

# **Announcement and Call for Papers**

**Acoustics '17 Boston**

**3rd Joint Meeting**

**Acoustical Society of America/European Acoustics Association  
173<sup>rd</sup> meeting of ASA/8<sup>th</sup> Forum Acusticum**



**John B. Hynes Veterans Memorial Convention Center  
Boston, Massachusetts, USA**

**25-27 June 2017  
(Sunday-Thursday)**

**Deadline for receipt of abstracts: 9 January 2017**

# Acoustics '17 Boston

## Organizing Committee

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Architectural Acoustics.....	Kenneth Good, Monika Rychtáriková
Biomedical Acoustics .....	Nathan McDannold, Constantin-C. Coussios
Education in Acoustics.....	David Bradley, Catherine Potel
Engineering Acoustics.....	Kenneth Walsh, Ondrej Jiricek
Musical Acoustics.....	Andrew Morrison, David Sharp
Noise .....	William Murphy, Jian Kang, Brigitte Schulte-Fortkamp
Physical Acoustics .....	Joseph Gladden, Olga Umnova
Psychological and Physiological Acoustics.....	Magdalena Wotjczak, Armin Kohlrausch
Signal Processing in Acoustics .....	Paul Gendron, Boaz Rafaely
Speech Communication .....	Catherine Rogers, Alexander Raake
Structural Acoustics and Vibration .....	Robert Koch, Manfred Kaltenbacher, Ines Lopez-Arteaga
Underwater Acoustics .....	Megan Ballard, Philippe Blondel

## MEETING ANNOUNCEMENT AND CALL FOR PAPERS

Acoustics '17 Boston is the 3rd Joint Meeting of the Acoustical Society of America (ASA) and the European Acoustics Association (comprising the 173<sup>rd</sup> ASA meeting and the 8<sup>th</sup> Forum Acusticum) will be held Sunday through Thursday, 25-29 June 2017. The meeting will be held at the John B. Hynes Veterans Memorial Convention Center. Sleeping room blocks have been reserved at seven hotels nearby the convention center. Information about the meeting also appears on the ASA webpage at AcousticalSociety.org.

**The deadline for receipt of abstracts is 9 January 2017. This deadline will be strictly enforced.**

Susan E. Fox  
Executive Director

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# TECHNICAL PROGRAM AND SPECIAL SESSIONS

## TECHNICAL PROGRAM

Contributed papers are welcome in all branches of acoustics. The technical program will consist of lecture and poster sessions. Technical sessions will be scheduled Sunday through Thursday, 25-29 June.

Every effort will be made to schedule contributed abstracts in accordance with author and Organizing Committee preferences. However, authors should be prepared to accept assignment to poster sessions or lecture sessions. Assignments will take into account: a) author preference, b) program balance, and c) Technical Committee instructions. Abstracts will be rejected if they do not comply with the instructions.

Special sessions described below are planned for the meeting. Authors of invited papers must indicate the title of the special session in which they have been invited to participate when the abstract is submitted.

Authors of contributed papers have the option to request placement of their abstracts in the special sessions. However, placement of contributed abstracts in the requested special session may not be possible. Authors of contributed abstracts should be prepared to accept assignment to any technical session. If no special session placement is requested, contributed papers will be scheduled in sessions with abstracts of similar technical content.

## SPECIAL SESSIONS, ORGANIZERS, AND DESCRIPTIVE SENTENCES

### ACOUSTICAL OCEANOGRAPHY (AO)

Acoustic Measurements of Sediment Transport and Near-Bottom Structures  
(Joint with Underwater Acoustics)  
Organized by: James Lynch, Peter Thorne

Acoustics and Acoustic Ecology of Benthic Communities  
(Joint with AB/UW)  
Organized by: Preston S. Wilson, Jean-Pierre Hermand

Session in Honor of David Farmer  
Organized by: Andone Lavery, Grant Deane, Timothy G. Leighton

Tools and Methods for Ocean Mapping  
Organized by: Scott Loranger, Philippe Blondel

### ANIMAL BIOACOUSTICS (AB)

Comparative Bioacoustics: Session in Honor of Robert Dooling  
Organized by: Amanda Lauer, Micheal Dent

Ecosystem Acoustics  
Organized by: Susan Parks, Jennifer Miksis-Olds, Denise Risch

Fish Bioacoustics: Session in Honor of Anthony Hawkins and Arthur Popper  
Organized by: Joseph Sisneros, Michaela Meyer

### DESCRIPTIVE SENTENCES

Instrumentation, field programs and results, scattering theory, and signal processing aspects of sediment transport and seabed morphology

Acoustic characteristics of fauna and flora in marine habitats including acoustic ecology, soundscapes, acoustic remote sensing and ambient noise

Retrospective, historical, and contemporary papers honoring the contributions of David Farmer in advancing the study of physical oceanographic processes (e.g., stratified flow over topography), internal waves, turbulence, bubble clouds, ice mechanics, and wave breaking

Development and/or use of acoustical tools and techniques to advance ocean mapping and hydrography, including multi-beam sonars, side-scans sonars, and synthetic aperture sonar; includes applications to the sea-floor, structures on/beneath the sea-floor, and in the water-column

Celebrating research in the field of comparative bioacoustics in birds

Advances in the emerging research field of ecosystem acoustics (or 'ecoacoustics'), using passive acoustic recordings to assess ecosystem level processes over larger spatio-temporal scales than previously possible, in both terrestrial and marine ecosystems.

Celebrating Research in Fish Bioacoustics—Past, Present, and Future

## **ANIMAL BIOACOUSTICS (AB) (cont)**

Incorporating Underwater Acoustics Research into the Decision Making Process

(Joint with Acoustical Oceanography, Education in Acoustics and Underwater Acoustics)

Organized by: Kathleen J. Vigness-Raposa, Michael Ainslie

## **ARCHITECTURAL ACOUSTICS (AA)**

Acoustic Regulations and Classification of New and Retrofitted Buildings

Organized by: Dave Woolworth, Birgit Rasmussen, Jorge Patricio

Robust Heavy and Lightweight Constructions for New Build and Retrofit Buildings

Organized by: Matt Golden, Bart Ingelaere, Stefan Schoenwald

Architectural Acoustics and Audio: Even Better Than the Real Thing

Organized by: K. Anthony Hoover, Alex U. Case, Wolfgang Ahnert

Assistive Listening Systems in Assembly Spaces  
(Joint with Speech Communication, Signal Processing in Acoustics, ASA Committee on Standards and Engineering Acoustics)

Organized by: Damian Doria, Thomas Burns, Peter Mapp, Stephen Dance

Echolocation by People Who are Blind

Organized by: David Pelegrin Garcia, Monika Rychtarikova

Simulation and Evaluation of Acoustic Environments

Organized by: Michael Vorländer, Ning Xiang, Stefan Weinzierl

New Measurement and Prediction Techniques at Low Frequencies in Buildings

Organized by: James Phillips, Bert Roozen, Herbert Müllner

Noise and Soundscapes in Restaurants and Other Public Accommodations

(Joint with Noise)

Organized by: Kenneth P. Roy, Brigitte Schulte-Fortkamp

Open-Plan Offices - Benefits of Acoustic Design

Organized by: Monika Rychtarikova

Perceptual Effects Related to Music Dynamics in Concert Halls

Organized by: Michelle Vigeant, Tapio Lokki

## **DESCRIPTIVE SENTENCES**

Primers for decision makers on underwater acoustics, animals and sound, and underwater sound sources; a facilitated panel discussion on current research in underwater acoustics; also round table discussions on key topics identified by the decision-making community

Acoustic regulations and classification schemes for housing, educational, office, and healthcare buildings, including new as well as existing and retrofitted buildings. Exchange of experience about uses, needs, policies, and options, including use of acoustic criteria in indoor climate standards, and sustainability labelling

Examination of new robust building solutions developed for the different acoustic classes of rapidly changing construction technology due to increased thermal insulation requirements, optimization of building costs, etc.

Adapting, enhancing and fictionalizing acoustics through architectural, audio and signal processing systems

Current trends and challenges in assistive listening systems along with a panel discussion on potential enhancements of the listening experience for persons with hearing impairment. Emphasis placed on special challenges for assembly spaces used to host musical and theatrical performances

Active sensing and perception of the environment by auditory means known as echolocation in terms of orientation, perception and underlying sensory mechanisms and mobility training

Focus on novel approaches for the comparative evaluation of recorded or auralized rooms. Perceptual validations along the signal chain allow one to evaluate the plausibility and/or the authenticity of virtual acoustic environments as a whole

New measurement approaches in low frequency building acoustics (e.g. laser Doppler, accelerometers) to overcome the low modal density in rooms that typically impedes reliable microphone based measurements. Contributions also on measurement uncertainties, in low, mid and high frequencies

Treatment of occupant- and activity-based noise in public accommodations and alerting of occupants to these issues

Multidisciplinary session gathering researchers from room acoustic and environmental psychology, focusing on case studies where good design has resulted in either better objective room acoustic performance or better subjective employee satisfaction (environmental psychology) performance

Perceptual effects such as dynamics and spaciousness in concert halls that cannot be explained with linear impulse responses but are perceived when orchestra varies play (e.g., in pianissimo vs in fortissimo)

