

# 166th Meeting of the Acoustical Society of America

The 166th meeting of the Acoustical Society of America will be held Monday through Friday, 2–6 December 2013 at the Hilton San Francisco Union Square Hotel, San Francisco, California, USA.

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## 1. HOTEL INFORMATION

The Hilton San Francisco Union Square Hotel is the headquarters hotel where all meeting events will be held.

Note that there are three Hilton Hotels in San Francisco so please specify the Union Square as your destination when traveling.

The cut-off date for reserving rooms at special rates has passed. Please contact the Hilton San Francisco Union Square Hotel for reservation information: 333 O'Farrell Street, San Francisco, CA 94102, T: (415)771-1400, [sanfrancisco.hilton.com](http://sanfrancisco.hilton.com)

## 2. TRANSPORTATION AND TRAVEL DIRECTIONS

San Francisco is served by many major airlines through San Francisco International Airport (SFO). Information is available at <http://www.flysfo.com>. San Francisco International Airport consists of four terminals; 1, 2, 3, and International. AirTrain, a fully automated and free of charge people-mover system, connects all four terminals, the two international terminal garages, the BART station, and the airport's Rental Car Center. Although it is possible to walk between terminals, passengers must ride AirTrain to access the Rental Car Center.

There is a variety of ground transportation options between San Francisco International Airport and the Hilton San Francisco Union Square Hotel including rapid rail service, taxi, shuttle, and car rental. Information on ground transportation can be found at <http://www.flysfo.com/web/page/index.jsp>. Click on Ground Transport.

**TAXI:** Taxis depart from designated taxi zones located at the roadway center islands, on the Arrivals/Baggage Claim Level of all terminals. Uniformed taxi coordinators are stationed at the taxi zones from 7:00 a.m. to 1:00 a.m. to assist passengers with questions or concerns. Rates average USD\$41.00 from the airport to the Hilton San Francisco Union Square. By sharing a ride, up to 5 persons can ride for the price of 1 person. The drive takes approximately 30 minutes.

**SHARED RIDE VAN:** Shared-ride vans provide service between SFO and passenger-specified locations. Depending on the number of passengers, shared-ride vans may make multiple stops and therefore vary on the time it takes to get to the hotel. Van service is available on a walk-up basis. However, passengers are advised to make reservations for service after 11:00 p.m. Shared-ride vans pick up passengers on the Departures/Ticketing Level from the roadway center island at all terminals. Rates average USD\$17 per person for a one way trip.

**BAY AREA RAPID TRANSIT (BART):** BART operates rapid rail service directly between SFO and San Francisco. The SFO BART Station is located on the Departures/Ticketing Level of the International Terminal (Boarding Area G side). BART is easily accessed from any terminal by riding SFO's AirTrain to the Garage G/BART Station stop. Take the BART to the Powell St. Station. Exiting the station, take a left (this will be Market Street). Turn right on Powell Street and continue for approximately two blocks. Then take a left on O'Farrell Street. Travel two blocks and the Hilton San Francisco Union Square Hotel will be on your left. Rates are an average of

USD8.25 per person for a one-way trip. Transportation from the airport to Powell St. Station is approximately 30 minutes.  
**RENTAL CAR:** We do not recommend renting a car unless you are planning trips out of town. Most everything you need should be within walking distance of the hotel.

**PARKING:** The on-site parking fee at the Hilton San Francisco Union Square Hotel is USD\$53.58 (per 24 hours) for self-parking and USD\$59.28 (per 24 hours) for valet parking. Many convenient off-site parking options are available in the immediate area including the Mason O'Farrell Garage located at 325 Mason Street (across O'Farrell Street from the hotel) where the rate is USD\$32 per 24 hours.

### 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 applying for travel subsidies are given in the Call for Papers which 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. MESSAGES FOR ATTENDEES

Messages for attendees may be left by calling the Hilton San Francisco Union Square Hotel, 1-415-771-1400, and asking for the ASA Registration Desk during the meeting, where a message board will be located. This board may also be used by attendees who wish to contact one another.

### 5. 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, 2 December, at 7:30 a.m. in Golden Gate 6-8 of the Hilton San Francisco Union Square Hotel (Lobby floor) (see floor plan on page A12).

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 \$455 for members of the Acoustical Society of America; \$555 for non-members, \$100 for Emeritus members (Emeritus status pre-approved by ASA), \$260 for ASA Early Career Associates (for ASA members who transferred from Student member status in 2011, 2012, or 2013), \$50 for ASA Student members, \$75 for students who are not members of ASA, and \$100 for accompanying persons.

