

## Minutes – ED Com Meeting – ASA #181 Seattle

(Tuesday, November 16, 2021 – 7:30-9:00pm EST)

The ED Com meeting for ASA 181 Seattle was held as a Zoom meeting during the ASA Admin week (prior to the actual in-person meeting) on Thursday, Nov. 16, 2021, from 7:30-9:00pm EST.

### Attendance: (31 present)

Freddie Bell-Berti, David Brown, John Buck, Andrea Calilhanna, Bob Celmer, Jim DeGrandis, Eric Dieckman, Jack Dostal, Philip Faraci, T.J. Flynn, Chris Jasinski, Trevor Jerome, Keeta Jones, Matthew Kamrath, Jill Linz, Brian Monson, Thomas Moore, Andrew Morrison, Peggy Nelson, Andy Piacsek, Gordon Ramsey, Kimberly Riegel, Dan Russell, Juli Simon, Scott Sommerfeldt, Vic Sparrow, Benjamin Tucker, Michelle Vigeant, Cameron Vongsawad, Preston Wilson, Rand Worland

The meeting was called to order at 7:35pm by chair, Dan Russell.

### Approval of Minutes from June 2021 ASA 180, *Acoustics-in-Focus* meeting

Motion to approve minutes as posted – *Freddie Bell-Berti*

Seconded – *Scott Sommerfeldt*

### Reminder of ED Special Sessions for ASA 181 Seattle

#### • Monday, Nov. 29

- ▶ **1aED – 9:00am-11:50am – Returning to Teaching Acoustics In-Person in the Post-COVID Era**
  - ▶ 1aED1: The successes and failures of flipping an introductory musical acoustics course in response to the COVID pandemic – *Jill A. Linz (Skidmore College)*
  - ▶ 1aED2: Reflecting on universal design for learning in hybrid and in-person acoustics education – *Katherine Simeon (Northeastern Univ.)*
  - ▶ 1aED3: Acoustics education accelerated by interactive simulators and research imaging system experiments – *Thomas Szabo (Boston Univ.)*
  - ▶ 1aED4: Strategies for teaching and extracurricular activities during COVID-19 transitions – *Andrew Morrison (Joliet Junior College)*
  - ▶ 1aED5: Penn State Acoustic Wave (PAW) kits: Development of “at-home” hands-on activities for first-year graduate level acoustics courses – *Dan Russell and Juli Simon (Penn State Univ.)*
  - ▶ 1aED6: Return to in-person teaching and mentorship after COVID-19: hands-on photoacoustic demonstration apparatus – *Leah Burge and Murray Korman (U.S. Naval Academy)*
  - ▶ 1aED7: Individual undergraduate research during remote learning – *Kimberly Riegel (Queensborough Community College)*
  - ▶ Panel Discussion – very engaging discussion
- ▶ **1pED – 1:00pm-1:00pm – General Topics in Education in Acoustics**
  - ▶ 1pED: A step by step educational guide to designing and testing an underwater acoustic modem -- *Rami Rashid (New Jersey Inst. of Technology), John DellaMorte, James DellaMorte (delResearch, LLC), Erjian Zhang, and Ali Abdi (New Jersey Inst. of Technology)*
  - ▶ 1pED2: Design of virtual reality for teaching ultrasound in medical and engineering education – *Jan Lee and Olivia Coiado (Carle Illinois College of Medicine)*
  - ▶ 1pED3: withdrawn
  - ▶ 1pED4: Teaching speech acoustics concepts in an undergraduate speech science course: Are distributed or massed practice lab assignments more effective? – *Kathleen Siren (Loyola Univ.)*