## ARCHITECTURAL ACOUSTICS (AA) (cont)

Prediction of Direct and Flanking Airborne and Impact Sound Transmission

Organized by: John LoVerde, Edwin Reynders

Recent Developments and Advances in Archeo-Acoustics and Historical Soundscapes

(Joint with Noise)

Organized by: David Lubman, Miriam Kolar, Elena Bo

Retrospect on the Works of Bertram Kinsey

Organized by: Gary Siebein, David Lubman

Room Acoustics Design for Improved Behavior, Comfort, and Performance

Organized by: Ken Roy, Nicola Prodi

Sound Propagation Modeling and Spatial Audio for Virtual Reality

Organized by: Dinesh Manocha, Lauri Savioja, U. Peter Svensson

Teaching and Learning in Healthy and Comfortable Classrooms

Organized by: Dave Woolworth, Arianna Asolfi, Viveka Lyberg Ahlander

Uncertainty in Laboratory Building Acoustic Standards

(Joint with ASA Committee on Standards)

Organized by: Matthew Golden, Daniel Urban

## BIOMEDICAL ACOUSTICS (BA)

Advances in shock wave lithotripsy

Organized by: Adam Maxwell, Julianna Simon, Robin Cleveland

Beamforming and Image Guided Therapy

Organized by: Costas Arvanitis, Meaghan O'Reilly, Constantin Coussios

Beamforming and Image Reconstruction

(Joint with Physical Acoustics)

Organized by: Martin D. Verweij, Hendrik J. Vos

Diagnostic and Therapeutic Applications of Ultrasound Contrast Agents

(Joint with Signal Processing in Acoustics)

Organized by: Tyrone Porter, Klazina Kooiman

Impact of Soft Tissue Inhomogeneities and Bone/Air on Ultrasound Propagation in the Body

(Joint with Physical Acoustics)

Organized by: Vera A. Khokhlova, Robin O. Cleveland

## DESCRIPTIVE SENTENCES

Original research contributions on the prediction of airborne and impact sound transmission, especially for the sound insulating capacity of built-up, multi-layered and/or lightweight structural systems, and when flanking transmission is present

New and promising developments in archeo-acoustics illuminating recent interest in the field by historians, archaeologists, and anthropologists

A view back on the works of Bertram Kinsey as Teacher, Musician, Academic, and Architect

In many living and working spaces (e.g., restaurants, offices and classrooms), the impact of poor room acoustics is manifested in a negative alteration of the space. Session to include the mechanisms controlling subjects' responses along with surveys and design cases for ergonomic room acoustics

Room acoustic modeling and spatial audio techniques suitable for interactive applications and virtual reality

Issues concerning classroom acoustics from the teaching and learning points of view. Focus on health and comfort in classrooms taking into account all aspects involved beyond acoustics

Update on the Uncertainty, Repeatability, Reproducibility, Precision, and Bias of Building Acoustics Standards

Developments involving shock wave lithotripsy for kidney stones: New technologies and techniques for treating stones, modeling/measurements of shock propagation and interaction with tissue and stones, and pre-clinical or clinical studies on lithotripsy and related topics

Topics in the emerging fields of time and frequency domain passive acoustic imaging, micro-bubble imaging, image guided therapy and interventions, and ultrasound image quantification, characterization of thermal and mechanical effects of ultrasound

Novel beamforming, scanning, and image reconstruction approaches and procedures for medical ultrasound imaging, including channel data processing

Reviews the novel formulations, fundamental nonlinear physics, and biomedical applications of ultrasound contrast agents which have enabled exciting diagnostic and therapeutic applications

Examining both: 1. Theoretical, numerical, and experimental studies on how soft-tissue inhomogeneities and strong reflectors (e.g., bones, air pockets) affect the ultrasound propagation in the body, and 2. Engineering solutions overcoming the complications of these inhomogeneities (particularly relevant to diagnostic imaging and therapy)

## BIOMEDICAL ACOUSTICS (BA) (cont)

Partial Differential Equation Constrained and Heuristic  
Inverse Methods in Elastography  
Organized by: Mahdi Bayat, Wilkins Aquino,

Session in Honor of Edwin Carstensen  
(Joint with Physical Acoustics and Underwater  
Acoustics)  
Organized by: David T. Blackstock, Gail ter Haar

Standards for Ultrasound Medical Devices  
(Joint with ASA Committee on Standards)  
Organized by: Subha Maruvada

## ENGINEERING ACOUSTICS (EA)

Ducts and Mufflers  
Organized by: David Herrin, Mats Åbom

MEMS Acoustic Sensors  
(Joint with Physical Acoustics)  
Organized by: Vahid Naderyan, Robert White, Kheirollah  
Sepahvand

Micro-Perforates  
Organized by: J. Stuart Bolton, Mats Åbom

Miniature Microphones  
(Joint with Physical Acoustics)  
Organized by: Vahid Naderyan

## EDUCATION IN ACOUSTICS (ED)

Communicating Scientific Research to Non-Scientists  
(Joint with ASA Public Relations and ASA Student Council)  
Organized by: Andrew Piacsek, Kerri Seger

Hands-On Acoustics Demonstrations for Middle- and  
High-School Students  
Organized by: Tracianne Neilsen, Keeta Jones

Listen Up and Get Involved  
(Joint with ASA Women in Acoustics)  
Organized by: Tracianne Neilsen, Keeta Jones

Take 5's  
Organized by: Jack Dostal, Lawrence Feth

Teaching Tips for the New (or not so New) Acoustics  
Faculty Members  
(Joint with ASA Student Council)  
Organized by: Daniel Russell, Andrew Piacsek

## DESCRIPTIVE SENTENCES

Topics in PDE optimization-based inversion methods as well as heuristic methods (such as neural networks) for ultrasound elasticity and viscoelasticity imaging

Celebration of students and colleagues of Edwin Carstensen of his life and work in acoustics, especially as applied to biomedical acoustics, physical acoustics, and selected problems in underwater sound

Development and maintenance of consensus standards for ultrasound medical devices and outstanding technical issues related to these standards.

Fundamental and applied research into the numerical and experimental examination of the aero-acoustics of interior flows with application to noise control of fluid machines connected to duct or pipe systems.

Examination of acoustic-electro-mechanical aspects of miniature (MEMS) acoustic sensors including recent developments in design, fabrication methods, materials, calibration methods, or applications. Emphasis on noise, SNR, and nonlinear effects.

Recent developments and novel applications (e.g., materials, geometries, ...) beyond the classical panel absorber for sound absorption; of particular interest are applications for tough environments such as with hot flows and high sound levels

Examination of acoustic-electro-mechanical aspects of miniature microphones such as noise, SNR, and nonlinear effects with emphasis on the latest findings and studies on MEMS microphones and other new transducer methods

Strategies for communicating acoustics research, as well as raising awareness and interest in acoustics, to the public and policy makers

Acoustics demonstrations for middle- and high- school students

Acoustic demonstrations for middle- and high-school-aged Girl Scouts

Presentation of your favorite acoustics teaching ideas, including short demonstrations, teaching devices, and videos to share with colleagues. No abstract required

Teaching tips for new faculty members teaching courses in acoustics or vibration at undergraduate (introductory or advanced) or graduate levels for the first time. Suggested topics include: course organization, choosing a textbook, pedagogical methods, homework and exam strategies

## INTERDISCIPLINARY (ID)

Graduate Programs in Acoustics Poster Session  
(Joint with ASA Student Council, Education in Acoustics)  
Organized by: Y. Sanjay

Neuroimaging Techniques  
(Joint with all Technical Areas)  
Organized by: Meaghan O'Reilly, Martin Lawless, Zhao  
Ellen Peng, Sophie Nolden

## MUSICAL ACOUSTICS (MU)

Concert Hall Acoustics  
(Joint with Architectural Acoustics)  
Organized by: Jonas Braasch, David Griesenger

Electronically-Augmented Instruments  
Organized by: Edgar Berdahl, Adrien Mamou-Mani

Extended Playing Techniques in Acoustic and Electroacoustic  
Music  
(Joint with Signal Processing in Acoustics)  
Organized by: Bobby Gibbs

Musical Acoustics in the Animal Kingdom  
(Joint with Animal Bioacoustics)  
Organized by: Benjamin Taft, Joel Gilbert

Musical Instrument Performance, Perception, and Psychophysics  
(Joint with Psychological and Physiological Acoustics)  
Organized by: Edgar Berdahl, Claudia Fritz

Session in Honor of Thomas D. Rossing  
Organized by: Daniel Russell, Andrew Morrison, Murray  
Campbell

Session in Memory of David Wessel  
(Joint with Psychological and Physiological Acoustics)  
Organized by: William Hartmann, Andrew Morrison

## NOISE (NS)

A Comparative Look at US and European Noise Policies  
(Joint with Architectural Acoustics and Engineering  
Acoustics)  
Organized by: David Woolworth, Brigitte Schulte-Fortkamp

Effects of Noise on Human Comfort and Performance  
(Joint with Architectural Acoustics, Speech Communication, and  
Psychological and Physiological Acoustics)  
Organized by: Lily Wang, Zhao Ellen Peng, Anna Warzybok

E-Mobility--Challenge for Acoustics  
(Joint with Structural Acoustics and Vibration, Architectural  
Acoustics, Speech Communication and Psychological  
and Physiological Acoustics)  
Organized by: Steve Sorenson, Klaus Genuit

