

## AGENDA – ED Com Meeting – ASA #179 “Acoustics Virtually Everywhere”

(Tuesday, December 1, 2020 – 4:30-6:00pm EST)

This will be a virtual online meeting via Zoom: <https://psu.zoom.us/j/9119063448>

**Attendance:** (will be gathered from Zoom participation list)

### Approval of Minutes from May 2020 Virtual Meeting

Motion to approve minutes as posted –

Seconded –

## Special ED Sessions for upcoming meetings

### ED Sessions for ASA #179 Acoustics Virtually Everywhere (Dec. 7-11, 2020)

The following sessions are ED special session or other TC sessions that ED co-sponsored:

- **Monday, Dec. 7**
  - ▶ **1pNSa** – 1:05-2:35pm EST – **Larry H. Royster Memorial Session I**
  - ▶ **1pNSb** – 2:50-4:00pm EST – **Larry H. Royster Memorial Session II**
- **Tuesday, Dec. 8**
  - ▶ **2aED** – 11:15am-12:10pm EST – **Rossing Prize Lecture – Daniel Butko (Univ. Oklahoma)**
  - ▶ **2aMU** – 11:15am-12:45pm EST – **Musical Acoustics Education at the Undergraduate Level I**
  - ▶ **2pMUa** – 1:05-2:35pm EST – **Musical Acoustics Education at the Undergraduate Level II**
  - ▶ **2pMUb** – 2:50-4:00pm EST – **Musical Acoustics Education at the Undergraduate Level III**
- **Wednesday, Dec. 9**
  - ▶ **3aEDa** – 9:30-11:00am EST – **Acoustics Demonstrations for Classroom Teaching I**
    - ▶ **3aEDa1:** Acoustics outreach demonstrations show: Sounds to Astound -- *Cameron Vongsawad (Brigham Young Univ.)*.
    - ▶ **3aEDa2:** Propellers, motors, fans – *Tom Gabrielson (Penn State)*
    - ▶ **3aEDa3:** Acoustic-phonetic demonstrations for classroom teaching – *Takayuki Arai (Sophia Univ., Japan)*
    - ▶ **3aEDa4:** Demonstration and validation of nonlinear acoustic shock wave formation in a renovated waveguide – *Connor McClusky, Mark Langhirt, Nick Carder, and Luke Wade (Penn State)*
  - ▶ **3aEDb** – 11:15am-12:25pm EST – **Acoustics Demonstrations for Classroom Teaching II**
    - ▶ **3aEDb1:** Photoacoustic imaging demonstration – *Leah Burge and Murray Korman (US Naval Academy)*.
    - ▶ **3aEDb2:** Demonstration of subjective sound preferences and jury studies in product noise control using countertop blenders – *Andrew Barnard (Michigan Tech. Univ.)*
    - ▶ **3aEDb3:** An acoustic resonator rocket: Reviving Dvorak’s 1878 acoustic repulsion apparatus – *Dan Russell (Penn State)*
  - ▶ **3pED** – 1:05-2:35pm EST – **Hands-On Demonstrations: Acoustics at Home**
  - ▶ **3pAAa** – 1:05-2:35pm EST – **New Developments in Classroom Acoustics I**
  - ▶ **3pAAb** – 2:50-4:00pm EST – **New Developments in Classroom Acoustics II**
- **Thursday, Dec. 10**
  - ▶ **4aEDa** – 9:30-11:00am EST – **General Topics in Acoustics Education**
    - ▶ **4aEDa1:** Last Call for the Wiki4YearOfSound2020 Campaign and the Contributions from Students – *Thais Morata*
    - ▶ **4aEDa2:** SpeakEasy: Browser-based automated multi-language intonation training – *Jeramey Tyler*
    - ▶ **4aEDa3:** Ogene Bunch music analyzed through the visualization and sonification of beat-class theory with ski-hill and cyclic graphs – *Andrea Calilhanna*
    - ▶ **4aEDa4:** Interdisciplinary Physical Music; Blind Spor in Education on Acoustics – *Stephen Onwubikio*
  - ▶ **4aEDb** – 11:15am – 12:00pm EST – **Undergraduate Research Symposium Poster Session**
    - ▶ **4aEDb1:** Acoustic conditions in occupied K-12 classrooms as measured over four continuous weekdays – *Dirk Hintz and Lily Wang*
    - ▶ **4aEDb2:** Acoustical demonstration of slurring characteristics using a French horn – *Tiffany Bixler and Murray Korman*
    - ▶ **4aEDb3:** Circular synthetic aperture ultrasonic acoustic imaging using a 2.25MHz underwater sonar – *Ava Twitty and Murray Korman*
    - ▶ **4aEDb4:** Spectral Analysis of Turbulent Boundary Layer Pressure Fluctuations Collected by a MEMS Microphone Array – *Ethan Saff and Robert White*
    - ▶ **4aEDb5:** Characterization of Sand Moisture Profiles for Improved Atmospheric Acoustic Modeling – *Faith Cobb, Nia Wilson, Andrea Vecchiotti, Diego Turo, Joseph Vignola, and Teresa Ryan*
    - ▶ **4aEDb6:** Comparison of existing and experimental weather models of the near surface atmospheric boundary layer – *Nia Wilson, Faith Cobb, Diego Turo, Joseph Vignola, and Teresa Ryan*
  - ▶ **4pIDa** – 1:05-1:50pm EST – **Graduate Programs in Acoustics Poster Session I**
  - ▶ **4pIDb** – 1:50-2:35pm EST – **Graduate Programs in Acoustics Poster Session II**

