175th Meeting of the Acoustical Society of America

The 175th meeting of the Acoustical Society of America will be held Monday through Friday, 7–11 May 2018 at the Hyatt Regency Minneapolis Hotel, Minneapolis, Minnesota.

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1. HOTEL INFORMATION

The Hyatt Regency Minneapolis Hotel is the headquarters hotel where all meeting events will be held.

The cut-off date for reserving rooms at special rates has passed.

Please contact Hyatt Regency Minneapolis, (888-421-1442), 1300 Nicollet Mall, Minneapolis, MN 55403 for information about room availability.

2. TRANSPORTATION AND TRAVEL

The Minneapolis-St Paul International Airport (MSP), is the country's 14th busiest travel hub with 34 million passengers passing through each year. Central location offers a speedy trip (15–30 minutes) to the city.

Transportation options between the Hyatt and the airport include:

Light Rail: The Terminal 1 light rail station is located below the Transit Center, between the Blue and Red ramps. From the Tram Level (one level below bag claim), take the tram to the Transit Center. When you exit the tram, follow the signs to the light rail station. The Terminal 2 light rail station is located on the north side of the Orange Ramp. From Level 1 near Ticketing take the elevator or escalator up to the Orange Ramp skyway. Follow the signs to the LRT station. Take the escalators or elevators down one level to the station platform. The light rail stations are fully accessible.

Blue Line to the Nicollet Avenue stop, the hotel is 8 blocks south on Nicollet Avenue. You can use your Light Rail ticket to take a bus on Nicollet Mall to 13th Street. Fares are $2.00 for Off-Peak times and $2.50 from 6-9 am and 3-6:30 pm.

Taxi: Taxi service at Terminal 1 is accessible via the Tram Level (Level T). Signs direct passengers one level up to the taxi starter booth, where airport staff will assist passengers in obtaining a taxi. At Terminal 2, taxi service is available at the Ground Transport Center, located on the ground level of the Purple Ramp directly across from the terminal building. Downtown Minneapolis is approximately 12 miles from the airport, with fares averaging $39-$49.

Airport Shuttle: Shared ride service to and from the airport is available through SuperShuttle. Ticket counters are located in the Terminal 1-Lindbergh Ground Transport Center, accessible via the terminal's Tram Level. Follow the signs to the escalator or elevator up. Advance reservations are highly recommended. Travelers arriving at Terminal 2-Humphrey can call for pick up at the Super Shuttle kiosk in the Ground Transport Center, located on Level 1 of the Purple Ramp across from the terminal building.

Car Rental: On-airport rental car counters at Terminal 1 are located on the second and third levels between the Blue and Red parking ramps. At Terminal 2, on-airport rental car counters are located in the Ground Transport Center on the ground level of the Purple Ramp directly across from the terminal building.

Hotel valet parking is $38/day, self-parking is $20/day.

3. MESSAGES FOR ATTENDEES

A message board will be located in the Nicollet Promenade near the ASA registration desk. Check the board during the week as messages may be posted by attendees who do not have cell phone numbers of other attendees.

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, 7 May, at 7:30 a.m. in the Exhibit Hall (see floor plan on page A10).

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 $650 for members of the Acoustical Society of America; $800 for non-members, $250 for Emeritus members (Emeritus status pre-approved by ASA), $375 for ASA Early Career members (for ASA members within three years of their most recent degrees – proof of date of degree required), $150 for ASA Student members, $250 for students who are not members of ASA, $25 for Undergraduate Students, and $200 for accompanying persons.

One-day registration is available at $375 for members and $450 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 $800 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 2018 dues.

Invited speakers who are members of the Acoustical Society of America are expected to pay the Member full-week or one-day registration fees. 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 $450 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.

5. ACCESSIBLITY

If you have special accessibility requirements, please indicate this below by informing ASA (1305 Walt Whitman Road, Suite 300, Melville, NY 11747-4300; asa@acousticalsociety.org) at a minimum of thirty days in advance of the meeting. Please provide a cell phone number, email address, and detailed information including the nature of the special accessibility so that we may contact you directly.

6. TECHNICAL SESSIONS

The technical program includes 101 sessions with 955 abstracts scheduled for presentation during the meeting.

A floor plan of the Hyatt Regency Minneapolis appears on page A10. 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, 7 May
2-Tuesday, 8 May
3-Wednesday, 9 May
4-Thursday, 10 May
5-Friday, 11 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 or Administrative 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 begins earlier in the same morning.