Implications of Community Tolerance Level Analysis for  
Prediction of Community Reaction to Environmental Noise  
Organized by: Sanford Fidell, Truls Gjestland

## DESCRIPTIVE SENTENCES

Wide range of Graduate "Programs" in acoustics present, in poster  
format, what their University has to offer a prospective graduate  
student

Topical presentation of neuroimaging techniques

Recent work on the acoustics of concert halls

Exploration of the electronic augmentation of musical instruments

Acoustics of various extended (non-traditional) playing techniques  
of musical instruments, including the use of distortion as a  
technique

Exploration of the connections between musical acoustics and  
bioacoustics, ranging from bird songs to whale singing to elephant  
trumpeting

Exploration of various aspects related to performance of musical  
instruments as well as performance perception

Honoring the work and contributions of Thomas D. Rossing

Honoring the work and contributions of David Wessel

A comparative look at noise policy and enforcement, social  
expectations, and the future of noise policy on both sides of the  
pond

Understanding the short- and long-term impact of noise on human  
comfort and performance in the built environment

Examination of the interior and exterior sound of electrical vehicles  
including issues related to acoustical feedback, necessity to create  
artificial signals, and the need for new analysis tools like tonality  
and other psycho acoustical parameters

Examination of the 2016 update of Part 1 of ISO's 1996 standard  
which describes a method for predicting the prevalence of a  
consequential degree of noise-induced annoyance in communities  
that may lead to a paradigm shift in rationale for transportation  
noise regulation

## **NOISE (NS) (cont)**

Measuring, Modeling, and Managing Transportation Noise  
Organized by: Matthew Kamrath, Lisa Lavia

Mechanical System Noise  
Organized by: Eric Reuter, Shiu-Keung Tang ,

Noise Impacts and Soundscapes on Outdoor Gathering Spaces  
(Joint with Architectural Acoustics and ASA Committee on Standards)  
Organized by: K. Anthony Hoover, Brigitte Schulte-Fortkamp

Perception of Tonal Noise  
(Joint with Psychological and Physiological Acoustics and Structural Acoustics and Vibration)  
Organized by: Joonhee Lee, Roland Sottek

Session in Honor of Kenneth Plotkin  
(Joint with Physical Acoustics)  
Organized by: Victor W. Sparrow

Sonic Boom Noise  
(Joint with Physical Acoustics and ASA Committee on Standards, and Structural Acoustics and Vibration)  
Organized by: Victor W. Sparrow, Philippe Blanc-Benon

Statistical Learning and Data Science Techniques in Acoustics Research  
(Joint with Signal Processing in Acoustics)  
Organized by: Jonathan Rathsam  
Edward T. Nykaza, Laure-Anne Gille

Using Acoustic Standards in Education  
(Joint with Education in Acoustics and ASA Committee on Standards, and Psychological and Physiological Acoustics)  
Organized by: William J. Murphy, Lawrence Feth, Massimo Garai

Wind Turbine Noise  
(Joint with ASA Committee on Standards and Structural Acoustics and Vibration)  
Organized by: Nancy Timmerman, Paul Schomer, Kenneth Kaliski, Robert Hellweg, Dick Botteldooren

## **PHYSICAL ACOUSTICS (PA)**

Acoustofluidics  
(Joint with Biomedical Acoustics)  
Organized by: Max Denis, Charles Thompson, Jürg Dual

Chains, Grains, and Origami Metamaterials  
Organized by: Jay D. Maynard, Vincent Tournat

Eco-acoustics: Acoustic Applications for Green Technologies and Environmental Impact Measurements  
(Joint with Noise)  
Organized by: JohnPaul Abbott

## **DESCRIPTIVE SENTENCES**

Investigation of the public health concern of road, rail, and aircraft transportation noise through numerical calculations, measurements, and simulations towards improved noise management and overall soundscape quality

Exploration of the situations, mitigation methods and effectiveness, and assessment criteria in the area of mechanical systems noise control inside modern buildings and as a contributor to environmental noise

Recent advances in noise impacts/problems in outdoor gathering spaces, how they are measured, how they are evaluated, and how they might be resolved

Presentation of state-of-art research findings of tonality perception of environmental noise, including tone-related psychoacoustic or noise studies (e.g., tone quantification methods, effects of tones on sound quality)

Honoring the life and technical contributions of Kenneth J. Plotkin, primarily in the areas of sonic boom, aircraft noise, and outdoor sound propagation

Propagation of sonic booms through the atmosphere, structural transmission of sonic boom noise into buildings, and human response to sonic booms; experimental and certification measurements, numerical modeling, and sonic boom signature, reproduction, and acceptability studies.

Examination of the application of statistical learning and data science techniques to process large datasets commonly encountered in noise and signal processing research

Presentations on how acoustic standards are used to educate audiologists, industrial hygienists, and engineers in mechanical, underwater, and bioacoustics with focus on how standards can be incorporated into curriculums for undergraduate and graduate education

Recent advances into the characteristics of wind turbine noise and effective evaluation methods

Examination of the fundamental underlying physics of acoustofluidics and microfluidics and their application to the excitation of acoustic fields for ultrasonic cell and particle manipulation

Examination of novel properties found in regular arrays ("chains") or irregular arrays ("grains") of elastic objects, where the objects may be linear but the array connections may be nonlinear (e.g., origami metamaterials involving buckling)

Application of acoustics for environmental friendly technologies, alternative energy sources, measurement of environmental impact, and the development of these technologies and measurement methods

## PHYSICAL ACOUSTICS (PA)

Infrasound

Organized by: Roger Waxler, Láslo G. Evers

Outdoor Sound Propagation

(Joint with Signal Processing in Acoustics)

Organized by: Sandra Collier, Philippe Blanc-Benon

Propagation in Inhomogeneous Media

(Joint with Biomedical Acoustics and Structural Acoustics and Vibration)

Organized by: Valerie Pinfield, Olga Umnova

## PSYCHOLOGICAL AND PHYSIOLOGICAL ACOUSTICS (PP)

A Celebration of Nat Durlach and His Contributions to Sensory Communications

Organized by: H Steven Colburn, Barbara Shinn-Cunningham

Perception of Synthetic Sound Fields

Organized by: Nils Peters, Sascha Spors

Acoustics Outreach to Budding Scientists: Planting Seeds for Future Clinical and Physiological Collaborations

(Joint with Speech Communication)

Organized by: Anna Diedesch, Adrian K.S. Lee,

Auditory Cognition and Scene Analysis in Complex Environments

Organized by: Barbara Shinn-Cunningham, Janina Fels, Volker Hohmann

History of Psychoacoustics in the Period 1900-1950

Organized by: Jont Allen, Armin Kohlrausch

Honoring the Contributions of Louis Braidà to the Study of Auditory and Speech Perception

(Joint with Speech Communication)

Organized by: Charlotte M. Reed, William M. Rabinowitz,

Models and Reproducible Research

Organized by: Alan Kan, Piotr Majdak

Perceptual Weights and Cue Integration in Hearing:

Loudness, Binaural Hearing, Motion Perception, and Beyond

Organized by: Virginia Richards, Daniel Oberfeld, Bernhard Seeber

Physiology Meets Perception

Organized by: Antje Ihlefeld, Sarah Verhulst, Tom Francart, Jan Wouters

## DESCRIPTIVE SENTENCES

Latest developments in infrasound propagation, generation, signal detection, and analysis as well as discussion of hardware and applications to remote sensing of the atmosphere and natural and man-made hazards

Natural and man-made environmental effects on outdoor sound propagation and sensing, acoustic remote sensing, predictive methods, novel methods to model or overcome environmental effects, and physics-based signal processing

Acoustic/ultrasonic propagation in non-crystalline, inhomogeneous media, including solid, soft-solid, fluid and fluid-solid systems; applications include composite materials, particle suspensions, porous materials, metal microstructure, powders, biological tissue, bone etc.

Session honoring the work of Nat Durlach, a past winner of the Silver Medal for his contributions to the fields of binaural hearing and sensory communications

Research advances focusing on the evaluation of perceptual properties of multichannel reproduction techniques (e.g. Ambisonics or Wave Field Synthesis) for sound field synthesis.

Presentation of underrepresented topics in psychological/clinical and physiological acoustics research

Recent experiments on auditory cognition using virtually created "real life" scenarios and modeling Auditory Scene Analysis in these complex acoustic environments.

