Across Acoustics Organized by: Ralph Muehleisen, Kuangcheng Wu	Will present research that highlight the benefits of utilizing high performance computing across all acoustic fields, such as in analyzing big data, performing numerical analyses, or supporting machine/deep learning
Computational Acoustics	SA,NS, MU, PA, AO	Wind Acoustics Organized by: D. Keith Wilson, Gregory W. Lyons	Acoustics of wind, including characterization of the sounds produced, perception, and methods for mitigating wind noise in acoustical measurements

Education in Acoustics	PA , NS, AA, EA	Assessment of Acoustics Education Organized by: Andrew Piacsek, Daniel Russell	Tools and approaches for the assessment of teaching pedagogy, education research, and evaluation of the effectiveness of teaching methods. Suitable topics include assessment strategies, methods for measuring outcomes, designing and using rubrics, concept inventories, when to start and stop assessment and how to report measured outcomes
Education in Acoustics	PA, EA, MU	Resources for Teaching Waves in a Physics Class Organized by: Cameron Vongsawad, Andrew Morrison, Andrew Piacsek, Daniel Russell	Educational resources (websites, online repositories, apps for mobile devices or computers, demonstration apparatus, hands-on activities, etc.) suitable for teaching waves in a physics class with a specific emphasis on high school physics classes, including AP (advanced placement)
Education in Acoustics	PA, AA, NS	When Doing it Right Goes Wrong Organized by: Kimberly Riegel, John Buck	Even when we do everything the research says about active learning it is not always successful, presentations will outline these failures and how we readjust to make them a success
Engineering Acoustics	SP, PA, AA, UW, BA, NS	Acoustic Measurement in Extreme Environments Organized by: Robert White	Measurement of acoustics in extreme environments such as extreme temperatures, low or high static pressures, corrosive or otherwise challenging chemical environments, high radiation environments or other challenging environments. Sensors, signal conditioning, signal transmission, processing techniques, or other aspects of acoustic measurement systems for extreme environments
Engineering Acoustics	SP, BA, PA, UW	Additive Manufacturing for Transducers Organized by: Thomas Blanford, Michael Haberman	Experimental and theoretical research on the topic of additive manufacturing as applied to electro-acoustic transduction materials and devices
Engineering Acoustics	SP, NS, UW, AA, PA	Microphones: Design, Development, and Characterization Organized by: Thomas Blanford, Zane Rusk	Development of microphones design, electro-acoustic transduction mechanisms, and methods for their characterization and calibration in audio, medical, industrial, and scientific applications
Interdisciplinary	Student Council	Guidance From the Experts: Applying for Grants and Fellowships Organized by: Zane Rusk, Pratik Ambekar, Brijonnay Madrigal	A panel of successful fellowship winners, selection committee members, and fellowship agency members will answer questions regarding grants and fellowships, application advice, and funding opportunities. The panelists will briefly introduce themselves, followed by a question and answer session with the audience
Musical Acoustics		Acoustics of Percussion Instruments Organized by: Colin Malloy, Andrew Morrison	All topics involving the broad family of struck musical instruments
Musical Acoustics		Acoustics of Stringed Instruments Organized by: Montserrat Pàmies Vilà, Vasileios Chatziioannou	Computational and experimental studies of chordophones, including player-instrument interaction, string-body interaction, modal behavior, and sound radiation

Musical Acoustics	CA, SC	Computational Phonogram Archiving Organized by: Rolf Bader	Modern music archives, streaming platforms, film music distributers, or museums or collections are in need of computational, artificial intelligent, automatic tools to analyze, sort, and understand the Big Data of modern collections. Tools like Music Information Retrieval, Self-Organizing Maps (SOMs) or Machine Learning techniques, problems from archives and related topics, demands and problems in this field