#### • Thursday, Dec, 2

- ▶ **4pED – 1:30pm-4:30pm – Preview of the Next JASA Special Issue on Education in Acoustics**
  - ▶ 4pED1: Acoustics and vibrations as an integral part of the engineering curriculum at the University of Hartford – *Christopher Jasinski and Robert Celmer (Univ. of Hartford)*
  - ▶ 4pED1: withdrawn
  - ▶ 4pED3: Knocking over LEGO minifigures with time reversal focused vibrations: Understanding the physics and developing a museum demonstration – *Brian E. Anderson (Brigham Young Univ.), Pierre-Yves Le Bas (Los Alamos National Lab), Adam Kingsley, Aaron Brown, (BYU) and Henrik Thomsen (ETH Zurich)*
  - ▶ 4pED4: withdrawn
  - ▶ 4pED5: Creating a mentored research environment in an underwater acoustics lab – *Cameron T. Vongsawad, Tracianne B. Neilsen, Kaylyn N. Terry, Scott P. Hollingsworth, Corey E. Dobbs, and Gabriel H. Fronk (Brigham Young Univ)*
  - ▶ 4pED6: One problem, two solution approaches: Using the impedance translation theorem and equivalent circuits for graduate level homework – *Brian E. Anderson and Scott D. Sommerfeldt (Brigham Young Univ)*
  - ▶ 4pED7: Using Impedance to explore resonance in mechanical, acoustical, and electrical analog systems – *Dan Russell (Penn State Univ)*
  - ▶ 4pED8: An overview of the upcoming Special Issue on Education in Acoustics – *Dan Russell (Penn State Univ) and Preston Wilson (Univ. Texas Austin)*

**Note: The Wednesday Evening Demonstration Session “Sounds to Astound” by the BYU Acoustics group was cancelled (despite widespread advertising and a blitz of contacting local area groups, there was zero response)**

## **SMMfL (Students Meet Members for Lunch)**

### **Report from Martin Lawless (SMMfL subcommittee chair)**

Happy to report that **we were able to successfully match all 69 students that signed up for SMMfL**. 66 students were matched by the program and 3 were matched manually.

Several people have had problems, this meeting specifically, with the check box not working for the SMMfL program (myself included). We did contact Elaine about this before the meeting, and they have reached out to who they contract to do the registration site to look into things. It is very helpful to know this was a bit more widespread, so we will definitely follow up with Elaine on this. Another potential reason may be that the questionnaire e-mails may be sent to some spam folders, though we don't know this for certain and I check with one or two students every time I send an e-mail.

The solution we outlined involved improving the SMMfL registration process. Currently, students and members check the box at registration, then receive an e-mail to fill out a questionnaire about their research interests and availability, then receive an e-mail about their matches, and lastly have to contact each other to set up the meeting. We think that if we reduce the number of steps and simplify the process, we'll have higher rates of participation. For example, for the past meeting, we had 85 members check the box (that we know of), but only 55 filled out the questionnaire. Simplifying the process would require two major changes:

- Instead of just a checkbox on the registration form, we would also ask which days the students and members are available to meet.
- Using the membership directory to acquire information about research interests

To do this, we would like to update the membership management system to include a bit more information about specific research interests and members could update this information when they renew their membership. Another option would be to have a database stored on [asaedcom.org](http://asaedcom.org) that members would be able to update

With these two changes, we'd be able to make the matches right after registration closes and have less attrition between steps. We would maybe also have more time to send the e-mails through the official channel so that we don't have to worry about the spam filter so much. We anticipate some pushback on these changes from headquarters because I know that these systems are run by third-party contractors.

## **Update on JASA Special Issue on Education in Acoustics**

**Call for Papers:** [https://asa.scitation.org/jas/info/specialissues/cfp\\_020421](https://asa.scitation.org/jas/info/specialissues/cfp_020421)

Preston Wilson and Dan Russell are co-guest editors.

Deadline for manuscript submissions was extended to: **December 20, 2021**

As of Nov. 16, we can report:

- 2 manuscripts fully accepted
- 5 manuscripts undergoing author revision (after review)
- 9 manuscripts currently with reviewers
- 4 manuscripts with editors awaiting assignment to reviewers
- 10-12 manuscripts that have been “promised” but not yet submitted

## **Update on Education in Acoustics Awards**

### **2021 Robert Young Awards for Undergraduate Research**

The application form says “*Four (4) awards of up to \$500 each for separate and independent projects are available for 2021.*” However, the Acoustical Society Foundation Board allocated \$3250 for 2021. A total of 12 applications were received. Four of those applications requested funds to travel to ASA meetings (*which is not what Young Award MoU states this award is for*) so those four applications were ignored and the eight remaining applications were considered. It was decided to divide the available \$3200 among the eight applications, with some slight variation depending on the nature of the proposed projects and requests.

