

167th Meeting of the Acoustical Society of America

The 167th meeting of the Acoustical Society of America will be held Monday through Friday, 5–9 May 2014 at the Rhode Island Convention Center and the OMNI Providence Hotel, Providence, Rhode Island, USA.

SECTION HEADINGS

1. HOTEL INFORMATION
2. TRANSPORTATION AND TRAVEL DIRECTIONS
3. STUDENT TRANSPORTATION SUBSIDIES
4. REGISTRATION
5. ASSISTIVE LISTENING DEVICES
6. TECHNICAL SESSIONS
7. TECHNICAL SESSION DESIGNATIONS
8. HOT TOPICS SESSION
9. AUDITORY NEUROSCIENCE PRIZE LECTURE AND THE WILLIAM AND CHRISTINE HARTMANN PRIZE IN AUDITORY NEUROSCIENCE
10. ACOUSTICAL OCEANOGRAPHY PRIZE LECTURE AND MEDWIN PRIZE IN ACOUSTICAL OCEANOGRAPHY
11. TUTORIAL LECTURE
12. SHORT COURSE
13. STUDENT DESIGN COMPETITION
14. EXHIBIT AND EXHIBIT OPENING RECEPTION
15. TECHNICAL COMMITTEE OPEN MEETINGS
16. TECHNICAL TOUR TO NUWC
17. ORGAN TOUR AND CONCERT
18. PLENARY SESSION AND AWARDS CEREMONY
19. ANSI STANDARDS COMMITTEES
20. COFFEE BREAKS
21. A/V PREVIEW ROOM
22. PROCEEDINGS OF MEETINGS ON ACOUSTICS
23. E-MAIL ACCESS AND INTERNET CAFE
24. BUFFET SOCIALS
25. SOCIETY LUNCHEON AND LECTURE
26. STUDENTS MEET MEMBERS FOR LUNCH
27. STUDENT EVENTS: NEW STUDENT ORIENTATION, MEET AND GREET, STUDENT RECEPTION
28. WOMEN IN ACOUSTICS LUNCHEON
29. JAM SESSION
30. ACCOMPANYING PERSONS PROGRAM
31. WEATHER
32. TECHNICAL PROGRAM ORGANIZING COMMITTEE
33. MEETING ORGANIZING COMMITTEE
34. PHOTOGRAPHING AND RECORDING
35. ABSTRACT ERRATA
36. GUIDELINES FOR ORAL PRESENTATIONS
37. SUGGESTIONS FOR EFFECTIVE POSTER PRESENTATIONS
38. GUIDELINES FOR USE OF COMPUTER PROJECTION
39. DATES OF FUTURE ASA MEETINGS

1. HOTEL INFORMATION

The OMNI Providence Hotel is the headquarters hotel where most meeting events will be held.

The cut-off date for reserving rooms at special rates has passed. Please contact the OMNI Providence Hotel for reservation information: One West Exchange Street, Providence, RI 02903; T: 401-598-8000; Fax: 401-598-8200.

2. TRANSPORTATION AND TRAVEL DIRECTIONS

Air Transportation

Located just 15 minutes from downtown Providence, Warwick's T.F. Green Airport (PVD) was recently named one of the top five airports in the US by Travel + Leisure magazine. Just off Exit 13 on Interstate Route 95, Green Airport is accessible to Boston, Cape Cod and Southeastern New England, and is fast-becoming a popular alternative to Boston's Logan Airport. For flight information visit, <http://www.pvdairport.com/>.

Ground Transportation

Transportation from the T. F. Green Airport to The Omni Providence Hotel and downtown Providence area hotels: **INFORMATION.** The Information Booth, located at the sailboat in the airport main common area, serves many needs of the traveler to T. F. Green Airport, including maps, brochures, courtesy paging, parking and directions to locations in the local area. The staff can also provide general information on what is at T. F. Green. The information booth is staffed during normal business hours by Johnson and Wales hospitality students.

RAIL SERVICE. Providence is located on Amtrak's Northeast Corridor between Washington DC/New York City and Boston. High speed Acela Express train service transports passengers from New York City to Providence in about two and a half hours. The Massachusetts Bay Transit Authority (MBTA) runs low cost commuter trains to Providence from Boston and other points in Massachusetts. Amtrak's Providence railway station is within walking distance of The Omni Providence Hotel and The Rhode Island Convention Center. Amtrak's contact information; 1-800-USA-RAIL or visit, www.amtrak.com.

MAJOR CAR RENTAL COMPANIES. Nearly every major car rental company is represented at T.F. Green. Rental car counters are located in the Interlink building directly connected to the airport via indoor skybridge.

AIRPORT SHUTTLE SHARED-RIDE SERVICE. The shuttle departs T. F. Green Airport every hour on the hour from 5:00 a.m. to 7:00 p.m., seven days a week. It arrives and departs the Omni Providence Hotel at 17 minutes past every hour. The fee for this service is USD\$11.77 per person one way or USD\$23.54 round trip. Please Note: Roundtrip tickets are available for purchase inside the airport only. These tickets will guarantee a return seat. Drivers can only accept cash. At the counter, inside the airport, near baggage claims, all major credit cards are accepted. Phone 401-737-2868 or visit, www.airporttaxiri.com for more information.