## Special ED Sessions for Future Meetings

As of December 2020, it is not certain whether ASA #180 will be in-person in Seattle or virtually online . . . it depends on the COVID-19 situation. . . . plan for in-person (but be prepared for all-virtual)

### ASA #180 – Seattle, WA – (June 7-11, 2021)

- **Hands-On Demos**
- Listen Up and Get Involved ([depending on Seattle area Girl Scouts Interest](#))
- **Best Practices in Scientific Computing** – Kim Reigel (joint with CA)
  - [Tips and tricks for using GitHub, creating unit tests, IDEs, Creating User Interfaces, etc.](#)
- **STEAM ideas and resources for science fair projects – teaching younger kids** (Kim Riegel – Andrea Calilhanna – Cameron Vongsawad) ⇨ [move to Fall 2021?](#)
  - [Acoustics related ideas and resources for science fair projects or home-schooling activities.](#)
  - [We will reach out to Seattle area teachers and schools and the \*\*Seattle area ASA Regional chapter\*\*](#)
- **Teaching Speech & Hearing Science to Undergraduates** – Freddie Bell-Berti, Alexander Francis and Jenny Lentz (SC joint with ED, PP)
- **Tour (or social event) at the Pacific Science Center?** – [Keeta Jones will follow up](#)

### ASA #181 – Fall 2021 – **Virtual?? or In-Person?? (where?)**

- **Hands-On Demos**
- **Reflections on teaching during a pandemic – what worked and what didn’t?** – Dan Russell
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### ASA #182 – Denver, CO – (May 23-27, 2022)

- **Hands-On Demos**
- Listen Up and Get Involved (with Women in Acoustics) ([depending on Denver area Girl Scouts Interest](#))
- **Connecting Industry and Education** – Jim DeGrandis and Dan Russell
  - [Case studies and examples of successful partnerships between industry and educational institutions. Internships, equipment donations, educational programs, mentoring, etc.](#)
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### Sydney, Australia ⇨ **POSTPONED UNTIL FALL 2023**

The Technical and Executive councils have asked that these sessions involve a co-chair/co-organizer from both the ASA and also the Australian Acoustical society and/or one of the Asian acoustical societies.