Presentation of an historical overview of psychoacoustic developments, paradigms, important institutions and persons and, where possible, highlight developments in specific countries

Session honoring Professor Braidà and his research and legacy through different stages of his career

Hearing-related models and data are often published as descriptions and formulas, which makes reproducible research difficult. Session promotes collaboration and reproducibility between modelers, psychoacousticians and physiologists by discussing issues such as model implementations, toolboxes, collection of data sets, and repositories

Latest research developments on perceptual weighting/cue integration in auditory and audiovisual perception, for example on cue integration in binaural hearing, motion perception, loudness, or for object identification

Recent research combining physiological (e.g., neural correlates, OAE) and behavioral approaches in the same species with a focus on auditory coding mechanisms, speech intelligibility and attention, as well as audiometry and the steering of auditory prostheses

## **PSYCHOLOGICAL AND PHYSIOLOGICAL ACOUSTICS (PP) (cont)**

Speech Intelligibility and Spatial Hearing in Adverse and Realistic Environments  
(Joint with Speech Communication, ASA Committee on Standards, Architectural Acoustics, and Signal Processing in Acoustics)  
Organized by: Virginia Best, Mathieu Lavandier

## **SIGNAL PROCESSING IN ACOUSTICS (SP)**

Acoustic Network Protocols  
(Joint with Underwater Acoustics)  
Organized by: Tommaso Melodia

Bayesian Classification  
Organized by: Ning Xiang, Edmund Sullivan, Dorothea Kolossa

Extraction of Acoustic Signals by Remote Non-Acoustic Methods  
(Joint with Architectural Acoustics, Biomedical Acoustics, and Physical Acoustics)  
Organized by: Geoffrey Goldman

Signal Processing for Directional Sensors  
(Joint with Engineering Acoustics and Architectural Acoustics)  
Organized by: Kainam T. Wong

Signal Processing in Side Scan Sonar Systems  
(Joint with Engineering Acoustics and Underwater Acoustics)  
Organized by: Dan Sternlicht

Sparse and Co-Prime Array Processing  
(Joint with Underwater Acoustics and Biomedical Acoustics)  
Organized by: John Buck, Efrén Fernández Grande

Topological Signal Processing  
Organized by: Jason Summers

Underwater Acoustic Communications  
(Joint with Underwater Acoustics)  
Organized by: Milica Stojanovic

## **SPEECH COMMUNICATION (SC)**

Measuring Speech Perception and Production Remotely: Telehealth, Crowd-Sourcing, and Experiments over the Internet  
(Joint with Animal Bioacoustics)  
Organized by: Benjamin Munson, Sebastian Möller

New Trends in Imaging for Speech Production  
Organized by: Jennell Vick, Maureen Stone

## **DESCRIPTIVE SENTENCES**

Recent developments on the measurement and prediction of speech intelligibility in adverse and realistic environments (competing sources, reverberation, ...), potentially involving spatially-separated sources and binaural listening, speech-on-speech masking and auditory attention, influences of hearing impairments and hearing aids

Recent developments in media access control and protocols for acoustic communication networks

Applications of Bayesian methods to acoustic model identification and classification

Examination of methods for extracting acoustic, vibrational, and seismic information by remote sensing methods as diverse as video, radar, and laser

Exploration of the signal processing paradigms and implementations that accompany the various types and diverse applications of directional sensors

Contributions to the theory and application of signal processing in support of side scan sonar imaging and the related techniques and implementations employed to improve image resolution

Recent advances of sparse and co-prime array designs and the signal processing methods that support them; includes contributions to detection, source estimation, and direction of arrival methods that are well suited to these array designs

Contributions in acoustic signal processing that employ algebraic topology, and manifold learning methods. Examples include but are not limited to persistence diagrams, kernel PCA, and nonlinear dimensionality reduction

Examination of advanced signal processing and methods for reliable communication in the presence of uncertainty, innovative approaches to the use of feedback on randomly varying channels, as well as specific system deployments, channel measurements and applications

Presentation of methodological challenges and new findings of conducting work on speech perception and production (including both experimental work and interventions for individuals with speech, language, and hearing impairments) remotely (i.e., via the internet or telecommunication systems)

Latest advances in the innovative technologies and approaches to visualizing the complexity of speech production

## STRUCTURAL ACOUSTICS AND VIBRATION (SA)

Acoustic Metamaterials  
(Joint with Physical Acoustics and Engineering Acoustics)  
Organized by: Christina Naify, Yun Jing, Jose Sanchez-Dehesa

Acoustics and Vibration of Sports and Sports Equipment  
(Joint with Noise and Physical Acoustics, and Architectural Acoustics)  
Organized by: Daniel Russell

Energy Methods in Acoustics and Vibration  
Organized by: Donald Bliss, Linda Franzoni, Otto von Estorff

Groundborne Noise and Vibration from Transit Systems  
(Joint with Noise, Physical Acoustics and ASA Committee on Standards)  
Organized by: James E. Phillips

Novel Techniques for Nondestructive Evaluation  
(Joint with Biomedical Acoustics, Signal Processing in Acoustics and Physical Acoustics)  
Organized by: Brian Anderson, Marcel Remillieux, Sylvain Haupt

Novel Treatments in Vibration Damping  
(Joint with ASA Committee on Standards)  
Organized by: Kenneth Cunefare, Manuel Collet

Numerical Methods and Benchmarking in Computational Acoustics  
(Joint with Physical Acoustics)  
Organized by: Robert Koch, Micah Shepherd, Manfred Kaltenbacher, Steffen Marburg

Probabilistic Finite Element Analysis and Uncertainty Quantification in Vibroacoustic Problems  
Organized by: Micah Shepherd, Kheirollah Sepahvand

## UNDERWATER ACOUSTICS (UW)

A Century of Sonar  
(Joint with Acoustical Oceanography, Engineering Acoustics, and Signal Processing in Acoustics)  
Organized by: Kevin Heaney, Michael Ainslie

Infrasound in the Ocean and Atmosphere  
(Joint with Physical Acoustics)  
Organized by: Oleg Godin, Philippe Blanc-Benon

Passive Sensing, Monitoring, and Imaging in Wave Physics  
(Joint with Acoustical Oceanography, Signal Processing in Acoustics, Structural Acoustics and Vibration, Physical Acoustics, and Biomedical Acoustics)  
Organized by: Karim Sabra, Philippe Roux

## DESCRIPTIVE SENTENCES

Recent advances in the study of acoustic metamaterials and phononic crystals including basic research and potential engineering applications of these advanced materials

Advances in acoustic and vibrational analysis of sports equipment, perception of sound and feel for players, acoustics of sports arenas and venues, and noise from sports events

Latest research in energy methods considering the variety of technical numerical approaches (EIBEM, SEA, FEA, hybrids) and the exploration of their technical validity and current utilization in commercial and military applications, with emphasis on the latest approaches, validation methods, and challenging multiple medium applications

Advances on the prediction, assessment and mitigation of groundborne noise and vibration impacts upon noise and vibration sensitive receivers near transit systems

Recent progress in developing experimental and numerical techniques to improve the detection, localization, and characterization of defects or any changes to the material and/or geometric properties in various media (e.g., metal or composite structures, consolidated/unconsolidated granular media, biological systems)

Latest developments in vibration damping and applications, including novel passive treatments, hybrid treatments, and practical applications of metamaterial concepts

Latest developments on various numerical methods for computational acoustics and their benchmarking, with the ultimate goal being the support of a long-term project about developing benchmarks in the entire field of computational acoustics, vibroacoustics, and aeroacoustics

Developments on the use of probabilistic finite element analysis and other related analyses for the consideration of various forms of uncertainty existing in vibroacoustic modeling and design

Innovations in the design, deployment and applications of active and passive sonar since their invention during the First World War, including the influence on sonar development of advances in understanding in underwater acoustics, oceanography, and transducer technology

Talks on various aspects of current infrasound research, including generation, propagation, scattering, and processing of infrasound, and its use in remote sensing of the environment and detection and characterization of natural and man-made infrasonic sources

Use of sound sources of opportunity or ambient noise to infer acoustic and elastic properties of the propagating medium with applications ranging from seismology, underwater acoustics, structural acoustics, to ultrasound

## **UNDERWATER ACOUSTICS (UW) (cont)**

Session in Honor of Ira Dyer, 60 Years as an Innovator, Entrepreneur, and Visionary for Ocean Engineering (Joint with Acoustical Oceanography)  
Organized by: Arthur B. Baggeroer, Peter Mikhalvesky

Sound Propagation and Scattering in 3D Underwater Environments  
Organized by: Ying-Tsong Lin, Frederic Sturm

Underwater Noise from Marine Construction and Energy Production (Joint with Acoustical Oceanography and ASA Committee on Standards)  
Organized by: James H. Miller, Paul Lepper

Unmanned Vehicles and Acoustics  
Organized by: Erin Fischell, Peter Nielsen

## **DESCRIPTIVE SENTENCES**

Ira Dyer spent his entire career in ocean acoustics and a member of ASA. He was one of the premier scientists at Bolt, Beranek and Newman and then a professor of ocean engineering at MIT. His work in many fields of acoustics was reported at ASA meetings and JASA. He received the ASA gold medal and was a past president

Analytical, numerical, and experimental studies of 3D volumetric and boundary effects on underwater sound propagation and scattering

Examination of offshore renewable energy installations like wind, wave and tidal systems, their generation of underwater noise, and any resulting environmental impacts

Application of unmanned and autonomous vehicles for underwater acoustic sensing

## **OTHER TECHNICAL EVENTS AND INFORMATION**

### **OPENING CEREMONIES**

The meeting will begin with an opening ceremonies on Sunday, 25 June.

### **KEYNOTE LECTURES**

The following Keynote Lectures will be presented during the meeting:

Prof. Constantin-C. Coussios, Magdalen College, University of Oxford, Oxford, United Kingdom, will present "Making, Mapping and using Acoustic Nanobubbles for Therapy"

Prof. Steven A. Cummer, Duke University, Durham, North Carolina, USA, will present "A Sound Future for Acoustic Metamaterials"

Dr. Darlene R. Ketten, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, USA, will present "Hearing as an Extreme Sport: Underwater Ears, Infra to Ultrasonic and Surface to the Abyss"

Dr. Tuomas Virtanen, Tampere University of Technology, Tampere, will present "Computational Analysis of Acoustic Events in Everyday Environments"

### **OPEN MEETINGS OF TECHNICAL COMMITTEES**

Technical Committees will hold open meetings on Monday and Wednesday evenings. These are working, collegial meetings during which proposals for special sessions, workshops, and technical initiative are submitted. All meeting participants are cordially invited to attend these meetings and to participate actively in the discussions.