- **Sanmeel Vijay Lagad** (team of 6 students from Virginia Tech) – “Dynamic Acoustic Soft Robot Inspired by Bats” – \$500
- **Caden Smith** (Penn State) – “Noninvasive Tracking of Tin Solidification in Casting Using Ultrasound” – \$500
- **David Nevarez-Saenz** (Wichita State Univ.) – “Additive Manufacturing of Ceramic Porous Noise Absorbers” – \$400

- **Grace Oh** (Univ. Pittsburgh) – “Auditory Stream Segregation in Children with Cochlear Implants: Perception of Interleaved Melodies Segregated by Frequency” – \$400
- **Esmeralda Sanchez-Torres** (Wichita State Univ.) – “Aerogel Based Ultralight Noise Reduction Technologies,” -- \$400
- **Alanalyn Pinaula Toves** (Univ. Minnesota) – “Changes in Pupil Dilation in the Presence of Various Noise Spectra and Correspondence to Individual Self-Reporting of Sensitivity, Annoyance, and Exposure to Noise,” – \$400
- **Zoe Haupt** (Univ. Oregon) – “Effect of Pauses and Dialect on the Perception of Deception” – \$300
- **Geonho Lee** (Penn State) – “Ultrasonic Attenuation to Quantify Martensite in Additively Manufactured Stainless Steel” – \$300

### 2022 Rossing Prize in Acoustics Education Research

The committee was reminded about nominations for the Rossing Prize in Acoustics Education. In previous years there has been a shortage of competitive nominations (three in 2019, two in 2020, and zero in 2021). NO prize was awarded in 2021 because of a lack of nominations. Deadline for submitting nominations is March 2022. Reminders will be sent out in January and February.

### **ED Demonstration Outreach Events during ASA meetings**

We entertained discussion about resuming our “normal” ED sponsored outreach events at each in-person meeting, unless local conditions or interest does suggest otherwise. During the discussion period, the following questions or comments were raised:

- **Hands-On Demos (focused on local area schools – middle school or high school)**

This outreach event is typically scheduled for Wednesday, mid-morning.

What about when local schools are not in session during ASA meeting?

Middle school students are the target audience (demos are cool)

High school – spring meeting better matched to HS physics class topic coverage about waves

What about reaching out to HS band/music (jazz) classes as target audiences as well as (instead of?) physics?

Is the existing set of demonstrations the right approach for High School physics students?

Would high school students be more interested in learning about careers (or college majors) in acoustics and acoustics related fields?

Is midmorning the best time? What about hosting a more formal demonstration s how in the evening (5pm) => with pizza and demo show?

**Note: A Wednesday Evening Demonstration Session “Sounds to Astound” by the BYU Acoustics group was originally planned and scheduled for ASA 181 Seattle. However, this event was cancelled because, despite widespread advertising and a blitz of contacting local area groups, there was zero response from local schools.**

- **Listen Up and Get Involved (sponsored by Women in Acoustics, focused on Girl Scouts) (age 13+)**

This outreach event is typically scheduled for Wednesday evening (6-8pm) with a pizza dinner.

Significant difficulties getting parents to bring girls to site (hotel? Parking? Conference? Who is ASA?)

- **What about combining these two outreach events into a single event – held at an off-site location?**

Partner with local school / library / science museum / business (local area, parking, space).

What would this cost?

How would an off-site event affect the ASA “hands-on” session (Wed. morning)? Would we cancel the “hands-on” outreach event?

We would need to transport ASA volunteers to location.

How would Equipment (3 crates) be transported to the off-site location? Who would set the equipment up?

Ramsey Gordon noted that this approach works well for AAPT. Need to work out logistics (Gordon is willing to help out.)

**Plan for Denver** => Combine existing funds (currently for 2 meetings per year) into one event => focus on one event per year (one meeting only). Explore options for hosting a demonstration event at off-site location for ASA 182 Denver.