Musical Acoustics	SP, PA	Music Synthesis Techniques Applied to Sound Design and Sonification Organized by: Jill Linz	Applications of digital signal processing and music synthesis techniques to help create audible representations of data
Musical Acoustics	AA	Music Venue Acoustics and Architecture Organized by: Rolf Bader, Tim Ziemer	Acoustical and architectural demands and constraints of a music venue, concert hall, music club etc. are often not aligning. Venues sound according to architecture, visual elements in a hall are caused by acoustic needs. Problems, solutions, and future suggestions in this field will be discussed, built venues are analyzed and discussed, and new suggestions for improving the situation, like metamaterials for room acoustics or wavefield-synthesis, next to other techniques, are presented
Noise		Flanking Paths: Finding them, Solving Them and Improvement in ASTC When You Do Organized by: Bonnie Schnitta	Those concerned with the acoustic value of a wall, floor, etc. are often disappointed in the low ASTC value that can occur in a partition with a lab tested high STC. This session will present methods to find flanking paths, methods to solve the flanking paths and resultant improvement in the ASTC
Noise		Incorporating Tones in Noise Criteria Orgnaized by: Derrick Knight, Jerry Lilly	Noise criteria often exclude the influence of tones. This session will focus on incorporating tones in indoor and outdoor noise criteria
Noise	AA, AO, EA, UW	Post Pandemic Soundscapes Organized by: Bennett Brooks, Brigitte Schulte-Fortkamp	The pandemic has changed the perception of our living areas. Methodically there are new approaches in soundscape that include virtual reality. We are seeking research and case studies to improve this new understanding
Noise	EA, PA, SA, CA	Validation of Environmental Noise Modeling Organized by: Joseph Keefe, Eric Reuter	Comparison of measured site results to acoustical modeling predictions (CadnaA/SoundPlan/etc.), including lessons learned, pitfalls, accuracy, and limitations
Noise	PP, EA, PA, SA	Wind Turbine Noise Organized by: Norm Broner, David Michaud	Wind turbine sound: its prediction, measurement, and factors influencing community response are all among the topics welcome
Physical Acoustics		Acoustic Remote Sensing in Urban Environments Organized by: Max Denis, Sandra L. Collier	Approaches that have been developed to determine the acoustic characteristics of the urban environment for robustly localizing remote sources, removal of noise and multipath distortion from signals.
Physical Acoustics	EA, SA	Acoustic Sensing in Planetary Environments Organized by: Andi Petculescu, Timothy G. Leighton	New developments in acoustic sensing of planetary atmospheres and interiors, including measurements by lander-based sensors, numerical modeling, and theoretical predictions for future missions

Physical Acoustics	SA	Acoustics and Elasticity of Consolidated and Unconsolidated Granular Materials Organized by: John Yoritomo, James Bittner	Acoustic and elastic properties of both consolidated granular materials (e.g., rocks, concrete, sintered materials) and unconsolidated granular materials (e.g., sands, bead packs, fault gouge). Such materials display non-linear and out-of-equilibrium features, not found in materials described by atomic-scale elasticity. This session hopes to attract researchers in nonlinear elasticity and acoustics, non-destructive testing, wave propagation in granular materials, metamaterials, soft condensed matter physics, and geophysics
Physical Acoustics	ED,SA	Acoustics Demonstrations Extravaganza Organized by: Daniel Russell	In the spirit of the "Circus of Acoustics" demonstration show from ASA #143 in 2002, this session will showcase a collection of demonstrations and apparatus to inspire, delight, and perhaps challenge your understanding of acoustics and vibration. (Demonstrations will be by invitation only, though interested parties may contact the session organizer)
Physical Acoustics	BA, EA	Advances in Sonochemistry Organized by: James Kwan	Talks on sonochemistry, sonodynamic therapy, sonochemical reactors and more!