- **Connections between Music and Math** – Andrea Calilhanna
- **Online Resources for Teaching Acoustics (with a music flavor?)** – Andy Morrison and Joe Wolfe?

## Reports from SubCommittees

### SMMfL (Students Meet Members for Lunch)

Update from Martin Lawless . . . challenges of implementing virtual connections during a Virtual Online meeting.

### Special JASA issue on Education in Acoustics

It's time for another JASA special issue for Education in Acoustics (the first one was published in 2011-2012). Dan Russell and Preston Wilson to co-coordinate and co-guest edit this Special Issue. Call for papers will be announced and posted before the end of December 2020. Manuscript submissions will be due before October 2021. We need members of the Education in Acoustics Committee to:

- Write and submit papers for this special session
- Serve as reviewer for submitted papers

### Report and Updates from Keeta Jones (ASA Outreach and Education).

**International Year of Sound (IYS):** activities extended through 2021

#### **Update on Booths Initiative – VIRTUAL exhibit booths at other society meetings:**

- AAPT
- SACNAS
- NSBP

#### **Update on ASA Teacher Activity Kits**

- subcommittee

#### **Other Outreach Activities**

- Invited Speaker Series (ASA and SPS) has pivoted to virtual talks. Volunteer speakers are needed!
- **SPS Science Outreach Catalyst Kits (SOCKs)** – focus on Sound –
- Acoustics Education Workshop – was scheduled for summer 2020 AAPT meeting (which moved to an online virtual meeting). Plan to reschedule to next summer 2021 AAPT meeting.

## **New Business (Breakout Sessions?)**

### **CIRDI – Committee to Improve Racial Diversity and Inclusivity**

Newly formed committee (formed in June 2020) to explore ways that ASA can become more inclusive and welcoming to members (especially students) from diverse backgrounds. There are several ways that the Education in Acoustics Committee can help this effort.

#### **Making students at HBCU aware of acoustics as a viable career path**

- Update on current efforts to contact faculty at HBCU with research areas related (even remotely) to acoustics
- Pamphlet/flyer about acoustics to send to HBCUs
- Advertising about Acoustics in *Physics Teacher* / *Physics Today* / *Science News* / *SPS Observer*

#### **Collaboration with other organizations/programs**

- AIP TEAM-UP
- National Organization of Minority Architects
- National Black Physicists Society
- Society of Hispanic Professional Engineers

#### **Waiving Graduate School Application Fees for Minority and Underrepresented Students**

- How to waive application fees for minority students applying to graduate programs in acoustics?

#### **Mini Virtual ED Com conferenes (aligned with Task Force D)**

- Every 3 months . . . live session with a couple of speakers
- Possible topics: diversity in acoustics, REUs, Science Engagement, Demonstrations
- Small fee for participants?

#### **Create a List of ASA “endorsed” speakers**

- Share list with HBCUs, SPS chapters, SWE chapters, and other minority science/engineering societies
- Invite speakers from these organizations to ASA meetings/events
- Create a “meet a scientist / adopt a physicist” program for K-12 to provide personal interactions with acousticians

#### **Summer School & Research/Internship Experience for Minority Students**

- Plans are underway to start this in a virtual format for summer 2021
  - › Initial Funding from ASA and AIP has been designated and approved
- Planning for 8 minority students participate in a 12-week research/internship experience
  - › 3 week “acoustics summer school” – 3 hours of class per day, to prep students with no acoustics background
  - › ED Com members can help with developing curriculum and teaching
  - › 9 weeks of research with faculty mentor / internship with industry mentor
  - › Weekly virtual meetings between student cohorts and mentors and ASA
  - › Weekly seminars by ASA members . . . from different TC areas
- Match each student with a faculty/industry mentor
  - › Provide training for mentors
  - › Provide resources for mentors and students
- Significant interest from Apple, Google, and some other industry sponsors
- In future years, this would be on-site, in-person research/internship experience