## EXHIBITION

An instrument and equipment exhibition will be located near the registration area and meeting rooms and will open on Sunday, 25 June, with an evening reception with lite snacks and a complimentary drink. Exhibition hours are Sunday, 26 June, 5:30 p.m. to 7:00 p.m., Monday, 26 June, 9:00 a.m. to 5:00 p.m., and Wednesday, 27 June, 9:00 a.m. to 12:00 noon.

The Exhibition will include computer-based instrumentation, scientific books, sound level meters, sound intensity systems, signal processing systems, devices for noise control and acoustical materials, active noise control systems, and other exhibits on acoustics.

Contact the Exhibition Manager for information about participating in the exhibit: Robert Finnegan, Advertising and Exhibits Division, AIP Publishing, LLC, 1305 Walt Whitman Road, Suite 300, Melville, NY 11747-4300, Tel: 516-576-2433; Fax: 516-576-2481; E-mail: rfinnegan@aip.org.

## GALLERY OF ACOUSTICS

The Technical Committee on Signal Processing in Acoustics will sponsor the 16th Gallery of Acoustics at the joint Acoustical Society of America and European Acoustics Association meeting in Boston, MA. Its purpose is to enhance ASA meetings by providing a setting for researchers to display their work to all meeting attendees in a forum emphasizing the diversity, interdisciplinary, and artistic nature of acoustics. The Gallery of Acoustics provides a means by which we can all share and appreciate the natural beauty, aesthetic, and artistic appeal of acoustic phenomena: This is a forum where science meets art.

The Gallery will consist of a multimedia collection of images, videos, audio clips, and narrations, of images and/or sounds generated by acoustic processes or resulting from signal and image processing of acoustic data. Images and videos can consist of actual visualizations of acoustic processes or of aesthetically and technically interesting images resulting from various signal and image processing techniques and data visualization. Audio clips and segments should also have aesthetic, artistic, and technical appeal. It is possible to submit a poster entry but permission from Michael Muhlestein should be obtained prior to submission. Recently the highly ranked entries have been video entries (a series of photos or video, with audio narration or text to read). The top 3-6 submitted video entries are then burned onto a common DVD that is played on a loop on a TV in a main lobby of the conference hotel for all to see. These video entries must be limited to 3 minutes in duration (STRICTLY ENFORCED). Entries must be submitted electronically, either by e-mail attachment, or by mailing a CD, or DVD to the address given below.

Entries must be accompanied by all authors' names and affiliations, a title, a brief description of the entry and importance or interest of the entry (no more than 200 words), and statement of permission to display the entry at the meeting. Please indicate the primary point of contact. The meeting attendees will vote on the entries on the basis of aesthetic/artistic appeal, ability to convey and exchange information, and originality. A cash prize of USD \$400 and \$200 will be awarded to the winning and first runner-up entries, respectively.

(1) 25 April 2017: Deadline for notice of intent to submit. Include a title, an abstract, a complete author list with full contact information, and a basic description of the proposed entry. This information will not be published anywhere, rather it is used to help guide entrants in their submissions. Please indicate the primary point of contact.

(2) 22 May 2017: Deadline for the receipt of all entries and materials.

Entries, questions, and all other communications regarding the Gallery should be directed to:  
Michael B. Muhlestein, T: (801) 755-8419  
E-mail: mimuhle@gmail.edu

## TECHNICAL TOURS

Technical tours are still in the planning stages. Details will be announced on the Acoustics '17 Boston webpage at <http://acousticalsociety.org/content/acoustics-17-boston>

## **STUDENT DESIGN COMPETITION**

The 2017 Student Design Competition will be displayed and judged at the Boston ASA meeting. This competition is intended to encourage students in the disciplines of architecture, engineering, physics, and other curriculums that involve building design and/or acoustics to express their knowledge of architectural acoustics and noise control in the design of a facility in which acoustical considerations are of significant importance. The competition will be a poster session. Entries may be submitted by individual students or by teams of a maximum of three students. Undergraduate and graduate students from all countries are encouraged to participate.

Students must be enrolled in either the fall term of 2016 or the spring term of 2017 (or equivalent if a particular school does not operate on a spring and fall term basis) to be eligible for the competition. It is not necessary to attend the Boston meeting to participate in the competition, although attending the meeting is encouraged.

All competition entries will respond to a design scenario. Information about the design scenario, entry rules, and registration for the competition will be available on the Newman Fund website, [www.newmanfund.org](http://www.newmanfund.org). Additional information may be obtained by emailing [sdc@newmanfund.org](mailto:sdc@newmanfund.org).

The Student Design Competition is sponsored by the ASA Technical Committee on Architectural Acoustics, with generous support from the Wenger Foundation, the Robert Bradford Newman Student Award Fund, and the National Council of Acoustical Consultants.

## **PROCEEDINGS OF MEETINGS ON ACOUSTICS (POMA)**

This meeting will have a corresponding volume in Proceedings of Meetings on Acoustics (POMA) the ASA's open-access proceedings journal. Although submission is optional, meeting authors are encouraged to prepare and submit a written version of their paper according to the author instructions found at <http://scitation.aip.org/poma>. Submitted manuscripts will be reviewed by a POMA editor according to technical area.

## **ITINERARY PLANNER AND MOBILE APP**

An itinerary planner and mobile app will be available for the Acoustics '17 Boston meeting.

## **MEETING PROGRAM**

A complete meeting program will be mailed as Part 2 of the May issue of JASA. Abstracts will be available on the ASA webpage <<http://AcousticalSociety.org>> in May.

## **EARLY CAREER SPEED-NETWORKING EVENT**

ASA is hosting a speed-networking event for early career participants at Acoustics '17 Boston. The purpose of the speed-networking session is to facilitate professional relationships and collaboration between early career participants and more experienced members of the Society. The first half of the event will include multiple short one-on-one conversations between early career participants and more senior Society members. The second half of the session will provide participants with the opportunity to continue conversations with the more experienced society members as well as interact with other early career participants.

The speed-networking event is intended for early career acousticians from any subfield of acoustics, who received their last degree within the past ten years. The event is not intended for students or those in the processing of receiving a degree. Students are encouraged to attend the activities specifically designed for them throughout the week.

Participants are asked to RSVP for the event by 22 May 2017 by completing and submitted the form at <https://goo.gl/forms/uAykINhE9TBObG2Y2>. If you have any questions, please contact Tessa Bent ([tbent@indiana.edu](mailto:tbent@indiana.edu)) or Martin Lawless ([msl224@psu.edu](mailto:msl224@psu.edu)).

## ABSTRACT SUBMISSION GUIDELINES

An abstract of not more than 200 words is required for each paper, whether invited or contributed. **Abstracts longer than 200 words will be edited or truncated.** Authors must submit abstracts online (see page 26).

### ABSTRACT SUBMISSION GUIDELINES

All abstracts must be submitted online by 9 January 2017. This deadline will be strictly enforced. Abstracts submitted via postal mail, fax, or e-mail will not be accepted.

### ABSTRACT DISCLOSURE STATEMENTS

Authors will be asked to answer several questions during the submission process. These include:

- Compliance with ethical principles
- Confirmation that all authors are aware of and agree with the submission of abstracts on which their names appear
- Whether or not they are interested in having their abstract presentation broadcast live over the internet and/or recorded for later broadcast.

### ABSTRACT LIMITATIONS

- The number of abstracts that may be submitted by the same corresponding author who will present the papers is three.
- While authors may indicate a preference for presentation style, it may not always be possible to honor the request. Authors should be prepared to accept assignment of their abstracts to either lecture or poster presentation.

### ACKNOWLEDGMENT OF RECEIPT OF ABSTRACTS SUBMITTED ONLINE

Contributors submitting abstracts online will receive an e-mail message confirming that their abstracts have been received. Acceptance notices will be sent to authors by e-mail in March.

## ASA BEST PAPER AWARDS FOR STUDENTS AND YOUNG PRESENTERS

The ASA Technical Committees on Acoustical Oceanography, Animal Bioacoustics, Architectural Acoustics, Biomedical Acoustics (spring meeting only), Engineering Acoustics, Musical Acoustics, Noise, Signal Processing in Acoustics, Speech Communication, Structural Acoustics and Vibration, and Underwater Acoustics offer Best Paper Awards to students or young presenters who present papers at meetings. Authors need not be members of ASA to qualify. **If you want your paper to be considered for an award, you must indicate this when you submit your abstract.** Please read the entry qualifications to be sure that you are eligible and follow the instructions for entering the individual Technical Committee competitions that appear on pages 27 and 28.

## AUDIO-VISUAL AND SPECIAL EQUIPMENT AND SOFTWARE

### AUDIO-VISUAL EQUIPMENT

PC laptops with stereo audio playback capability, computer projectors, and laser pointers will be provided in all lecture sessions. **Mac laptops will not be provided.** All other equipment is considered to be special equipment, including stereo sound playback. Refer to the “Special Equipment” section below for additional information.