8. HOT TOPICS SESSION

The Hot Topics session (3pID) will be held on Wednesday, 9 May, at 2:15 p.m. in Greenway C/D. Papers will be presented on current topics in the fields of Engineering Acoustics, Signal Processing in Acoustics, and Structural Acoustics and Vibration.

9. MEDWIN PRIZE IN ACOUSTICAL OCEANOGRAPHY AND ACOUSTICAL OCEANOGAPHY PRIZE LECTURE

The 2018 Medwin Prize in Acoustical Oceanography will be presented to Ying-Tsong Lin, Woods Hole Oceanographic Institution, at the Plenary Session on Wednesday, 9 May. Dr. Lin will present the Acoustical Oceanogaphy Prize Lecture on Tuesday, 8 May, at 11:00 a.m. in Session 2aAOb in Greenway A.

10. WILLIAM AND CHRISTINE HARTMANN PRIZE IN AUDITORY NEUROSCIENCE AND AUDITORY NEUROSCIENCE PRIZE LECTURE

The 2018 William and Christine Prize in Auditory Neuroscience will be presented to Shihab Shamma, University of Maryland College Park, at the Plenary Session on Wednesday, 9 May. Dr. Shamma will present the Auditory Neuroscience Prize Lecture on Wednesday, 9 May, at 11:00 a.m. in Session 3aPPb in Nicollet D2.

11. TUTORIAL LECTURE ON HEARING LOSS AND THE FUTURE OF AUDITORY IMPLANTS

A tutorial presentation titled "Hearing loss and the future of auditory implants" will be given by Andrew J. Oxenham, University of Minnesota, on Monday, 7 May, at 7:00 p.m. in Nicollet D2.

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

The registration fee is USD $25 (USD $12 for students with current student IDs).

12. SHORT COURSE ON OPEN SCIENCE AND RELATED TOPICS IN HEARING RESEARCH

A short course on Open Science and Related Topics in Hearing Research will be given in two parts: Sunday, 6 May, from 1:00 p.m. to 5:00 p.m. and Monday, 7 May, from 8:30 a.m. to 12:30 p.m. in the Mirage Room.

The objective of this course is to introduce the various parts of Open Science and to provide researchers related to hearing research with hands-on tools and workflow examples for their everyday use.. Onsite registration at the meeting will be on a space-available basis.

13. EXHIBIT AND EXHIBIT OPENING RECEPTION

An instrument and equipment exhibit conveniently located near the registration area and meeting rooms, will be located in the Exhibit Hall adjacent to Nicollet Promenade.

The Exhibit 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.

The Exhibit will open with an evening reception on Monday with lite snacks and a complimentary drink. Coffee breaks on Tuesday and Wednesday mornings will be held in the exhibit area as well as an afternoon break on Tuesday.

Exhibit hours are Sunday, 7 May, 5:30 p.m. to 7:00 p.m., Tuesday, 8 May, 9:00 a.m. to 5:00 p.m., and Wednesday, 9 May, 9:00 a.m. to 12:00 noon.

14. GALLERY OF ACOUSTICS

The Technical Committee on Signal Processing in Acoustics will sponsor the 17th Gallery of Acoustics. 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 will be on display in Nicottet Foyer, Monday to Thursday.

Ballots will be distributed to meeting attendees to rank-order the entries. A cash prize of USD $400 and $200 will be awarded to the winning and first runner-up entries, respectively.

15. TECHNICAL COMMITTEE OPEN MEETINGS

Technical Committees will hold open meetings on Tuesday, Wednesday, and Thursday at the Hyatt Regency Minneapolis. The schedule and rooms for each Committee meeting are given on page A16.

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. WOMEN IN ACOUSTICS ROUND-TABLE DISCUSSION SESSION

The Women in Acoustics Committee is hosting a facilitated round-table discussion session from 1:30 p.m. to 2:30 p.m. on Tuesday, May 8, in the Exhibit Hall. Discussion topics will include navigating careers in academia, government, and industry; mentoring at all levels; work-life balance; and navigating power differentials in your career. Each table will have a topic leader to facilitate the informal discussions, and the attendees may choose which topic they would like to discuss. There will be an opportunity for attendees to switch tables to discuss a new topic at 2:00 p.m. While the discussions in this session will focus on women's experiences related to these topics, anyone interested in participating in these discussions is welcome to attend.