One-day registration is available at \$260 for members and \$285 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 \$555 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.**

### 6. 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 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502; Email: [asa@aip.org](mailto:asa@aip.org)

### 7. TECHNICAL SESSIONS

The technical program includes 117 sessions with 1127 papers scheduled for presentation during the meeting.

A floor plan of the Hilton Hotel appears on page A12. 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.

### 8. TECHNICAL SESSION DESIGNATIONS

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

- 1-Monday, 2 December
- 2-Tuesday, 3 December
- 3-Wednesday, 4 December
- 4-Thursday, 5 December
- 5-Friday, 6 December

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.

### **9. DISTINGUISHED LECTURE**

W. Jeffrey Elias, M.D., of the University of Virginia School of Medicine will present a special lecture on "The Use of Magnetic Resonance-Guided High Intensity Focused Ultrasound to Treat Essential Tremor (ET)" on Wednesday, 4 December, at 10:25 a.m. in Golden Gate 2/3. Essential Tremor is a common movement disorder, affecting an estimated 3% of the population, or approximately 10 million individuals in the United States. Dr. Elias is currently the Director of Stereotactic and Functional Neurosurgery with a large multidisciplinary program in the surgical treatment of movement disorders, epilepsy, and spasticity. Academically, he holds the rank of Associate Professor with tenure, and serves on the editorial board of the Journal of Neurosurgery.

### **10. HOT TOPICS SESSION**

Hot Topics session 3pID will be held on Wednesday, 4 December, at 1:15 p.m. in Continental 6. Papers will be presented on current topics in the fields of Animal Bioacoustics, Architectural Acoustics, Biomedical Acoustics, and Musical Acoustics.

### **11. ROSSING PRIZE IN ACOUSTICS EDUCATION AND ACOUSTICS EDUCATION PRIZE LECTURE**

The 2013 Rossing Prize in Acoustics Education will be awarded to Juliette Ioup, University of New Orleans, at the Plenary Session on Wednesday, 4 December. Juliette Ioup will present the Acoustics Education Prize Lecture titled "Time-frequency analysis for acoustics education and for listening to whales in the Gulf of Mexico" on Wednesday, 4 December, at 2:00 p.m. in Session 3pED in Continental 1.

### **12. MUNK AWARD AND MUNK AWARD LECTURE**

The 2013 Munk Award will be presented to W. Steven Holbrook of the University of Wyoming at session 3aAO on Wednesday, 4 December. The Munk Award and Medal are granted jointly by The Oceanography Society, the Office of Naval Research, and the Office of the Oceanographer of the Navy. There have been nine recipients since the award was established in 1993.

Steven Holbrook will present the Munk Award Lecture titled "Ten years of seismic oceanography: Accomplishments

and challenges" on Wednesday, 4 December, at 11:00 a.m. in session 3aAO in Continental 2/3.

### **13. TUTORIAL LECTURE: TIME-FREQUENCY ANALYSIS**

A tutorial lecture on "Time-Frequency Analysis: Theory and Applications" will be given by Professor Leon Cohen of the City University of New York and Professor Patrick Loughlin of the University of Pittsburgh on Monday, 2 December, at 7:00 p.m. in Continental 7/8.

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 \$25.00 USD and \$7.00 USD for students with current ID cards.

### **14. SHORT COURSE: ARRAY SIGNAL PROCESSING FOR SONAR**

A short course on Array Signal Processing for Sonar will be given on Sunday, 1 December, from 1:00 p.m. to 5:00 p.m. and Monday, 2 December, from 8:30 a.m. to 12:30 p.m. in Union Square 1/2.

The objective of this short course is to introduce the participant to a span of topics in array signal processing. The short course instructor is Douglas Abraham who has over twenty years of experience in the sonar field, having held positions at U.S. Navy, NATO, and University laboratories.

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.

### **15. UNDERGRADUATE RESEARCH POSTER EXPOSITION**

The Undergraduate Research Poster Exposition will be held Wednesday morning, 4 December, at 10:00 a.m. in session 3aEDa in the East Lounge. The 2013 Undergraduate Research Exposition is a forum for undergraduate students to present their research pertaining to any area of acoustics. It is intended to encourage undergraduates to express their knowledge and interest in acoustics and foster their participation in the Society. Four awards, up to \$500 each, will be made to help undergraduates with travel costs associated with attending the meeting and presenting a poster.

### **16. TECHNICAL COMMITTEE OPEN MEETINGS**

Technical Committees will hold open meetings on Tuesday, Wednesday, and Thursday evenings at the Hilton. The schedule and rooms for each Committee meeting are given on page A10.

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.