Physical Acoustics	BA, SA, EA	Interaction of Electromagnetic Waves with Acoustic Waves Organized by: Chu Ma, Parag Chatnis	Deals with thermoacoustic waves generated by the material absorption of pulsed electromagnetic waves, including applications such as thermoacoustic/photoacoustic imaging, therapy guidance, and non-destructive evaluation
Physical Acoustics	BA	Sonogenetics Organized by: James Friend, Sreekanth "Shrek" Chalasani	Ultrasound may now be used to drive cellular responses in tissue to provide a means of communication and potential treatment, with targeted treatment of the brain, pancreas, heart, and other organs enabled using this approach which combines ultrasound with mechanosensitive ion channels and proteins. The session will include the latest results in this discipline
Psychological and Physiological Acoustics		David Green and Psychoacoustics Organized by: William A. Yost, Robert Lutfi	Dave was an ASA icon receiving every honor the ASA (and many other organizations) could bestow and serving the ASA in almost every elected position. But, far more importantly his impact on the field of Psychological Acoustics was unmatched over the past 75 years and probably for much longer. Through both his empirical and theoretical research he helped change the way in which measurements are made and their results interpreted in studying perception. And, equally important his tutelage of students, postdocs, and colleagues included a vast majority of those active in the field of Psychological Acoustics over the past 75 years. The Special Session will include many who worked with Dave on the vast array of topics he studied. If possible, the Session will include others who may not have worked with Dave, but used what Dave provided in their study of psychoacoustics
Psychological and Physiological Acoustics	SC	Perception Beyond Tones and Speech in Normal and Impaired Hearing: Voice, Emotions, and Music Perception Organized by: Deniz Baskent, Tyler Perrachione	A lot of perception research, especially with impaired hearing and hearing devices, has concentrated on perception of tones and speech (hearing and speech audiometry). However, perception extends beyond these, and recent research now emphasize also importance of other aspects of perception, such that of voice/talkers, emotions, and music. In this session we want to emphasize the latest research on these domains

Psychological and Physiological Acoustics		Sensory and Non-Sensory Influences on Auditory Development Organized by: Bonnie Lau, Laurianne Cabrera	Sensory and non-sensory (e.g., cognition, memory, attention) influences on auditory development through both behavioral and physiological data
Psychological and Physiological Acoustics		Environmental Sounds: Perception, Cognition, Applications Organized by: Laurie Heller, Valeriy Shafiro	Environmental sound research is on the rise. The session considers theoretical and applied aspects of current environmental sound research across listener populations and listening environments
Signal Processing in Acoustics	BA, UW, PA, AA	Acoustical Imaging, Reconstruction and Localization Organized by: Yangfan Liu, Efren Fernandez Grande	Acoustical imaging, reconstruction and localization is a type of techniques where information of sound field, sound sources as well as acoustic media in a spatial region can be obtained based on acoustic measurements from an array of sensors or scanning measurements with a single sensor. This special session welcomes presentations on physical modeling, algorithm development, measurement system, information inference and other aspects related to this technology category
Signal Processing in Acoustics	CA	Feature Extraction, Dimensionality Reduction, and Learning in Ocean Acoustics Organized by: Grant Deane, James Preisig	Explores a number of problems in ocean acoustic signal processing of interest to the subsea community, including localization, tracking, and modeling. Of particular interest are methods that incorporate ocean physics models together with feature extraction, dimensionality reduction and machine learning
Signal Processing in Acoustics	ED, PA	My Favorite Signal Processing Homework Problems Organized by: Kathleen Wage, John R. Buck	Homework problems for signal processing classes, including those based on real data, conceptually oriented problems, and good brain-teasers
Speech Communication	PP	Clear Speech(es) Across People, Places, and Time Organized by: Rajka Smiljanic, Georgia Zellou	Examination of listener- and environment-oriented clear speeches in production and perception. The session aims to bring together those working on basic science, technological, and clinical research on intelligibility-enhancing speech patterns