17. ANNUAL MEMBERSHIP MEETING

The Annual Membership Meeting of the Acoustical Society of America will be held at 3:30 p.m. on Wednesday, 9 May 2017, in Nicollet B/C at the Hyatt Regency Minneapolis Hotel, 1300 Nicollet Mall, Minneapolis, Minnesota 55403.

18. PLENARY SESSION AND AWARDS CEREMONY

A plenary session will be held Wednesday, 9 May, at 3:30 p.m. in Nicollet B/C.

ASA scholarship recipients and the Student Council Mentor Award recipient will be introduced. The Medwin Prize in Acoustical Oceanography will be presented to Ying-Tsong Lin. The William and Christine Hartmann Prize in Auditory Neuroscience will be presented to Shihab Shamma. The von Békésy Medal will be presented to David Kemp. The R. Bruce Lindsay Award will be presented to Yun Jing. The Helmholtz-Rayleigh Interdisciplinary Silver Medal in Physical Acoustics and Biomedical Acoustics will be presented to Kenneth S. Suslick, and the Gold Medal will be presented to William A. Yost.

Certificates will be presented to Fellows elected at the Boston meeting. See page 1875 for a list of fellows.

All attendees are welcome and encouraged to attend. Please join us to honor and congratulate these medalists and other award recipients.

19. ANSI STANDARDS COMMITTEES

Meetings of ANSI Accredited Standards Committees will be held at the Minneapolis meeting.

Meetings of selected advisory working groups are often held in conjunction with Society meetings and are listed in the Schedule of Committee Meetings and Other Events on page A16 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: Neil Stremmel, ASA Standards Manager, Standards Secretariat, Acoustical Society of America, 1305 Walt Whitman Road, Suite 300, Melville, NY 11747-4300; T.: 631-390-0215; F: 631-923-2875; E: asastds@acousticalsociety.org

20. COFFEE BREAKS

Morning coffee breaks will be held each day from 9:30 a.m. to 11:00 a.m. The breaks on Monday, Thursday, and Friday will be held in Nicollet Foyer. The breaks on Tuesday and Wednesday will be held in the Exhibit Hall. There will also be an afternoon break on Tuesday from 2:30 p.m. to 3:45 p.m. in the Exhibit Hall.

21. A/V PREVIEW ROOM

Greenway E on the third 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.

22. PROCEEDINGS OF MEETINGS ON ACOUSTICS (POMA)

The Minneapolis meeting 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 for downloading without charge to anyone in the world. 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. 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://acousticsauthors.org. Published papers from previous meeting can be seen at the site http://asadl/poma.

23. E-MAIL AND INTERNET ZONE

Wi-Fi will be available in all ASA meeting rooms and spaces.

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 on the first floor in Nicollet Promenade.

Tables with power cords will be set up in Nicollet Promenade for attendees to gather and to power-up their electronic devices.

24. SOCIALS

Socials will be held on Tuesday and Thursday evenings, 6:00 p.m. to 7:30 p.m. in the Exhibit Hall.

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 open meetings of Technical Committees that begin immediately after the socials

25. SOCIETY LUNCHEON AND LECTURE

The Society Luncheon and Lecture, sponsored by the College of Fellows, will be held Thursday, 10 May, at 12:00 noon in the Regency Room. The program will be presented by members of Cantus, the acclaimed men's vocal ensemble (cantussings.org). Cantus has been lauded as the premier men's vocal ensemble in the United States. They are committed to ensuring the future of ensemble singing by mentoring young singers and educators. Since the very early years, Cantus has been offering master classes and lectures

This 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 USD $30.00 per ticket.

26. STUDENT EVENTS: NEW STUDENTS ORIENTATION, MEET AND GREET, STUDENT RECEPTION

Follow the student twitter throughout the meeting @ASAStudents.

A New Students Orientation will be held on Monday, 7 May, from 5:00 p.m. to 5:30 p.m. in Nicollet C. This will be followed by the Student Meet and Greet from 5:30 p.m. to 6:45 p.m. in Greenway F/G where refreshments and a cash bar will be available.

The Students' Reception will be held on Wednesday, 9 May, from 6:00 p.m. to 8:00 p.m. in the Regency 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.

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 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.