TAXICABS AND LIMOUSINES. Taxis are available outside the terminal at T. F. Green Airport. Providence is approximately 10 minutes from the airport, with fares averaging USD\$35.00 one way. All fares are metered. Please phone 401-737-2868 for more information.

Driving/Parking Information

Rhode Island Convention Center, One Sabin Street, Providence, RI 02903.

FROM THE NORTH. Take 95S to exit 22ABC. Merge onto 22A (Memorial Blvd.) toward Downtown. At the second light turn right onto Cookson Place. Take your next right onto West Exchange Street. Stay straight and the RI Convention Center will be directly in front of you. **From the South.** Take 95N to exit 22ABC. Merge onto 22A (Memorial Blvd.) toward Downtown. Turn right onto Francis Street. At the light take a right onto West Exchange Street. The RI Convention Center will be directly in front of you.

PARKING AT THE RHODE ISLAND CONVENTION CENTER. Self-Parking is available at the Rhode Island Convention Center Garage. The full day and overnight rate is USD\$18.00. The RI Convention Center garage and the Omni Providence Hotel are connected via indoor walkway. <http://www.riconvention.com/>

Omni Providence Hotel, One West Exchange Street, Providence, Rhode Island 02903.

FROM 95 NORTH. Take Exit 22A. At the first set of lights take a right onto Francis Street, at the next set of lights make a right turn onto West Exchange Street. The hotel will be located on your right.

FROM 95 SOUTH. Take Exit 22A, at the top of the exit ramp stay in your left lane towards Downtown Providence. At the first set of lights go straight onto Memorial Boulevard. At the next set of lights make a right turn onto Exchange Street. At the stop sign make a right turn onto Exchange Terrace. At the next set of lights go straight onto West Exchange Street. The hotel will be located on your right.

FROM 295 NORTH & SOUTH. Take Exit 6 (Route 6), Follow Route 6 East to Route 10 North. Follow Route 10 to the end and bear right into Downtown Providence. At the first set of lights go straight onto Memorial Boulevard. At the next set of lights make a right turn onto Exchange Street. At the stop sign make a right turn onto Exchange Terrace. At the next set of lights go straight onto West Exchange Street. The hotel will be located on your right.

PARKING AT THE OMNI PROVIDENCE HOTEL. The hotel valet overnight and full day parking rate is USD\$28.00. Self parking is available at the Rhode Island Convention Center Garage next to hotel. The self-parking rate is USD\$18.00 for overnight or full day. The Rhode Island Convention Center garage and the Omni Providence Hotel are connected via indoor walkway.

3. STUDENT TRANSPORTATION SUBSIDIES

To encourage student participation, limited funds are available to defray partially the cost of travel expenses of students to attend Acoustical Society meetings. Instructions for applying for travel subsidies are given in the Call for Papers which is mailed to ASA members for each meeting and can be found online at <http://acousticalsociety.org>. The deadline for the present meeting has passed but this information may be useful in the future.

4. REGISTRATION

Registration is required for all attendees and accompanying persons. Registration badges must be worn in order to participate in technical sessions and other meeting activities.

Registration will open on Monday, 5 May, at 7:30 a.m. in the West Prefunction area, 5th floor at the Rhode Island Convention Center (see floor plan on page A11).

Checks or travelers checks in U.S. funds drawn on U.S. banks and Visa, MasterCard and American Express credit cards will be accepted for payment of registration. Meeting attendees who have pre-registered may pick up their badges and registration materials at the pre-registration desk.

The registration fees (in USD) are \$545 for members of the Acoustical Society of America; \$645 for non-members, \$150 for Emeritus members (Emeritus status pre-approved by ASA), \$350 for ASA Early Career Associates (for ASA members who transferred from Student member status in 2014, 2013, or 2012), \$90 for ASA Student members, \$130 for students who are not members of ASA, \$115 for nonmember undergraduate students, and \$150 for accompanying persons.

One-day registration is available at \$310 for members and \$360 for nonmembers (one-day means attending the meeting on only one day either to present a paper and/or to attend sessions). A nonmember who pays the \$645 nonmember registration fee and simultaneously applies for Associate Membership in the Acoustical Society of America will be given a \$50 discount off their dues payment for 2014 dues.

Invited speakers who are members of the Acoustical Society of America are expected to pay the registration fee, but nonmember invited speakers who participate in the meeting only on the day of their presentation may register without charge. The registration fee for nonmember invited speakers who wish to participate for more than one day is \$110 and includes a one-year Associate Membership in the ASA upon completion of an application form.

Special note to students who pre-registered online: You will also be required to show your student id card when picking-up your registration materials at the meeting to provide verification of your status as a student and/or as an undergraduate Student.