Andrea Calilhana suggested a large outreach possibility for **Australia meeting** . . . match up a “buddy” school (USA / ASA and Australia) and combine a poster session (competition) for high school students with a interactive Hands-on demonstration session.

## ED Special Sessions for Future Meetings

We reviewed the list of Session ideas from June 2021 AiF ED meeting (attached as appendix)

### ASA #182 – Denver, CO – (May 23-27, 2022)

- Hands-on session (day/time) => plan for an off-site demonstration event Wed. evening.
- **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.](#)
- ~~STEAM ideas and resources for science fair projects – teaching younger kids~~ – Kim Riegel, Andrea Calilhanna, Cameron Vongsawad(?)
  - ~~Acoustics related ideas and resources for science fair projects or home schooling activities.~~
  - **This special session was tabled and postponed for a future meeting**

### ASA #183 – Nashville, TN – (December 5-9, 2022)

- **Resources for Teaching Waves in a Physics class?** – Cameron Vongsawad, Andy Piacsek, Dan Russell, Andrew Morrison
  - [#lteacherphysics](#) (Twitter).
  - [Communication between college and HS teachers?](#)
- **My Favorite Homework Problems (based on measurements, demonstrations, or experimental data)** – [sponsored by PA & ED] – Dan Russell, Thomas Szabo, Preston Wilson
  - [descriptions of favorite homework problems and/or classroom activities based on measured data from physical acoustics experiments or demonstrations.](#)
- **Field Trip?** – Scott Hawley
  - [Belmont \(Atmos Theater and brand new concert hall\).](#) Schermerhorn.

### ASA #184 – Chicago, IL – (May 8-12, 2023)

- **Education Assessment Research** – Andy Piacsek and Dan Russell
  - [Assessment of pedagogy, concept inventories, measuring outcomes . . . Where to start and stop assessment. How to assess what we do? Application of Education theory.](#)
- **Artistic vs Technical approaches to Acoustics** – Gordon Ramsey and Andrea Calilhanna
  - [Connection between physics & arts . . . connection between acoustics as an art vs math/physics](#)
- **Using Math in Acoustics** – organizer??
  - [Description needed.](#)

### ASA #185 – Sydney, Australia – (Fall 2023)

This is a JOINT meeting with the Australian Acoustical Society and WESPAC. 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
  - [Description needed](#)
- **Online Resources for Teaching Acoustics (with a music flavor?)** – Andy Morrison and Joe Wolfe?
  - [Description needed](#)
- **Approaches to Acoustics Education in the Asia Pacific Region** – Marion Burgess and ???
  - [Description needed](#)
- **Distance Learning for Acoustics Professionals Across International Boundaries** – Marion Burgess and Dan Russell
  - [Description needed](#)

## Reports from ASA Outreach and Education (Keeta Jones)

### SURIEA – Summer Undergraduate Research & Internship Experience in Acoustics

- 16 undergraduate students from underrepresented minorities (matched to mentors)
- Two-Week Acoustics Summer School (*Kim Riegel, Eric Reuter, Adrian KC Lee*)
- 10-week research / industry internships with mentors/sponsors
- End of summer presentations (great!). 2-3 participants at Seattle / Denver
- Applications for 2022 are open for students (insert website URL) due Jan 14.
- Mentor applications will be open soon!
- CIRDI/SURIEA will be requesting funding for 10 students (funding approved to support on-site short course)

### ASA Outreach Activities

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

- **Friday, Dec. 3, 8am. Session 5aAA – International Year of Sound Potpourri**
- Wikipedia edit-a-thon - <https://meta.wikimedia.org/wiki/Wiki4YearOfSound2020>
  - a. At Seattle (Monday @ 1-3pm -- ) for “newbies” and “experts”
  - b. How to edit Wiki pages – how to use Wikipedia in courses
- Past/Upcoming virtual events - <https://exploresound.org/virtual-events/>
- Acoustics Today IYS issue - <https://acousticstoday.org/issues/2020AT/SpecialIssue/#p=1>
- Physics Today IYS issue - <https://physicstoday.scitation.org/toc/pto/73/12>

**SONIC – Student Outreach for Networking . . . Colleagues**

- <https://asastudents.org/sonic-registration-guides/>

### **Acoustics Today Collections**

- Is anyone interested in suggesting a Collection of Acoustics Today articles on Education topics? Are there enough AT articles on Education topics to warrant a collection?