### SPECIAL EQUIPMENT, COMPUTER EQUIPMENT, AND SOFTWARE

Any equipment other than PC computers with stereo audio playback capability, computer projectors, and laser pointers is “special equipment.” Requests for special equipment (e.g., special speakers, CD players) must be specified at the time of abstract submission. Provision of unusual special equipment will depend upon availability and cost. Special software requests should also be made, if required.

Please be specific about your audio needs, including number of channels and preferred loudspeaker arrangement.

### SPECIAL NOTE TO AUTHORS

Authors will be required to use the provided PC laptop. No option will be provided for presenters to use their own laptops for presentations, including Mac laptops.

### POSTER SESSION BOARDS

Poster boards and fastening materials will be provided. Poster boards are 8 ft. wide by 4 ft. high.

### PROJECTION GUIDELINES FOR AUTHORS

A PC laptop with stereo playback capability and projector will be provided in each meeting room on which all authors who plan to use computer projection will load their presentations. Authors should bring computer presentations on a USB drive to load onto the provided computer and should arrive at the meeting rooms at least 30 minutes before the start of their sessions.

Authors **will not** have the option to use their own laptops for their presentations, including MACs.

Note that only PC format will be supported so authors using Macs must save their presentations for projection in PC format. Also, authors who plan to play audio during their presentations should ensure that their sound files are also saved on the USB drive.

Guidelines for use of computer projection will be supplied with acceptance notices.

### AUDIO/VISUAL PREVIEW ROOM

Computer presentations can be reviewed by authors in the audio/visual preview room at the meeting. Separate computers will be made available in this room for accessing email.

## **SPECIAL MEETING FEATURES**

### **STUDENT TRANSPORTATION SUBSIDIES**

A student transportation subsidies fund has been established to provide limited funds to students to partially defray transportation expenses to meetings. No reimbursement is intended for the cost of food or housing. The amount granted each student depends on the number of requests received. To apply for a subsidy, submit a proposal by e-mail to be received by 22 May 2017 to: Jolene Ehl, [jehl@acousticalsociety.org](mailto:jehl@acousticalsociety.org). The proposal should include your status as a student; whether you have submitted an abstract; whether you are a member of ASA; method of travel, and estimated cost of transportation.

### **YOUNG INVESTIGATOR TRAVEL GRANTS**

The Committee on Women in Acoustics (WIA) is sponsoring a Young Investigator Travel Grant to help with travel costs associated with presenting a paper at the Boston meeting. Young professionals who have completed their doctorate in the past five years are eligible to apply if they plan to present a paper at the Boston meeting, are not currently students, and have not previously received the award. Each award will be of the order of \$500 with four awards anticipated. Awards will be presented by check at the WIA luncheon at the meeting. Both men and women may apply. Applicants should submit a request for support, a copy of the abstract for their presentation at the meeting, and a current resume/vita which includes information on their involvement in the field of acoustics and in the ASA. Submit materials by e-mail to Michele Halvorsen <[mhalvy@gmail.com](mailto:mhalvy@gmail.com)>. Deadline for receipt of applications is 15 May 2017.

### **DEPENDENT CARE SUBSIDIES**

The Committee on Women in Acoustics (WIA) is sponsoring a Dependent Care Subsidy to help with dependent care costs associated with attending the Boston meeting. Meeting attendees are eligible to apply if they plan to present a paper at the Boston meeting or hold a leadership position in ASA. Each subsidy will be of the order of \$500 with four awards anticipated. Both men and women may apply. Applicants should submit a paragraph describing how the funds would assist their dependent care expenses, a copy of the abstract for their presentation at the meeting and/or a paragraph describing their leadership position in ASA. Submit materials by e-mail to Christina Naify <[christina.naify@gmail.com](mailto:christina.naify@gmail.com)>. Deadline for receipt of applications is 15 May 2017.

### **ASA RESUME HELP DESK**

Are you interested in applying for graduate school, a postdoctoral opportunity, a research scientist position, a faculty opening, or other position involving acoustics? If you are, please stop by the ASA Resume Help Desk near the Registration Booths. Members of the ASA who are experienced in hiring will be available to review your CV, cover letter, and research and teaching statements to provide tips and suggestions to help you most effectively present yourself in today's competitive job market. The ASA Resume Help Desk will be staffed on Tuesday, Wednesday, and Thursday during the lunch hour for walk-up meetings. Appointments during these three lunch hours will also be available via a sign-up sheet as well. Members interested in volunteering to serve at the help desk should contact David Dowling <[drd@umich.edu](mailto:drd@umich.edu)>. The Resume Help Desk is sponsored by the Education in Acoustics Committee.

### **REQUESTING LETTER FOR VISA APPLICATIONS**

Meeting participants who require letters of invitation to apply for U.S. entry visas should send their requests to the Secretariat at: [asa@acousticalsociety.org](mailto:asa@acousticalsociety.org).

## **STUDENT ACTIVITIES**

### **STUDENT ORIENTATION AND MEET AND GREET**

A New Students Orientation will be held from 5:00 p.m. to 5:30 p.m. on Sunday, 25 June, for all students to learn about the activities and opportunities available for students at the meeting. This will be followed by the Student Meet and Greet from 5:30 p.m. to 6:45 p.m. where refreshments and a cash bar will be available.

### **STUDENTS' RECEPTION**

The Students' Reception will be held on Tuesday, 27 June, from 6:00 p.m. to 8:00 p.m. This reception, sponsored by the Acoustical Society of America and supported by the National Council of Acoustical Consultants, will provide an opportunity for students to meet informally with fellow students and other members of the Acoustical Societies of America and the European Acoustics Association. All students are encouraged to attend, especially students who are first time attendees or those from smaller universities.

### **STUDENTS MEET MEMBERS FOR LUNCH (SMMfL)**

A student in the SMMfL program meets one-on-one with an ASA/EAA member over lunch during the ASA/EAA Joint Meeting. The purpose is to encourage students, as they embark on their acoustical careers, to network with more senior members. Each lunch pairing is arranged to ensure a good match between the student's and member's acoustical interests. Each participant pays for his/her own meal. Students who wish to participate should enter "yes" where SMMfL appears in the on-line pre-registration form. They will be contacted later for additional information to assist with the matching process. The Students Meet Members for Lunch program is sponsored by the ASA Committee on Education in Acoustics.

### **OTHER INFORMATION FOR STUDENTS**

Students are also encouraged to visit the official ASA Student Home Page at <http://asastudentcouncil.org/>.

## **SOCIAL EVENTS**

### **PLENARY SESSION AND AWARDS CEREMONY**

The ASA Plenary session will be held Tuesday afternoon, 27 June, where awards will be presented and recognition of newly-elected Fellows of the Acoustical Society will be announced.

The European Acoustics Association will present two awards including Contribution to Acoustics in Europe and Lifetime Achievements in Acoustics.

### **SOCIAL HOURS**

Buffet Socials with cash bar will be held on Monday, 26 June and Wednesday, 28 June. The Socials provide relaxing settings for meeting attendees to meet and mingle with their friends and colleagues as well as an opportunity for new members and first-time attendees to meet and introduce themselves to others in the field. A second goal of the socials is to provide a sufficient meal so that meeting attendees can attend the open meetings of the Technical Committees that begin immediately after the socials.

### **WOMEN IN ACOUSTICS LUNCHEON**

The Women in Acoustics luncheon will be held on Tuesday, 27 June. The fee is USD \$25 (students USD \$15) for pre-registration by 22 May 2017 and USD \$30 (students USD \$15) at the meeting. Those who wish to attend this luncheon must register online at <http://AcousticalSociety.org>.

### **JAM SESSION**

Once again the College of Fellows will be hosting the ASA Jam Session. Bring your axe, horn, sticks, voice, or anything else that makes music. Musicians and non-musicians are all welcome to attend. A full PA system, backline equipment, guitars, bass, keyboard, and drum set will be provided. All attendees will enjoy live music, a cash bar, and all-around good times. Don't miss out.

## TRANSPORTATION AND TRAVEL INFORMATION

The Visit Boston website at <https://www.bostonusa.com/plan-your-trip/getting-here/> provides information about traveling to Boston by air, rail, bus, and auto.

### INTERNATIONAL TRAVEL

Boston is on Eastern Standard Time, 5 hours behind GMT and 3 hours ahead of Los Angeles (Pacific Time zone). Daylight Savings Time (1 hour ahead of Standard Time) is observed from March through the first Sunday in November.

Some visitors will need visas to enter the US. Please refer to the U.S. Department of Homeland Security (<https://www.cbp.gov/travel/international-visitors>) and the Visit Boston website (<https://www.bostonusa.com/plan-your-trip/getting-here/international-travel-info/>) for further information.

International travelers transiting through the United States are required to be documented with either a valid passport and a valid visa (unless exempt) or if traveling on the Visa Waiver Program, an approved Electronic System for Travel Authorization (ESTA).

Canadian citizens can present a valid passport, Enhanced Driver's License, or Trusted Traveler Program card (NEXUS, SENTRI or FAST).

Mexican citizens, including children, are required to present a passport with visa, or a Border Crossing Card.

### TRANSPORTATION

#### Air

Logan International Airport is located a convenient two miles from the city center, with several public airport transportation options from downtown and suburban locations. There are approximately 40 airlines that serve Boston.