5. ASSISTIVE LISTENING DEVICES

The ASA has purchased assistive listening devices (ALDs) for the benefit of meeting attendees who need them at technical sessions. Any attendee who will require an assistive listening device should advise the Society in advance of the meeting by writing to: Acoustical Society of America, Suite 1NO1, 2 Huntington Quadrangle, Melville, NY 11747-4502; Email: asa@aip.org

6. TECHNICAL SESSIONS

The technical program includes 105 sessions with 1145 papers scheduled for presentation during the meeting. All technical sessions will be held at the Rhode Island Convention Center.

A floor plan of the Rhode Island Convention Center appears on page A11. Session Chairs have been instructed to adhere strictly to the printed time schedule, both to be fair to all speakers and to permit attendees to schedule moving from one session to another to hear specific papers. If an author is not present to deliver a lecture-style paper, the Session Chairs have been instructed either to call for additional discussion of papers already given or to declare a

short recess so that subsequent papers are not given ahead of the designated times.

Several sessions are scheduled in poster format, with the display times indicated in the program schedule.

7. TECHNICAL SESSION DESIGNATIONS

The first character is a number indicating the day the session will be held, as follows:

- 1-Monday, 5 May
- 2-Tuesday, 6 May
- 3-Wednesday, 7 May
- 4-Thursday, 8 May
- 5-Friday, 9 May

The second character is a lower case “a” for a.m., “p” for p.m., or “e” for evening corresponding to the time of day the session will take place. The third and fourth characters are capital letters indicating the primary Technical Committee that organized the session using the following abbreviations or codes:

- AA Architectural Acoustics
- AB Animal Bioacoustics
- AO Acoustical Oceanography
- BA Biomedical Acoustics
- EA Engineering Acoustics
- ED Education in Acoustics
- ID Interdisciplinary
- MU Musical Acoustics
- NS Noise
- PA Physical Acoustics
- PP Psychological and Physiological Acoustics
- SA Structural Acoustics and Vibration
- SC Speech Communication
- SP Signal Processing in Acoustics
- UW Underwater Acoustics

In sessions where the same group is the primary organizer of more than one session scheduled in the same morning or afternoon, a fifth character, either lower-case “a,” “b,” or “c” is used to distinguish the sessions. Each paper within a session is identified by a paper number following the session-designating characters, in conventional manner. As hypothetical examples: paper 2pEA3 would be the third paper in a session on Tuesday afternoon organized by the Engineering Acoustics Technical Committee; 3pSAb5 would be the fifth paper in the second of two sessions on Wednesday afternoon sponsored by the Structural Acoustics and Vibration Technical Committee.

Note that technical sessions are listed both in the calendar and the body of the program in the numerical and alphabetical order of the session designations rather than the order of their starting times. For example, session 3aAA would be listed ahead of session 3aAO even if the latter session began earlier in the same morning.

8. HOT TOPICS SESSION

The Hot Topics session 3pID will be held on Wednesday, 7 May, at 1:30 p.m. in room 557 at the Rhode Island Convention Center. Papers will be presented on current topics in the fields of Engineering Acoustics, Psychological and Physiological Acoustics, and Underwater Acoustics.

9. AUDITORY NEUROSCIENCE PRIZE LECTURE AND THE WILLIAM AND CHRISTINE HARTMANN PRIZE IN AUDITORY NEUROSCIENCE

The 2014 William and Christine Hartmann Prize in Auditory Neuroscience will be awarded to Egbert de Boer, Academic Medical Centre, Amsterdam, the Netherlands, at the Plenary Session on Wednesday, 7 May. Egbert de Boer will present the Auditory Neuroscience Prize Lecture titled “The role of physics in inner-ear physiology and auditory perception” on Wednesday, 7 May at 11:00 a.m. in Session 3aPPc in Ballroom B at the Rhode Island Convention Center.

10. ACOUSTICAL OCEANOGRAPHY PRIZE LECTURE AND MEDWIN PRIZE IN ACOUSTICAL OCEANOGRAPHY

The 2014 Medwin Prize in Acoustical Oceanography will be awarded to Andone Lavery, Woods Hole Oceanographic Institution, at the Plenary Session on Wednesday, 7 May. Andone C. Lavery will present the Acoustical Oceanography Prize Lecture titled “Advances in remote inference of physical and biological parameters using acoustic scattering techniques: Mapping the ocean in broadband ‘color.’” on Wednesday, 7 May, at 1:00 p.m. in Session 3pAO in 554A/B at the Rhode Island Convention Center.

11. TUTORIAL LECTURE

A tutorial lecture on “Sound Reproduction: Science in the Service of Art” will be given by Floyd Toole, formerly of the National Research Council of Canada and Harman International, on Monday, 5 May, at 7:00 p.m. in Ballroom D at the Rhode Island Convention Center.

Lecture notes will be available at the meeting in limited supply; only preregistrants will be guaranteed receipt of a set of notes.

To defray partially the cost of the lecture a registration fee is charged. The fee is USD\$25.00 and USD\$7.00 for students with current ID cards.

12. SHORT COURSE

A short course on Recent Technologies for Hearing Assistance will be given on Sunday, 4 May from 1:00 p.m. to 5:00 p.m. and Monday, 5 May, from 8:30 a.m. to 12:30 p.m. in Providence I at the Omni Providence Hotel.