### **Twitter Posters**

- Template available on EDCOM website (<https://asaedcom.org/get-involved/>) under “Twitter Posters”

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

Which meetings should ASA (Keeta Jones and/or other ASA members) participate in for 2022?

Normally we target conferences that attract undergraduates or educators or under-represented minorities.

- **ISCF 2022** (Atlanta GA, May 8-14)
- **PHYSCON 2022** (Washington DC, August )
- **USA Science & Engineering Fair** (will participate if in-person for 2022?)
- AAPT = Grand Rapids MI (July 9-13)
- SACNAS (Puerto Rico?)
- NSBP (don’t know dates yet)
- APS (Chicago – March?)

### **Judges needed for student projects**

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

- Status on version 2.0 of the Activity Kits . . . ?
  - › Kit version 1.0 cost (\$100) – ASA paid for shipping (unless international).
  - › Kit supply has been exhausted.
  - › Cannot find vendor to build and store kits at the numbers (100) we need – vendors want more units.
  - › Vendors want to use their own suppliers (not the vendors we normally use for items). If we use a vendor . . . might need to use more stock materials, which means less choice of what we want to do with them.
  - › Should we keep the keep current kit as is? If so we would need to build and store kits ourselves (APS does this for optics kits). This means Keeta would have to do most of the work/storage.

- › We currently have a \$20,000 budget item for Activity Kits. But we haven't used funds from this requested line item for 2 years and the Executive Council is looking for ways to reduce the budget. So we might lose ASA funding for kits. (Update: EC rejected the request for \$20,000 at the ASA 181 Seattle meeting of the EC).
- › Andrea Calilhana suggested a possibility of connecting a new version of the kits to her Australia proposal to promote education in acoustics. Maybe an ASA sponsored competition for kit items at the Sydney meeting?
- › **Subcommittee** (Keeta Jones, Andrew Morrison, Dan Russell, Kimberley Reigel, ???) met in-person during the Seattle meeting to discuss options for a version 2.0.
  - › Discussed potential items to include in a new version of the kit
  - › Discussed ideas for sourcing items
  - › Discussed option of using an Amazon “store” for items in the kit, supplemented with instructions on how to assemble and use items.

## “New” Business . . . things to think about for the Future of ED COM

### ED COM meetings:

**[1] Should we continue to hold the ED COMM administrative meeting online (Zoom) the week before the ASA meeting, even after ASA meetings return to in-person formats?** This was a discussion among several members who had logged on to the meeting early, before the meeting was officially called to order. There are many advantages to holding the ED COM meeting online via Zoom ahead of the ASA meeting itself:

- It prevents conflicts with several other meetings that are typically scheduled at the same time during in-person meetings, thus allowing more people to attend. Women in Acoustics and the Engineering Acoustics TC are always scheduled at the same time as ED COM. Our attendance for the last 3 virtual Zoom ED COM meetings (34, 44,37) has been slightly higher than the attendance for the last four in-person meetings (29,35,25,35).
- Meeting over Zoom allows for breakout discussions and increased interaction in a manner that is not quite as easy in an in-person environment.

**[2] Should we schedule some informal, additional meetings (online via Zoom) to facilitate ongoing discussions?** Much of time during our regularly scheduled meetings is filled with necessary administrative tasks and information, leaving little time for discussions about ways ED COM could be advancing the cause and awareness of education in acoustics both within and outside of ASA. We generated a long list of potential topics for future special sessions, but those ideas could benefit from substantial further discussion to flesh them out and put them into practice. Or, some of those ideas could even be presented during a “min-conference” or afternoon workshop.

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**Call to Adjourn:** Gordon Ramsey, seconded by Trevor Jerome.

*Meeting was adjourned at 9:24pm*

### Screen Capture of Zoom Meeting