#### Rail

Amtrak passenger rail service connects Boston, New York, Washington, D.C., Philadelphia, Baltimore, Portland (Maine) and other points nationwide. Amtrak trains depart from South Station (Red Line), Back Bay Station (Orange Line) and North Station (Green and/or Orange Line). Amtrak's high-speed train Acela provides fast service along the Northeast Corridor High-Speed Rail between Washington, New York and Boston.

#### Bus Service

Nationwide bus companies stop downtown at South Station (adjacent to the South Station train terminal). Ticket counters are located on the third level of the Transportation Center. For information, call the South Station Bus Terminal at 617-737-8040.

#### Auto

There are three main routes into Boston: I-90 (Massachusetts Turnpike) from the West; I-95 from the North and South; I-93 from the North and South. Driving directions can be obtained from sources such as Google Maps or Mapquest. See the Ground Transportation section of this document for specific driving directions and parking information.

## **GROUND TRANSPORTATION**

<http://www.mbta.com/>

### **Logan Express to Back Bay**

<https://www.massport.com/logan-airport/to-and-from-logan/logan-express/back-bay/>

Logan Express stops at all terminals. Bus route time is approximately 20 minutes. Be sure to allow extra time during rush hour periods. One-way fare: \$7.50 by credit/debit card; One-way fare showing valid MBTA pass: \$3.00 by credit/debit card only. Payment: Visa, MasterCard, American Express, Diners Club and credit cards are accepted. NO CASH.

### **Bus Route Stops**

To Airport (5am-9pm)

Hynes Convention Center, 900 Boylston Street (opposite Gloucester Street)

Copley T Station, 650 Boylston Street (near Boston Public Library)

Terminal A, B, C, E (Departures Level drop-off)

From Airport (6am-10pm)

Terminal A, B, C, E (Arrivals Level pick-up at Logan Express stops)

Copley Square, St. James Avenue

Hynes Convention Center

Logan Express

Logan Express to Back Bay

### **Take the "T"**

Boston's public transportation system, known as the "T", offers subway, bus, trolley car and boat service to just about everywhere in the Greater Boston area and beyond. Subway stops are color coded - Red Line, Green Line, Blue Line, Orange Line or Silver Line. An MBTA "T" Map can be downloaded in PDF format at [https://res-5.cloudinary.com/simpleview/image/upload/v1/clients/boston/subway\\_map1\\_128202bc-f0ae-5102-046b6e7973bf8377.pdf](https://res-5.cloudinary.com/simpleview/image/upload/v1/clients/boston/subway_map1_128202bc-f0ae-5102-046b6e7973bf8377.pdf)

The Hynes Convention Center is conveniently located close to four T stops – the Hynes Convention Center stop, Prudential Center stop, and Copley Square stop on the Green Line and the Back Bay stop on the Orange Line.

To ride the T, you need to purchase a CharlieCard or CharlieTicket. These can be purchased at every subway station at vending machines and at select convenience stores. The basic fare is \$2.65 and children - 11 years and younger - ride free.

The "T's" Day/Week LinkPass gives visitors unlimited travel on Subway, Local Bus, Inner Harbor Ferry and Commuter Rail Zone 1A for one day (\$12) or seven days (\$19). More than 500 fare-vending machines are located throughout all subway stations.

For specific information on routes and schedules, call the MBTA at 617-222-3200 or visit [mbta.com](http://mbta.com). Information is in six languages and the website offers a very useful "Trip Planner" to get you to your destination.

### **Taxi Information**

Taxi service is available throughout the city. From Logan International Airport to most hotels in Boston and Cambridge, current fares are approximately \$25-\$35.00, one way.

### **Uber**

<https://www.uber.com/cities/boston/>

Uber - On Demand Transportation, an app that connects you with a driver at the tap of a button. Request a ride and

have a driver curbside in minutes. There's no need to carry cash. When you reach your destination, your fare is automatically billed to your card on file.

### **Bus**

All intercity/interstate buses depart from South Station. Ticket counters are located on the third level of the Transportation Center. For information, call the South Station Bus Terminal at 617-737-8040.

## **DRIVING/PARKING INFORMATION**

### **Hynes Convention Center**

Driving directions to the Hynes Convention center can be found at [http://s3.amazonaws.com/signatureboston/documents/HynesDirections\\_1.pdf](http://s3.amazonaws.com/signatureboston/documents/HynesDirections_1.pdf)

Within a three-block walk of the Hynes Convention Center are numerous parking garages totaling over 4,400 spaces. There is limited meter parking available around the Hynes and adjacent streets. Sample rates are \$34 up to 12 hours; \$38 12 to 24 hours. Download a guide of nearby garages for a full list of options. (<http://s3.amazonaws.com/signatureboston/documents/HynesParkingLots.pdf>).

### **Meeting Hotels**

Use Google Maps or Mapquest to obtain driving directions to each Acoustics '17 Boston meeting hotel.

Hotel parking information and rates as of 9/24/2016:

Sheraton Boston: \$42/day, valet \$53/day

Boston Marriott Copley Place: \$40 (offsite); valet \$54 USD daily

Boston Park Plaza: Self parking off site; Valet \$48

Westin Boston Copley Place: Valet Parking \$28-48 up to 8 hours; Overnight \$54

Hilton Boston Back Bay: Self parking: \$43.00 (Garage Lot); Valet: Not Available

Midtown Hotel; Overnight \$29

Hampton Inn & Suites Boston Crosstown Center: Guests have discounted parking privileges at the Crosstown Garage. Nightly discounted rate is \$25 per night with full in/out access until 6pm the day of check out

## **WEATHER**

Summer can be delightful with the ocean breezes helping keep the humid temperatures in control. Evening temperatures can be cool and may require a light sweater. And a pop up thunderstorm is not uncommon, so you may want to include an umbrella in your bag. Summer average high temperatures are above 80 °F (26.7 °C) and overnight lows above 60 °F (15.5 °C).

## **ROOM SHARING**

ASA will compile a list of those who wish to share a hotel room and its cost. To be listed, send your name, telephone number, e-mail address, gender, smoker or nonsmoker preference, not later than 22 May 2017 to the Acoustical Society of America, by e-mail, [asa@acousticalsociety.org](mailto:asa@acousticalsociety.org). The responsibility for completing any arrangements for room sharing rests solely with the participating individuals.

## HOTEL RESERVATION INFORMATION

Blocks of guest rooms at discounted rates have been reserved at seven Boston Hotels, most within easy walking distance to the Hynes Convention Center and Boston attractions.

Reservations must be made directly with the hotel of your choice. **Early reservations are strongly recommended.** Special ASA/EAA meeting rates are not guaranteed after **Friday, 2 June at 5:00 p.m. EDT.** You must mention the Acoustical Society of America, as specified below, when making your reservations by phone to obtain the special Acoustics '17 Boston meeting rates.

Blocks of hotel rooms at special discounted rates have been arranged at seven hotels, most within easy walking distance to the Hynes Convention Center and Boston attractions. Hotel rates vary. Early reservations are recommended.

Hotel taxes in Boston as of 11/1/16 are 14.45%

Rates at all hotels are non-commissionable.

**Please refer to the meeting website for reservation procedures for each hotel.**

**Sheraton Boston** (2 blocks - connected to convention center)

39 Dalton Street, Boston, MA 02199

\$279.00/single or double      \$319/triple      \$359/quad

Notes:

1. A deposit equal to one night room and tax will be charged by the hotel at the time a guest makes a room reservation. Deposits paid by guest are refundable if notice is received by hotel at least 24 hours prior to arrival and a cancellation number is obtained by guest.
2. An early departure fee of one night room and tax will apply if a guest attendee checks out prior to the confirmed check-out date.
3. Complimentary WiFi in guestrooms/Complimentary Fitness Center access

**Boston Marriott Copley Place** (3 blocks - connected to convention center)

110 Huntington Avenue, Boston, MA 02116

\$259.00/single or double      \$20.00 Additional Persons

Notes:

1. All reservations must be accompanied by a first night deposit or guaranteed with a major credit card. Hotel will not hold any reservations unless secured by one of the above methods.
2. Complimentary WiFi in guestrooms/Complimentary Fitness Center access

**Boston Park Plaza** (1.3 miles from convention center)

50 Park Plaza at Arlington Street, Boston, MA 02116

\$219/single or double      \$239/triple      \$259/quad

Notes:

1. An early departure fee of one night's room and tax will apply if a guest attendee checks out prior to the confirmed check out date.
2. Complimentary WiFi in guestrooms

**Please refer to the meeting website for reservation procedures for each hotel.**

**Westin Copley Place Boston** (3 blocks - connected to convention center)

10 Huntington Avenue, Boston, MA 02116

\$299.00/single or double     \$349/triple     \$389/quad

Notes:

1. An early departure fee of one night room and tax will apply if a guest attendee checks out prior to the confirmed check out date.
2. Complimentary WiFi in guestrooms/Complimentary Fitness Center access

**Hilton Boston Back Bay** - \$265 - (1 block to convention center)

40 Dalton Street, Boston, MA 02115

\$265/single or double     \$285/triple     \$305/quad

Notes:

1. Individuals can guarantee reservations with a first night's pre-payment or credit card guarantee.
2. Cancellation must be made 48 hours prior to arrival, or one night's room and tax will be charged to the credit card or deposit will be retained.
3. There will be a one night room and tax early departure fee charge for any guest checking out prior to the guest's reserved check-out date. Guests wishing to avoid an early check out fee should advise the Hotel on or before check in of any change in the planned length of stay.
4. Check in: 3:00 p.m.     Check out: 12:00 p.m.
5. Complimentary WiFi