The objective of this short course is to provide a comprehensive overview of the current state and the perspectives of digital signal processing in hearing devices.

The short course instructors are Birger Kollmeier, PhD, MD, professor of Medical Physics at Oldenburg University in Germany and chairman of the German Cluster of Excellence “Hearing4all” and Volker Hohmann, PhD, is a professor of Applied Physics at Oldenburg University in Germany.

The registration fee is USD\$300.00 (USD\$125 for students) and covers attendance, instructional materials and coffee breaks. Onsite registration at the meeting will be on a space-available basis.

13. STUDENT DESIGN COMPETITION

The 2014 Student Design Competition will be displayed and judged at the Providence 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.

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

The submitted designs will be judged by a panel of professional architects and acoustical consultants. An award of USD\$1,250 will be made to the submitter(s) of the design judged "first honors." Four awards of USD\$700 each will be made to the submitters of four entries judged "commendation." Entries will be on display in Session 2pAAb on Tuesday, 6 May, from 1:00 p.m. to 5:00 p.m. in 556A/B at the Rhode Island Convention Center.

14. EXHIBIT AND EXHIBIT OPENING RECEPTION

The meeting will be highlighted by an exhibit which will feature displays including 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.

The exhibit will be held in the East Prefunction Area at the Rhode Island Convention Center adjacent to the registration area and conveniently located near the meeting rooms. It will open on Monday, 5 May, and will close on Wednesday afternoon, 7 May.

The opening reception will be held Monday, 5 May, starting at 5:30 p.m. One free drink will be provided to each registrant who attends the reception. On Tuesday exhibit hours are 9:00 a.m. to 5:00 p.m. and on Wednesday, 9:00 a.m. to 12:00 noon.

Morning and afternoon refreshments will be available in the exhibit area. Contact the Exhibit Manager for information about participating in the exhibit: Robert Finnegan, Advertising and Exhibits Division, AIP Publishing LLC, Suite 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502, Tel: 516-576-2433; Fax: 516-576-2481; E-mail: rfinnegan@aip.org.

15. TECHNICAL COMMITTEE OPEN MEETINGS

Technical Committees will hold open meetings on Tuesday, Wednesday, and Thursday evenings at the Rhode Island Convention Center. The schedule and rooms for each Committee meeting are given on page A18.

These are working, collegial meetings. Much of the work of the Society is accomplished by actions that originate and are taken in these meetings including proposals for special sessions, workshops and technical initiatives. All meeting participants are cordially invited to attend these meetings and to participate actively in the discussions.

16. TECHNICAL TOUR TO NUWC

A tour of the acoustic test facilities at the Naval Undersea Warfare Center (NUWC) in Newport, Rhode Island will be conducted, Monday, 5 May.

A bus will leave from the main lobby near the registration desk of the Omni Providence Hotel at 1:00 p.m. Expected return time is 4:00 p.m. A fee of USD\$35 will be charged to cover transportation.

A NUWC visitor request form will be forwarded to you and MUST be on file prior to the tour. Non-US citizens should register for the tour early to allow additional time for processing their visit request.

17. ORGAN TOUR AND CONCERT

A Performance and Presentation on The Organ at The Cathedral of Saints Peter and Paul, Providence, Rhode Island has been scheduled for Wednesday, 7 May 2014 at 7:00 p.m. A delightful performance and history presentation on the magnificent church organ will be provided by resident organist Phillip Faraone. The cathedral organ is a four chamber manual mechanical action Casavant, Opus 3145 designed by Larry Phelps. It is the largest mechanical action organ in North America complete with 6,616 pipes, 126 ranks and 73 stops. Many prominent organists have performed on the instrument including Dame Gillian Weir and Stephen Hamilton.

The Cathedral is a leisurely 10-minute walk from the Omni Providence Hotel and Rhode Island Convention Center <http://www.cathedralprovidence.org/organ.html> Cost is a USD \$10 donation.

18. PLENARY SESSION AND AWARDS CEREMONY

A plenary session will be held Wednesday, 7 May, at 3:30 p.m. in Ballroom B/C.

The award ceremony will include presentations of the 2014 William and Christine Hartmann Prize in Auditory Neuroscience, the 2014 Medwin Prize in Acoustical Oceanography, the R. Bruce Lindsay Award, the Helmholtz-Rayleigh Interdisciplinary Silver Medal, and the Gold Medal. Certificates will also be presented to Fellows elected at the San Francisco meeting of the Society. See page 2317 for a list of award recipients and new fellows.

19. ANSI STANDARDS COMMITTEES

Meetings of ANSI Accredited Standards Committees and their advisory working groups will be held at the dates on times listed in the Schedule of Committee Meetings and Other Events on page A18.

Meetings of Accredited Standards Committees S1, Acoustics; S3, Bioacoustics; S3/SC1, Animal Bioacoustics, and S12, Noise, as well as the Standards Plenary meeting, are open meetings and all attendees are invited to attend and participate in the acoustical standards development process. Note that Standards Committee S2, Mechanical Vibration and Shock, will not be meeting in Providence.

Meetings of selected advisory working groups are often held in conjunction with Society meetings and are listed in the calendar or on the standards bulletin board in the registration area, e.g., S12/WGI8-Room Criteria.

