

MINUTES – ED Com Meeting – ASA #183 Nashville

(Thursday, Dec. 1, 2022 – 5:00-6:30pm ET)

This was a virtual online meeting via Zoom during the ASA Admin week prior to the ASA 183 Nashville meeting. Unfortunately, there is no recording of the meeting (because the chair forgot to hit the “record” button!)

Attendance: (38 people attended the Zoom meeting. 6 others registered but did not attend.)

Shima Abadi, Hazzan Azad, Andrew Barnard, Freddie Bell-Berti, Dave Berol, David Brown, Andrea Calilhanna, John Cormack, Jim DeGrandis, Eric Dieckman, Jack Dostal, David Dowling, Philip Faraci, Steven Garrett, Parvinkumar Ghodake, Scott Hawley, Kurt Hoffman, Keeta Jones, Matt Kamrath, Ron Kumon, Martin Lawless, Susannah Levi, Jill Linz, Subha Maruvada, Brian Monson, Andrew Morrison, ~~Miad Al Mursaline, Thomas Moore~~, Peggy Nelson, Noah Parker, Andy Piacsek, Gordon Ramsey, Kim Riegel, Olivier Robin, Richard Ruhala, Dan Russell, Juli Simon, Scott Sommerfeldt, ~~Victor Sparrow~~, Adam Svec, Lucky Tsaih, Michelle Vigeant-Haas, Preston Wilson, Rand Worland, Matthew Zeh

NOTE: EDCOM attendance was similar to, or greater than, six of 14 the Technical Committees during ASA 183 Nashville.

Approval of Minutes from May 17, 2022 ASA 182, Denver meeting

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

Seconded – *Andy Piacsek*

Reflection on the passing of Thomas D. Rossing

Thomas D. Rossing passed away on June 14, 2022, at the age of 93. Tom was a longstanding active member of the Education in Acoustics committee and the Musical Acoustics Technical Committee. Tom received the ASA Silver Medal in Musical Acoustics in 1992 and the ASA Gold Medal in Acoustics in 2009. A staunch supporter of physics and acoustics education, Tom provided the endowment for the Rossing Prize in Acoustics Education, which this committee awards each year to an outstanding and impactful acoustics educator. Tom wrote a brief personal autobiography: <https://www.dropbox.com/s/rw3zpaqhojchdx/ThomasRossingAutobiography-2022.pdf>. An obituary (written by Andrew Morrison) was published in the [Winter 2022 issue of Acoustics Today](#).

Summary of ED special sessions for ASA #183 Nashville

- **Wednesday, Dec. 7**
 - **3aPAb** – 8:20-am11:25am – **My Favorite Homework Problems (based on measurements, demonstrations, or experimental data)**
 - **Very well attended (80+ with standing room only) in a room that was too small (only 50 chairs).**
 - **3pED**– 1:00pm-2:00pm – **Rossing Prize in Acoustics Education Prize Lecture**
 - **Postponed until ASA 184 Chicago (Dr. Wage contracted COVID right before the meeting).**
- **Thursday, Dec, 8**
 - **3pED**– 1:00pm-4:25pm – **Connecting Industry and Education (Part 2) [Hybrid Session]**
 - **Attendance: 30 in person and 6 online. Good conversations afterward during “panel” discussion.**

Update on JASA Special Issue on Education in Acoustics

The Special Issue of JASA on Education is available online:

<https://asa.scitation.org/toc/jas/collection/10.1121/jas.2022.EIA2022.issue-1>

- 41 papers by authors around the world
- papers about acoustics education and classroom measurements and activities, papers on pedagogy, project-based learning, outreach, descriptions of educational and practical software, descriptions of acoustics programs and a short course, the use of circuit models
- papers that contain problems and exercises, several papers about teaching acoustics during the COVID-19 pandemic of the past two years, and four papers on teaching musical acoustics.
- a seven-page comic strip created to teach younger students about the history and use of the decibel.
- paper about debunking incorrect online information about the sound power of rocket engines (with suggestions for homework problems) with an Altmetric Attention Score of 406 – top 5% of all research outputs ever tracked by Altmetric.
- Special Guest Editors: Dan Russell and Preston Wilson

Update on Education in Acoustics Awards

2022 Rossing Prize in Acoustics Education

The recipient of the 2022 Rossing Prize in Acoustics Education is **Dr. Kathleen Wage**, Associate Professor of Electrical and Computer Engineering, George Mason Univ.

Rossing Prize Lecture: ~~Wednesday, Dec. 7 at 1:00pm (Grand Hall C)~~: **postponed until ASA 184 Chicago**

DJ Prof: Reflections on Teaching

In a short-lived career as a cartoonist for Acoustics Today [Summer 2016], I sketched DJ Prof, an acoustics professor who mixes multiple modes of instruction to engage and excite students. DJ Prof illustrates the concept of active learning, which Freeman et al. called the “preferred empirically validated teaching practice” [PNAS, 2014]. Numerous studies show that active learning courses improve student learning, increase retention rates, and reduce performance gaps in STEM for economically disadvantaged students and females in male-dominated classes. This lecture reflects on my evolution as DJ Prof using examples from acoustic signal processing courses. I will provide a brief overview of the literature on active learning, share a few favorites from my pedagogical playlist, and highlight open questions for the acoustics education community. The session will include interactive exercises. Please bring an open mind, a sense of humor, and a willingness to meet the people sitting near you.