**The Midtown Hotel** (3 blocks to convention center)

220 Huntington Avenue, Boston, MA 02115

\$159

Notes:

1. Cancellations must be made by 3:00 p.m. 24 hours prior to arrival to avoid a first night's room and tax penalty.
2. Complimentary WiFi

**Hampton Inn & Suites Boston Crosstown Center** (2 miles to convention center)

811 Massachusetts Avenue, Boston, MA 02118

\$208     Rollaway Beds: \$10/night

Notes:

1. Check in: 3 p.m.     Check out: 11 a.m.
1. Includes full breakfast buffet from 6 a.m. to 10 a.m.; shuttle service to and from Logan Airport; WiFi; Shuttle service to and from the convention center

**Reservation cut-off date: 2 June 2017 at 5:00 p.m. EDT**

## **GENERAL INFORMATION**

### **COMMITTEE MEETINGS**

Meetings of Administrative, Technical and Standards Committees, including Working Groups, will be announced in the meeting program if requests are received not later than 9 January 2017. Requests for meeting space, special luncheons, etc., should be made as early as possible to: Jolene Ehl, [asa@acousticalsociety.org](mailto:asa@acousticalsociety.org). Reservations will not be taken by phone. Requesters should note that space is limited, and that late requests can be filled only on a space-available basis.

### **ASSISTIVE LISTENING DEVICES**

Anyone planning to attend the meeting who will require the use of an assistive listening device, is requested to advise the Society in advance of the meeting: Acoustical Society of America, 1305 Walt Whitman Road, Suite 300, Melville, NY 11747-4300, [asa@acousticalsociety.org](mailto:asa@acousticalsociety.org).

### **ACCOMPANYING PERSONS PROGRAM**

Accompanying Persons (non-technical participants) are welcome at the Boston meeting. The registration fee for accompanying persons is USD \$150 for preregistration by 22 May 2017 and USD \$200 thereafter, including on-site registration at the meeting. Accompanying persons may attend the Accompanying Persons Program and the Monday and Wednesday evening social hours.

Information about activities planned for accompanying persons will be added to the meeting webpage as plans are developed.

## REGISTRATION INFORMATION

The registration desk at the meeting will open on Saturday afternoon, 24 June. Register online at <http://AcousticalSociety.org>. **If your registration is not received at the ASA headquarters by 22 May 2017 you must register on-site.**

Registration fees are USD as follows:

<u>Category</u>	<u>Preregistration by 22 May 2017</u>	<u>Onsite Registration</u>
Full Registration	\$575	\$675
Student Registration	\$50	\$150
ASA or EAA Emeritus Members (Emeritus status pre-approved by ASA or EAA)	\$150	\$200
Accompanying Persons (Registrants who will not participate in the technical sessions)	\$150	\$200

**Note: A USD \$25 fee will be charged for cancellations after 22 May 2017.**

### ONLINE REGISTRATION

Online registration is available at <http://AcousticalSociety.org>.

## INSTRUCTIONS FOR SUBMITTING ABSTRACTS ONLINE

Complete instructions for the preparation and submission of abstracts is provided online.

Acknowledgment that your abstract has been received will be sent by e-mail. **Please note that if you do not receive an email message your abstract has not been entered into the database.**

1. Online Abstract Submission site is accessed on the ASA Home Page at <http://AcousticalSociety.org>
2. Click "Submit Abstract for Acoustics '17 Boston" from the main page
3. You must first create an account and set up a username and password if you have not already done that in connection with submission of abstracts for prior ASA meetings.
4. After logging into the submission site, click the "Submission" tab.
5. To begin a new abstract click "Create a New Abstract" in the sidebar located on the left-hand side of the screen.
6. If at any time during the submission process you need technical support click the "Get Help Now" button at the top of the screen.
7. Abstracts are limited to 200 words (approximately 1500 characters).
8. The body of the abstract can be cut and pasted into the submission site. Note that LaTeX coding must be entered using the Special Character palette which appears on the Title/Body Screen.
9. Enter all authors and their affiliations in the order they should appear in the abstract. **Note: Only one affiliation may be included for each author.**
10. Carefully check the proof of your abstract. Make sure all special characters and formatting are displaying properly and that the authors and affiliations are listed in the proper order.
11. When all the required information for your submission is entered, the "Submit Abstract" button will appear at the Proof and Submit stage. Click the "Submit Abstract" button to submit the abstract.
12. Upon submission of your abstract you will receive an e-mail confirmation.
13. To view or edit an existing submission click "View Submissions" in the sidebar located on the left-hand side of the screen.
14. To edit an existing submission you must select "Return to Draft" and then select "Edit." All abstracts that are returned to draft must be resubmitted to be entered into the system. If not, the submission will remain in the Drafts table.

## ASA BEST PAPER AWARDS FOR STUDENTS AND YOUNG PRESENTERS

Several ASA Technical Committees offer Best Paper Awards to students and young presenters who present papers at Society meetings. If you want your paper to be considered for an award, you must indicate this when you submit your abstract. Follow the instructions for the appropriate technical area that appear below.

### **ASA Best Student Paper Awards**

**Committees Offering These Awards:** Acoustical Oceanography, Animal Bioacoustics, Architectural Acoustics, Engineering Acoustics, Musical Acoustics, Speech Communication, Structural Acoustics and Vibration, and Underwater Acoustics

**Award Amounts:** For each of the Technical Committees granting awards, up to two awards will be presented to students presenting papers in sessions organized by the specific Technical Committee: USD \$300 for first prize and USD \$200 for second prize.

**Qualifications:**

To qualify for each of these awards, an author must:

- ▶ be enrolled as a student at least half-time (graduates are eligible if the work being presented was performed as a student within one year of the meeting). Note that you do not need to be a member of the ASA to qualify.
- ▶ be listed as the first author on the submitted abstract
- ▶ present the paper at the meeting

**Special Note for Speech Communication entries:** Choose Poster Only as your preferred presentation type during the abstract submission process to be eligible for the Best Student Poster Award Competition for Speech Communication. If you do not choose 'Poster Only' and your paper is subsequently assigned to an oral presentation, you cannot be considered for the Best Student Poster Award Competition for Speech Communication

**Selection:** The award winners will be selected by a subcommittee of each of the Technical Committees granting awards, based upon the quality of both the content of the paper and its presentation. The awards will be announced either at the meeting of the Technical Committee or after the close of the meeting.

**Application:** All those who wish to participate in the competition for these awards must indicate their intention to enter the competition during the abstract submission process by clicking the entry box on the online submission form.

### **Biomedical Acoustics Student Paper Award**

The ASA Technical Committee on Biomedical Acoustics offers a Best Student Poster Award to students who present at spring meetings. Students who enter the competition are expected to give an oral presentation in a regular/special session and defend a poster in a separate student poster session. Only the poster presentation will be judged for the competition. Abstracts submitted by students who elect to participate in the competition will be listed in the program in appropriate oral sessions. Please read the entry qualifications that appear below to be sure you are eligible and follow the instructions for entering the competition.

**Award Amounts:**

Up to three awards will be presented to students presenting papers in sessions organized by the Technical Committee on Biomedical Acoustics and participating in the special student poster session: USD\$500 for first prize, USD\$300 for second prize, and USD\$200 for third prize.

**Qualifications:**

To qualify for an award, a student must:

- ▶ be enrolled as a student at least half-time (graduates are eligible if the work being presented was performed as a student within one year of the meeting). Note that you do not need to be a member of the ASA to qualify.
- ▶ be listed as the first author on the submitted abstract
- ▶ present the paper at the meeting
- ▶ defend the poster at a special student poster session, which will be open to all attendees

**Selection:**

The awardees will be selected by a panel of judges, based upon the quality of the content of the poster and a brief presentation to the judges during a designated poster session. The award winners will be announced either at the meeting of the Biomedical Acoustics Technical Committee or after the close of the meeting.

**Application:** All those who wish to participate in the competition must indicate their intention by clicking the entry box on the online abstract submission form. Additional details will be sent to entrants after the program has been organized.

### **ASA Best "Outstanding Paper by a Young Presenter" Awards**

**Note that you need not be a student to qualify for this award.**

**Committees Offering These Awards:** Noise and Signal Processing in Acoustics

**Award Amounts:** Noise - Up to three awards of up to USD \$250 each will be given for outstanding papers presented in sessions organized by the Technical Committee on Noise.

Signal Processing - One award of USD \$500 will be given for outstanding paper presented in a session organized by the Technical Committee on Signal Processing in Acoustics.

**Qualifications:**

To qualify for an award, the paper author must:

- ▶ be under 30 years of age as of 1 January 2016
- ▶ be listed as the first author of the paper and actually present the paper

**Selection:** Selection of the award winners will be based on the quality of the presented paper, comprising both the content and its delivery. The award winners will be chosen by a subcommittee of the Technical Committee and will be announced after the close of the meeting.

**Application:** The Award Subcommittees would like to consider papers by all authors who meet the eligibility criteria. Neither membership in the Acoustical Society, nor previous experience in the ASA, is required. Because the committees have no other way to identify eligible authors, however, it is essential that eligible authors indicate their intention to enter the competition during the abstract submission process by clicking the entry box on the online submission form.