People interested in attending and in becoming involved in working group activities should contact the ASA Standards Manager for further information about these groups, or about the ASA Standards Program in general, at the following address: Susan Blaeser, ASA Standards Manager, Standards Secretariat, Acoustical Society of America, Suite 114E, 35 Pinelawn Road, Melville, NY 11747; T.: 631-390-0215; F: 631-390-0217; E: asastds@aip.org

20. COFFEE BREAKS

Morning coffee breaks will be held each day from 9:45 a.m. to 10:30 a.m. in the East Pre-function area from Monday through Thursday and in the Rotunda room on Friday. An afternoon break will be held on Wednesday, 3:00 p.m. to 3:30 p.m. in East Prefunction.

21. A/V PREVIEW ROOM

558B at the Rhode Island Convention Center will be set up as an A/V preview room for authors' convenience, and will be available on Monday through Thursday from 7:00 a.m. to 5:00 p.m. and Friday from 7:00 a.m. to 12:00 noon.

22. PROCEEDINGS OF MEETINGS ON ACOUSTICS (POMA)

The upcoming meeting of the Acoustical Society of America will have a published proceedings, and submission is optional. The proceedings will be a separate volume of the online journal, "Proceedings of Meetings on Acoustics" (POMA). This is an open access journal, so that its articles are available in pdf format without charge to anyone in the world for downloading. Authors who are scheduled to present papers at the meeting are encouraged to prepare a suitable version in pdf format that will appear in POMA. The format requirements for POMA are somewhat more stringent than for posting on the ASA Online Meetings Papers Site, but the two versions could be the same. The posting at the Online Meetings Papers site, however, is not archival, and posted papers will be taken down six months after the meeting. The POMA online site for submission of papers from the meeting will be opened about one-month after authors are notified that their papers have been accepted for presentation. It is not necessary to wait until after the meeting to submit one's paper to POMA. Further information regarding POMA can be found at the site http://asadl/poma/for_authors_poma. Published papers from previous meeting can be seen at the site <http://asadl/poma>.

23. E-MAIL ACCESS AND INTERNET CAFE

Computers providing e-mail access will be available 7:00 a.m. to 5:00 p.m., Monday to Thursday and 7:00 a.m. to 12:00 noon on Friday in 558B at the Rhode Island Convention Center. Wireless access will be available in the Rhode Island Convention Center and Omni Providence Hotel public areas.

24. BUFFET SOCIALS

Complimentary buffet socials with cash bar will be held on Tuesday, 6 May, and Thursday, 8 May, from 6:00 p.m. to 7:30 p.m. in Ballroom A at the Rhode Island Convention Center.

All meeting attendees are invited to attend the social hours. The ASA hosts these social hours to provide a relaxing setting 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 Technical Committees meetings that begin immediately after the socials at 7:30 p.m. Please see page A18 for the schedule of Technical Committee meetings.

25. SOCIETY LUNCHEON AND LECTURE

The Society Luncheon and Lecture will be held on Thursday, 8 May, at 12:00 noon in Narragansett A/B at the Omni Providence Hotel. The luncheon is open to all attendees and their guests.

Tom Austin, Principal Engineer, Ocean Systems Laboratory, WHOI, will be our Society Luncheon Speaker. He will present results from field experiments in which a REMUS-100 autonomous underwater vehicle (AUV) tracked multiple tagged sharks in the open ocean over periods of several hours. The Oceanographic Systems Laboratory (OSL) developed an algorithm that allows the vehicle to use information from an active transponder to provide a three dimensional track of the animal with high spatial and high temporal resolution. Field studies were conducted in the spring and summer of 2012. Two basking sharks and four white sharks were tagged and tracked for 1-3 hours. We present the engineering developments required to create the system as well as some very exciting video footage that was featured on the Discovery Channel's "Shark Week."

Purchase your tickets at the Registration Desk before 10:00 a.m. on Wednesday, 7 May. The cost is USD\$30.00 per ticket.

26. STUDENTS MEET MEMBERS FOR LUNCH

The ASA Education Committee arranges for a student to meet one-on-one with a member of the Acoustical Society over lunch. The purpose is to make it easier for students to meet and interact with members at ASA Meetings. Each lunch pairing is arranged separately. Students who are interested should contact Dr. David Blackstock, University of Texas at Austin, by email. Please provide your name, university, department, degree you are seeking (BS, MS, or PhD), research field, acoustical interests, your supervisor's name, days you are free for lunch, and abstract number (or title) of any paper(s) you are presenting. The sign-up deadline is 12 days before the start of the Meeting, but an earlier sign-up is strongly encouraged. Each participant pays for his/her own meal.

27. STUDENT EVENTS: NEW STUDENT ORIENTATION, MEET AND GREET, AND STUDENT RECEPTION

A New Students Orientation will be held from 5:00 p.m. to 5:30 p.m. on Monday, 5 May, 550A/B at the Rhode Island Convention Center. This will be followed by the Student Meet and Greet from 5:30 p.m. to 6:45 p.m. in the Rotunda at the Rhode Island Convention Center which will provide an opportunity for students to meet informally with fellow students and invited members of the Acoustical Society. Students are encouraged to attend the tutorial lecture on Sound Reproduction which begins at 7:00 p.m. in Ballroom D at the Rhode Island Convention Center.