### **17. TECHNICAL TOUR**

A tour of three venues in the Berkeley Arts District will be held on Thursday afternoon 5 December. The tour will include

the Berkeley Repertory's Roda Theater (berkeleyrep.org), Berkeley Society for the Preservation of Traditional Music's Freight & Salvage Coffeehouse (thefreight.org), and Comal Restaurant (comalberkeley.com) which has a unique active acoustic system. A bus will leave from the Hilton's Taylor Street entrance at 1:30 p.m. and return by 6:00 p.m.

Tour participants will walk between the venues which are all within one block of each other. The tour fee is USD\$20. On-site registration will be on a space-available basis.

## 18. EXPLORATORIUM TOUR

A tour to The Exploratorium, a museum of science, art, and human perception, will take place on Tuesday, 3 December, from 10:00 a.m. to 12:00 noon. A museum guide will lead the tour of the Exploratorium's hands-on exhibits that explore biology, physics, listening, cognition, visual perception, social behavior, and environment.

A bus will leave the Hilton's Taylor Street entrance promptly at 9:45 a.m. for the approximately 15-minute trip to the museum. The bus will leave the museum at 11:45 a.m. for the return trip and will arrive at the Hilton at about 12:00 noon.

The charge for the tour, including bus transportation, is USD\$20. Participants must ride the bus to the museum. The tour is limited to 50 people. On-site registration will be on a space-available basis.

## 19. GALLERY OF ACOUSTICS

The Technical Committee on Signal Processing in Acoustics will sponsor the 14th Gallery of Acoustics at the Acoustical Society of America meeting in San Francisco. 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 be held in the Golden Gate 6-8, Monday to Thursday, 2-5 December, from 8:00 a.m. to 5:00 p.m. and Friday, 6 December from 8:00 a.m. to 12 noon.

A cash prize of USD\$500 will be awarded to the winning entry. Meeting attendees are asked to rank-order the entries using the ballot distributed with registration materials.

## 20. ANNUAL MEETING OF THE MEMBERSHIP

The annual meeting of the membership of the Acoustical Society of America will be held at 3:30 p.m. on Wednesday, 4 December 2013, in Continental 4 at the Hilton San Francisco Union Square Hotel, 333 O'Farrell Street, San Francisco CA 94102.

## 21. PLENARY SESSION AND AWARDS CEREMONY

A plenary session will be held Wednesday, 4 December, at 3:30 p.m. in Continental 4.

The 2013 recipient of the Munk Award, W. Steven Holbrook, will be introduced. The Rossing Prize in Acoustics Education will be presented to Juliette Ioup. The Silver Medal in Biomedical Acoustics will be presented to Kullervo Hynynen and the Silver Medal in Musical Acoustics will be

presented to William J. Strong. Certificates will be presented to Fellows elected at the Montreal meeting of the Society. See page 4135 for a list of fellows.

## 22. 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; S2, Mechanical Vibration and Shock; 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.

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

## 23. COFFEE BREAKS

Morning coffee breaks will be held each day from 9:45 a.m. to 10:30 a.m. in the East Lounge.

## 24. A/V PREVIEW ROOM

Golden Gate 1 on the first floor 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.

## 25. 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 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](http://asadl/poma/for_authors_poma). Published papers from previous meeting can be seen at the site <http://asadl/poma>.

## 26. 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 1:00

p.m. on Friday in Golden Gate 1. An Internet Café will be available 8:00 a.m. to 5:00 p.m. Monday through Thursday and 8:00 a.m. to 1:00 p.m. in the West Lounge. Wireless access will be available in the Hotel public areas.

## **27. SOCIAL HOURS**

Complimentary buffet socials with cash bar will be held on Tuesday, 3 December, and Thursday, 5 December, from 6:30 p.m. to 8:00 p.m. in Continental 4/5/6.

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 8:00 p.m. Please see page A18 for the schedule of Technical Committee meetings.

## **28. SOCIETY LUNCHEON AND LECTURE**

The Society Luncheon and Lecture will be held on Thursday, 5 December, at 12:00 noon in Continental 4. The luncheon is open to all attendees and their guests. Purchase your tickets at the Registration Desk before 10:00 a.m. on Wednesday, 4 December. The cost is \$30.00 per ticket.

## **29. 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.

## **30. STUDENT EVENTS: NEW STUDENT ORIENTATION, ICEBREAKER, FELLOWSHIP AND GRANT PANEL, AND STUDENT RECEPTION**

A New Students Orientation will be held from 5:00 p.m. to 5:30 p.m. on Monday, 2 December, in Cityscape on the 46<sup>th</sup> floor of the Hilton. This will be followed by the Student Icebreaker from 5:30 p.m. to 6:45 p.m. in Cityscape 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 Time-Frequency Analysis following the Icebreaker at 7:00 p.m. in Continental 7/8.

A Fellowship and Grant Panel will be held on Tuesday, 3 December, from 4:30 p.m. to 6:30 p.m. in Continental 1.