Speech Communication	ED	Infusing Social Justice in Speech and Hearing Acoustics Pedagogy: Principles and Case Studies Organized by: Benjamin Munson	The National Science Teaching Association states that "scientific ways of knowing and science education are fundamentally cultural and inherently political. All students have a right and a responsibility to learn how science has been implicated in creating many social inequities over time and how diverse scientific knowledges and practices can promote justice." This session is intended to contribute to the development of a socially just pedagogy in acoustics, with a focus on the organizers' content areas, speech communication and psychological and physiological acoustics. The session will include presentations on socially just pedagogical frameworks, metrics for assessing the equity in existing pedagogies, and case studies of curricular evolution toward more just and equitable teaching and learning in our fields

Speech Communication	PP	Multisensory Integration, Perception, and Aging Organized by: Ken Grant, Bogdan Popa, Brittany Wojciechowski	Healthy aging implies the successful integration of sensory information arising from multiple modalities, even as sensory processing for individual modalities decline (vision, audition, balance, proprioception, taste, etc.). For complex tasks requiring sustained attention and memory, or under conditions requiring multitasking, elderly individuals often show deficits in unimodal integration. For example, the ability to ignore irrelevant information, such as a conversation taking place at a different location in a room, is reduced and neural activity associated with the non-attended target(s) is amplified relative to the attended target. In this session, we will address issues surrounding dual- and poly-sensory impairments, how some elderly individuals are able to at least partially compensate for reduced sensory acuity while others are not, and how multisensory integration deficits affects the individual's quality of life
Structural Acoustics and Vibration	SA, EA, PA, CA	Acoustic Metamaterials Organized by: Christina Naify, Alexey Titovich, Ian Bacon	Contributions on theoretical and computational analysis of new metamaterial structures, experimental validation, and characterization of prototype unit cells or bulk materials, and demonstrations of the uses for acoustic metamaterials
Structural Acoustics and Vibration	EA, PA, SP, NS	Acoustic Excitation of Structures Organized by: Brian Anderson, Trevor Jerome	Research on noncontact acoustic excitation of structural vibration. The session includes intentional excitation techniques for assessment of structures and unintentional excitation of vibration due to external noise for example
Structural Acoustics and Vibration	PA, EA	Historical Perspectives in Structural Acoustics Organized by: Alexey Titovich, Kuanchang Wu, Matthew Luu	Structural Acoustics and Vibration covers wide range of disciplines including structural dynamics and vibration, fluid propagation and their interaction. The session would invite our most experienced associates in structural acoustics and vibration to convey their perspective topics in the past to near future. A panel discussion will be held with presenters
Structural Acoustics and Vibration	EA, PA, NS, CA, PA	Real World Case Studies for Damping Organized by: Benjamin Shafer, Robert Koch	Case studies involving the prediction, experimentation, and application of damping in a variety of projects worldwide
Structural Acoustics and Vibration	PA, EA	Standardization in Structural Acoustics and Vibration Organized by: Benjamin Shafer, Benjamin Beck	A history and review of national and international standards related to structural acoustics and vibration
Structural Acoustics and Vibration	ED, PA, EA	Tutorial on Structural Acoustics and Vibrations Organized by: Stephanie Konarski, Anthony Bonomo, Martin Siderius	This session provides a tutorial that expounds upon a single topic within the field of structural acoustics and vibration. This session will include invited speakers only

Underwater Acoustics	AO, SP, PA, EA	Acoustic Methods for Unmanned Mobile Platforms: Sensing, Localization, and Communications Organized by: Aijun Song, Fumin Zhang, Martin Siderius	Unmanned platforms such as surface vehicles, autonomous underwater vehicles, gliders, and drifters are increasingly being used in the undersea environment for variety of tasks that include environmental sensing, detection, localization, and communications. This session will focus on advances in acoustic methods implemented on unmanned platforms. Also of interest are the many challenges (e.g., navigation, radiated sound, size and power constraints) associated with adapting techniques for these autonomous platforms
Underwater Acoustics	AO, PA	Exploring Fine-Grained Sediments in the Variable Ocean Organized by: David Knobles, Preston Wilson, Tracianne Nelson	Modeling and analyses of data from seabed characterization experiments in fine-grained sediment areas including the impact of variable oceanography
Underwater Acoustics	AO, CA, PA, NS, AA	3D Acoustic Propagation Organized by: T. J. Flynn, Jennifer Cooper	Current research in the development of three-dimensional acoustic propagation models, experimental observations of three-dimensional phenomena, and the additional challenges and insights encountered beyond two dimensions