The Students' Reception will be held on Wednesday, 7 May, from 6:30 p.m. to 8:00 p.m. in Narragansett C in the Omni Providence Hotel.

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 Society. All students are encouraged to attend, especially students who are first time attendees or those from smaller universities.

Students will find a sticker to place on their name tags identifying them as students in their registration envelopes. Although wearing the sticker is not mandatory, it will allow for easier networking between students and other meeting attendees.

Students are encouraged to refer to the student guide, also found in their envelopes, for important program and meeting information pertaining only to students attending the ASA meeting. They are also encouraged to visit the official ASA Student Home Page at www.acosoc.org/student/ to learn more about student involvement in ASA.

28. WOMEN IN ACOUSTICS LUNCHEON

The Women in Acoustics luncheon will be held at 11:30 a.m. on Wednesday, 7 May, in the Rotunda in the Rhode Island Convention Center. Those who wish to attend must purchase their tickets in advance by 10:00 a.m. on Tuesday, 6 May. The fee is USD\$30 for non-students and USD\$15 for students.

29. JAM SESSION

The tradition continues! You are invited to the Rotunda in the Providence Convention Center on Wednesday night, 7 May from 8:00 p.m. to midnight for an epic 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 with snacks, and all-around good times. Don't miss out.

30. ACCOMPANYING PERSONS PROGRAM

Spouses and other visitors are welcome at the Providence meeting. The on-site registration fee for accompanying persons is USD\$150. A hospitality room for accompanying persons will be open in the Blackstone Room at the Omni Providence Hotel from 8:00 a.m. to 10:00 a.m. Monday through Thursday where information about activities in and around Providence will be provided. A representative from the Providence and Warwick Convention and Visitors Bureau will be present on Monday and Tuesday mornings from 9:00 a.m. to 10:00 a.m. to talk about Providence and the many things to do and places to see.

31. WEATHER

April showers will have brought a bloom to May flowers and a definite Spring feel in the air. Temperatures are typically in the mid 60s during the day. Dropping to the cool low 50s at night.

32. TECHNICAL PROGRAM ORGANIZING COMMITTEE

James F. Lynch, Chair; Timothy K. Stanton, Acoustical Oceanography; James A. Simmons, Animal Bioacoustics; William Cavanaugh, Timothy J. Foulkes, Architectural Acoustics; Tyrone Porter, E. Carr Everbach, Biomedical Acoustics; David T. Bradley, Education in Acoustics; Roger Richards, Engineering Acoustics; Eric Dieckman, Musical Acoustics; Nancy Timmerman, Noise; David A. Brown, Physical Acoustics; Patrick Zurek, Richard Freyman, Jayaganesh Swaminathan, Psychological and Physiological Acoustics; John R. Buck, Signal Processing in Acoustics; Rachel M. Theodore, Mark Tiede, Robert Port, Speech Communication; Robert M. Koch, Structural Acoustics and Vibration; Cathy Ann Clark, Gopu R. Potty Underwater Acoustics.

33. MEETING ORGANIZING COMMITTEE

James H. Miller, General Chair; Gopu R. Potty, Cochair; James F. Lynch, Technical Program Chair; Andrea M. Simmons and James A. Simmons, Audio Visual; John R. Buck, Signs; Cathy Ann Clark and David A. Brown, Technical Tours; Gail Paolino, Meeting Coordinator.

34. PHOTOGRAPHING AND RECORDING

Photographing and recording during regular sessions are not permitted without prior permission from the Acoustical Society.

35. ABSTRACT ERRATA

This meeting program is Part 2 of the April 2014 issue of *The Journal of the Acoustical Society of America*. Corrections, for printer's errors only, may be submitted for publication in the Errata section of the *Journal*.

36. GUIDELINES FOR ORAL PRESENTATIONS

Preparation of Visual Aids

- See the enclosed guidelines for computer projection.
- Allow at least one minute of your talk for each slide (e.g., Powerpoint, Keynote, or transparencies). No more than 12 slides for a 15-minute talk (with 3 minutes for questions and answers).
- Minimize the number of lines of text on one visual aid. 12 lines of text should be a maximum. Include no more than 2 graphs/plots/figures on a single slide. Generally, too little information is better than too much.
- Presentations should contain simple, legible text that is readable from the back of the room.
- Characters should be at least 0.25 inches (6.5 mm) in height to be legible when projected. A good rule of thumb is that text should be 20 point or larger (including labels in inserted graphics). Anything smaller is difficult to read.
- Make symbols at least 1/3 the height of a capital letter.
- If you are using transparencies, all material should be within an 8x9-inch (20x23 cm) frame to ensure projection of the entire page.
- For computer presentations, use all of the available screen area using landscape orientation with very thin margins.

If your institutions logo must be included, place it at the bottom of the slide.