The Students' Reception will be held on Wednesday, 4 December, from 6:30 p.m. to 8:00 p.m. in the Cityscape room. 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/](http://www.acosoc.org/student/) to learn more about student involvement in ASA.

## **31. WOMEN IN ACOUSTICS LUNCHEON**

The Women in Acoustics luncheon will be held at 11:30 a.m. on Wednesday, 4 December, in the Cityscape room on the 46<sup>th</sup> floor of the Hilton. Those who wish to attend must purchase their tickets in advance by 10:00 a.m. on Tuesday, 3 December. The fee is USD\$30 for non-students and USD\$15 for students.

## **32. JAM SESSION**

The tradition continues! You are invited to Continental 4 on Wednesday night, 4 December, 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.

## **33. ACCOMPANYING PERSONS PROGRAM**

Spouses and other visitors are welcome at the San Francisco meeting. The on-site registration fee for accompanying persons is USD\$100. A hospitality room for accompanying persons will be open in Union Square 18 from 8:00 a.m. to 10:00 a.m. Monday through Friday where information about activities in and around San Francisco will be provided. A representative of San Francisco Travel will be present on Monday and Tuesday mornings from 9:00 a.m. to 10:00 a.m. to talk about San Francisco and the many things to do and places to see. Representatives from local tour providers are expected to be present at about 9:00 a.m. on the remaining days.

## **34. WINE COUNTRY TOUR**

An all-day tour to the Sonoma wine country will be held on Saturday, 7 December. The bus will leave the Taylor Street entrance of the Hilton at 9:00 a.m. and return by 4:00 p.m. The cost is \$97.50 which will include lunch, visits to three wineries, gratuities, and transportation. Tasting fees at the wineries will be on an additional-fee basis which range from USD\$10 to USD\$15 per person per winery (most wineries visited by the tour company allow guests to share tastings). You will not be required to pay tasting fees for wineries at which you do not taste. Tasting fees are often waived for those

who purchase wine or join the wine club at that winery (the tour driver will be able to tell you whether this is the case at each winery). Please visit [http://www.platypustours.com/custom\\_tour\\_asa.php](http://www.platypustours.com/custom_tour_asa.php) to register.

### 35. WEATHER

San Francisco enjoys a year-round spring-like climate. Temperatures average 48-59 degrees F (8-14 C) in winter. You will probably want to bring a sweater and/or a windbreaker during your strolls around San Francisco, particularly near the waterfront. An umbrella is recommended for occasional spring-like showers.

### 36. TECHNICAL PROGRAM ORGANIZING COMMITTEE

Roger W. Schwenke, Chair; James F. Lynch, Acoustical Oceanography; Michael Stocker, Animal Bioacoustics; Amanda B. Lind, Architectural Acoustics; Thomas J. Matula, Biomedical Acoustics; Thomas D. Rossing, Education in Acoustics; Roger T. Richards, Engineering Acoustics; Thomas D. Rossing, Musical Acoustics; Steven D. Pettyjohn, Noise; James P. Chambers, Bradley Goodwiller, Physical Acoustics; Sunil Puria, Psychological and Physiological Acoustics; David H. Chambers, Jeffrey A. Ballard, Signal Processing in Acoustics; Keith A. Johnson, Marc Ettliger, Speech Communication; Benjamin M. Shafer, Structural Acoustics and Vibration; James F. Lynch, Underwater Acoustics.

### 37. MEETING ORGANIZING COMMITTEE

James E. Phillips, General Chair; Roger W. Schwenke, Technical Program Chair; Joel A. Lewitz, Audio Visual; Dennis Paoletti, Food and Beverage; Sarah E. Kaddatz, Norman H. Philipp, Signs; Keith A. Johnson, Sunil Puria, Student Volunteer Coordinators; Roger W. Schwenke, David R. Schwind, Technical Tour; Erika R. Ferguson, Meeting Assistant.

### 38. PHOTOGRAPHING AND RECORDING

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

### 39. ABSTRACT ERRATA

This meeting program is Part 2 of the November 2013 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*.

### 40. GUIDELINES FOR ORAL PRESENTATIONS, Preparation of Visual Aids

- See the guidelines for computer projection in section 42.
- 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.

#### **41. 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.

#### **42. 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.

#### 43. 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 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502; Telephone: 516-576-2360; Fax: 516-576-2377; E-mail: asa@aip.org

167th Meeting, Providence, Rhode Island, 5–9 May 2014  
 168th Meeting, Indianapolis, Indiana, 27–31 October 2014  
 169th Meeting, Pittsburgh, Pennsylvania, 18–22 May 2015  
 170th Meeting, Jacksonville, Florida, 2–6 November 2015