27. WOMEN IN ACOUSTICS LUNCHEON

The Women in Acoustics luncheon will be held at 11:30 a.m. on Wednesday, 9 May, in the Regency Room. Those who wish to attend must purchase their tickets in advance by 10:00 a.m. on Tuesday, 8 May. The fee is USD $30 for non-students and USD$15 for students.

28. JAM SESSION

You are invited on Wednesday night, 5 December, from 8:00 p.m. to midnight in Nicollet D for the ASA Jam. 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.

29. ACCOMPANYING PERSONS PROGRAM

Spouses and other visitors are welcome at the Minneapolis meeting. The on-site registration fee for accompanying persons is USD $200. A hospitality room for accompanying persons will be open in the Regency Room from 8:00 a.m. to 10:00 a.m. Monday through Friday. This entitles you access to the accompanying persons room, social events on Tuesday and Thursday, the Jam Session, and the Plenary Session on Wednesday afternoon.

The program will include speakers on the history and culture of the city. Check the meeting website for updated information.

Minneapolis is a city rich in music, architecture and cultural institutions, as well as a hub for sports and shopping. Within a short walk of the hotel are dozens of museums and landmarks as well as a broad range of culinary experiences. There are also a variety of excellent tours to choose from.

30. WEATHER

In Minneapolis, the month of May is characterized by rapidly rising daily high temperatures, with daily highs increasing by 10°F, from 64°F to 74°F over the course of the month, and rarely exceeding 85°F or dropping below 51°F. The average high and low temperatures are 66°F and 46°F, respectively. The probability of rainfall is 32% during the beginning of May.

31. TECHNICAL PROGRAM ORGANIZING COMMITTEE

Andrew J. Oxenham, Chair; David P. Knobles, Acoustical Oceanography; David Mann, Animal Bioacoustics; Ian Hoffman, Shane Kanter, Architectural Acoustics; Siddhartha Sikdar, Kang Kim, Subha Maruvada, Biomedical Acoustics; Daniel Russell, Education in Acoustics; Kenneth M. Walsh, Engineering Acoustics; Whitney Coyle and Peter Rucz, Musical Acoustics; William J. Murphy, Noise, Michael Haberman and Kevin Lee, Physical Acoustics; Anna Diedesch, Psychological and Physiological Acoustics; Buye Xu, Ballard Blair, Signal Processing in Acoustics; Melissa Baese-Berk, Kristin Van Engen, Speech Communication; Benjamin Shafer, Robert A. Koch, Structural Acoustics and Vibration; Julien Bonnel, Underwater Acoustics; Kelly Whiteford, Vahid Naderyan, Jonathan Weber, Student Council.

32. MEETING ORGANIZING COMMITTEE

Peggy B. Nelson and Bruce C. Olson, Cochairs; Andrew J. Oxenham, Technical Program Chair; Benjamin Munson and Adam Svec, Student Coordinators; Matt Hildebrand, Signs; Alan Nelson and Milton Salcedo, Accompanying Persons.

33. PHOTOGRAPHING AND RECORDING

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

34. ABSTRACT ERRATA

This meeting program is Part 2 of the March 2018 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*.

35. GUIDELINES FOR ORAL PRESENTATIONS
Preparation of Visual Aids

- See the guidelines for computer projection in section 41 below.
- Allow at least one minute of your talk for each slide (e.g., PowerPoint). 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.
- 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.

36. 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.

37. GUIDELINES FOR USE OF COMPUTER PROJECTION
A PC computer with monaural 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 who plans to use his/her own laptop connect 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 1024x768 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, connect your laptop to the projector during the question/answer period of the previous speaker. It is good protocol to initiate your slide show (e.g., run PowerPoint) immediately once connected, so the audience doesn't have to wait. 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.

Specific Hardware Configurations
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 1024x768 for an XGA projector or at least 640x480 for an older VGA projector. (1024x768 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.
- 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 adjusting the 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 A/V preview 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.

38. 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, 1305 Walt Whitman Road, Suite 300, Melville, NY 11747-4300; Telephone: 516-576-2360; Fax: 631-923-2875; E-mail: asa@acousticalsociety.org

176th Meeting, Victoria, Canada, 6–9 November 2018

177th Meeting, Louisville, Kentucky, 13–17 May 2019

178th Meeting, San Diego, CA, 30 November–4 December 2019

179th Meeting, Chicago, Illinois, 11–15 May 2020

180th Meeting, Cancun, Mexico, fall 2020