- Sans serif fonts (e.g., Arial, Calibri, and Helvetica) are much easier to read than serif fonts (e.g., Times New Roman) especially from afar. Avoid thin fonts (e.g., the horizontal bar of an e may be lost at low resolution thereby registering as a c.)
- Do not use underlining to emphasize text. It makes the text harder to read.
- All axes on figures should be labeled.
- No more than 3–5 major points per slide.
- Consistency across slides is desirable. Use the same background, font, font size, etc. across all slides.
- Use appropriate colors. Avoid complicated backgrounds and do not exceed four colors per slide. Backgrounds that change from dark to light and back again are difficult to read. Keep it simple.
- If using a dark background (dark blue works best), use white or yellow lettering. If you are preparing slides that may be printed to paper, a dark background is not appropriate.
- If using light backgrounds (white, off-white), use dark blue, dark brown or black lettering.
- DVDs should be in standard format.

Presentation

- Organize your talk with introduction, body, and summary or conclusion. Include only ideas, results, and concepts that can be explained adequately in the allotted time. Four elements to include are:
 - Statement of research problem
 - Research methodology
 - Review of results
 - Conclusions
- Generally, no more than 3–5 key points can be covered adequately in a 15-minute talk so keep it concise.
- Rehearse your talk so you can confidently deliver it in the allotted time. Session Chairs have been instructed to adhere to the time schedule and to stop your presentation if you run over.
- An A/V preview room will be available for viewing computer presentations before your session starts. It is advisable to preview your presentation because in most cases you will be asked to load your presentation onto a computer which may have different software or a different configuration from your own computer.
- Arrive early enough so that you can meet the session chair, load your presentation on the computer provided, and familiarize yourself with the microphone, computer slide controls, laser pointer, and other equipment that you will use during your presentation. There will be many presenters loading their materials just prior to the session so it is very important that you check that all multi-media elements (e.g., sounds or videos) play accurately prior to the day of your session.
- Each time you display a visual aid the audience needs time to interpret it. Describe the abscissa, ordinate, units, and the legend for each figure. If the shape of a curve or some other feature is important, tell the audience what they should observe to grasp the point. They won't have time

to figure it out for themselves. A popular myth is that a technical audience requires a lot of technical details. Less can be more.

- Turn off your cell phone prior to your talk and put it away from your body. Cell phones can interfere with the speakers and the wireless microphone.

37. SUGGESTIONS FOR EFFECTIVE POSTER PRESENTATIONS

Content

The poster should be centered around two or three key points supported by the title, figures, and text. The poster should be able to “stand alone.” That is, it should be understandable even when you are not present to explain, discuss, and answer questions. This quality is highly desirable since you may not be present the entire time posters are on display, and when you are engaged in discussion with one person, others may want to study the poster without interrupting an ongoing dialogue.

- To meet the “stand alone” criteria, it is suggested that the poster include the following elements, as appropriate:
 - Background
 - Objective, purpose, or goal
 - Hypotheses
 - Methodology
 - Results (including data, figures, or tables)
 - Discussion
 - Implications and future research
 - References and Acknowledgment

Design and layout

- A board approximately 8 ft. wide × 4 ft. high will be provided for the display of each poster. Supplies will be available for attaching the poster to the display board. Each board will be marked with an abstract number.
- Typically posters are arranged from left to right and top to bottom. Numbering sections or placing arrows between sections can help guide the viewer through the poster.
- Centered at the top of the poster, include a section with the abstract number, paper title, and author names and affiliations. An institutional logo may be added. Keep the design relatively simple and uncluttered. Avoid glossy paper.

Lettering and text

- Font size for the title should be large (e.g., 70-point font)
- Font size for the main elements should be large enough to facilitate readability from 2 yards away (e.g., 32 point font). The font size for other elements, such as references, may be smaller (e.g., 20–24 point font).
- Sans serif fonts (e.g., Arial, Calibri, Helvetica) are much easier to read than serif fonts (e.g., Times New Roman).
- Text should be brief and presented in a bullet-point list as much as possible. Long paragraphs are difficult to read in a poster presentation setting.

Visuals

- Graphs, photographs, and schematics should be large enough to see from 2 yards (e.g., 8 × 10 inches).
- Figure captions or bulleted annotation of major findings next to figures are essential. To ensure that all visual elements are “stand alone,” axes should be labeled and all symbols should be explained.

- Tables should be used sparingly and presented in a simplified format.

Presentation

- Prepare a brief oral summary of your poster and short answers to likely questions in advance.
- The presentation should cover the key points of the poster so that the audience can understand the main findings. Further details of the work should be left for discussion after the initial poster presentation.
- It is recommended that authors practice their poster presentation in front of colleagues before the meeting. Authors should request feedback about the oral presentation as well as poster content and layout.

Other suggestions

- You may wish to prepare reduced-size copies of the poster (e.g., 8 1/2 × 11 sheets) to distribute to interested audience members.

38. GUIDELINES FOR USE OF COMPUTER PROJECTION

A PC computer with audio playback capability and projector will be provided in each meeting room on which all authors who plan to use computer projection should load their presentations. Authors should bring computer presentations on a CD or 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. Assistance in loading presentations onto the computers will be provided.

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 insure that their sound files are also saved on the CD or USB drive.

Introduction

It is essential that each speaker connect his/her own laptop to the computer projection system in the A/V preview room prior to session start time to verify that the presentation will work properly. Technical assistance is available in the A/V preview room at the meeting, but not in session rooms. Presenters whose computers fail to project for any reason will not be granted extra time.

Guidelines

Set your computer's screen resolution to 1024 × 768 pixels or to the resolution indicated by the AV technical support. If it looks OK, it will probably look OK to your audience during your presentation. Remember that graphics can be animated or quickly toggled among several options: Comparisons between figures may be made temporally rather than spatially. Animations often run more slowly on laptops connected to computer video projectors than when not so connected. Test the effectiveness of your animations before your assigned presentation time on a similar projection system (e.g., in the A/V preview room). Avoid real-time calculations in favor of pre-calculation and saving of images. If you will use your own laptop instead of the computer provided, a video switcher will be available. During the question and answer period of the previous speaker, connect your laptop to the video switcher. It is good protocol to initiate your slide

show (e.g., run PowerPoint) immediately once connected, so the audience doesn't have to wait. When it is your turn to present, the session chair will press the button on the switcher corresponding to the appropriate number of the input to which you connected (indicated on the cord you plugged into your computer). If there are any problems, the session chair will endeavor to assist you, but it is your responsibility to ensure that the technical details have been worked out ahead of time. During the presentation have your laptop running with main power instead of using battery power to insure that the laptop is running at full CPU speed. This will also guarantee that your laptop does not run out of power during your presentation.

Macintosh

Older Macs require a special adapter to connect the video output port to the standard 15-pin male DIN connector. Make sure you have one with you.

- Hook everything up before powering anything on. (Connect the computer to the RGB input on the projector).
- Turn the projector on and boot up the Macintosh. If this doesn't work immediately, you should make sure that your monitor resolution is set to 1024 × 768 for an XGA projector or at least 640 × 480 for an older VGA projector. (1024 × 768 will most always work.). You should also make sure that your monitor controls are set to mirroring. If it's an older powerbook, it may not have video mirroring, but something called simulscan, which is essentially the same.
- Depending upon the vintage of your Mac, you may have to reboot once it is connected to the computer projector or switcher. Hint: you can reboot while connected to the computer projector in the A/V preview room in advance of your presentation, then put your computer to sleep. Macs thus booted will retain the memory of this connection when awakened from sleep. Alternatively, you can reboot while connected to the video switcher during the previous speaker's presentation, but it is safer to queue this up in advance of the session.
- Depending upon the vintage of your system software, you may find that the default video mode is a side-by-side configuration of monitor windows (the test for this will be that you see no menus or cursor on your desktop; the cursor will slide from the projected image onto your laptop's screen as it is moved). Go to Control Panels, Monitors, configuration, and drag the larger window onto the smaller one. This produces a mirror-image of the projected image on your laptop's screen.
- Also depending upon your system software, either the Control Panels will automatically detect the video projector's resolution and frame rate, or you will have to set it manually. If it is not set at a commensurable resolution, the projector may not show an image. Experiment ahead of time with resolution and color depth settings in the A/V preview room (please don't waste valuable time fiddling with your Control Panel settings during your allotted session time).

PC

- Make sure your computer has the standard female 15-pin DE-15 video output connector. Some computers require an adaptor.

- Once your computer is physically connected, you will need to toggle the video display on. Most PCs use either ALT-F5 or F6, as indicated by a little video monitor icon on the appropriate key. Some systems require more elaborate keystroke combinations to activate this feature. Verify your laptop's compatibility with the projector in the computer/video prep room. Likewise, you may have to set your laptop's resolution and color depth via the monitor's Control Panel to match that of the projector, which settings you should verify prior to your session. Linux
- Most Linux laptops have a function key marked CRT/LCD or two symbols representing computer versus projector. Often that key toggles on and off the VGA output of the computer, but in some cases, doing so will cause the computer to crash. One fix for this is to boot up the BIOS and look for a field marked CRT/LCD (or similar). This field can be set to Both, in which case the signal to the laptop is always presented to the VGA output jack on the back

of the computer. Once connected to a computer projector, the signal will appear automatically, without toggling the function key. Once you get it working, don't touch it and it should continue to work, even after reboot.

39. DATES OF FUTURE ASA MEETINGS

For further information on any ASA meeting, or to obtain instructions for the preparation and submission of meeting abstracts, contact the Acoustical Society of America, Suite 1NO1, 2 Huntington Quadrangle, Melville, NY 11747-4502; Telephone: 516-576-2360; Fax: 516-576-2377; E-mail: asa@aip.org

168th Meeting, Indianapolis, Indiana, 27–31 October 2014

169th Meeting, Pittsburgh, Pennsylvania, 18–22 May 2015

170th Meeting, Jacksonville, Florida, 2–6 November 2015

171st Meeting, Salt Lake City, Utah, 23–27 May 2016

172nd Meeting, Honolulu, Hawaii, 28 November – 2 December 2016