2022 Robert Young Awards for Undergraduate Research

The 2022 application form indicated four (4) awards of up to \$500 each would be awarded. Main ASA office informed us that there was \$3250 available to be awarded for 2022. There were seven (7) applications for the 2022 Robert Young Award. One application was from a student at a university in Canada, while the Robert Young MOU restricts funds to be awarded only to students at US institutions. So, we were not able to consider an award for this student – which is unfortunate since this student participated in SURIEA and it would have been good to encourage a student from an under-represented minority group to continue pursuing research in acoustics.

The remaining six applications were reviewed by the ED COM chair (Dan Russell) and a second EDCOM member (Ben Tucker). The final recommended Robert Young Award amounts for 2022 are as listed below. The total award amount for 2022 is \$2,770 (out of \$3,250 available).

- **Ethan Fort** (SUNY at Buffalo) – “Experimental Realization of a Thermoacoustic Gas Analyzer” – **\$500**
- **Dan Ngyuen** (Simmons Univ) – “Experimental detection of skull-based ultrasonic lamb waves as an intracranial pressure monitoring method” – **\$390**
- **Ana Rodriguez** (Univ. of Florida) – “Exploring the scaffolding of speech motor control and phonological sensitivity in dyslexic children” – **\$480**
- **Jaskirat Sidhu** (Univ. Wisconsin-Madison) – “Accent rating of noise-vocoded and tone-vocoded foreign-accented speech” – **\$500**
- **Jennifer Yang** (New York Univ.) – “Investigating perception-production relations in novice learnings of Madarin lexical tone,” – **\$500**
- **Bohan Zhang** (Johns Hopkins Univ) – “Acoustic trauma repository for mice models,” – **\$400**

Upcoming and Future ASA Meetings

ED special sessions for ASA #184 Chicago (May 8-12, 2023)

- **Assessment of Acoustics Education** – Andy Piacsek and Dan Russell
 - Tools and approaches for the assessment of teaching pedagogy, education research, and evaluation of the effectiveness of teaching methods. Suitable topics include assessment strategies, methods for measuring outcomes, designing and using rubrics, concept inventories, when to start and stop assessment, and how to report measured outcomes.
- **Resources for Teaching Waves in a Physics Class** – Cameron Vongsawad, Andrew Morrison, Andrew Piacsek, Dan Russell
 - Educational resources (websites, online repositories, apps for mobile devices or computers, demonstration apparatus, hands-on activities, etc.) suitable for teaching waves in a physics class, with a specific emphasis on high school physics classes, including AP (advanced placement).
- **When Getting it Right Goes Wrong** – Kim Riegel, John Buck, Dan Russell
 - Even when we do everything the research says about active learning, it is not always successful. Presentations will outline these failures and how we adjust to make them a success.
 - Open mic – panel / open discussion
- **My Favorite Homework Problems (Signal Processing)** – Kathleen Wage, John Buck
 - Homework problems for signal processing classes, including those based on real data, conceptually oriented problems, and good brain teasers.
- **Acoustics Demonstration Extravaganza (with PA and SA)** – Dan Russell
 - 2-hour demonstration show (similar in style and format to demonstration shows in 1982 and 2002).

ED special sessions for ASA #185 Sydney, Australia (December 4-8, 2023)

ASA 185 Sydney is a JOINT meeting with the Australian Acoustical Society and WESPAC.

⇒ Website for this meeting is active: <https://acoustics23sydney.org/>

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

ED Special Sessions --- Plans for this meeting need to be solidified in Nashville (Fall 2022).

- **Connections between Music and Math** – Andrea Calilhanna and (need additional organizer)
 - Exploring the connections between music, math, and psychoacoustics. Especially targeting younger school students (younger) – focusing on connections between music, math, psychoacoustics
- **Online Resources for Teaching Acoustics** – ~~Andy Morrison~~ (Dan Russell) Jack Dostal and Joe Wolfe?
 - Development of on-line based resources for both teachers and learners to explore acoustics concepts
- **Initiatives in Acoustics Education in the Asia Pacific Region** – Marion Burgess and ???
 - Acoustics education initiatives that take into consideration the regional diversity
 - ASA regional chapter East/Southeast Asia . . . outreach activities?
- **Distance Learning for Acoustics Professionals Across International Boundaries** – Marion Burgess and Dan Russell
 - Challenges in developing distance learning programs that are equally applicable and relevant for those learners in different countries with different approaches to building methods, environmental and workplace noise limits, etc.
- **Teaching Acoustics across Trans-Disciplinary areas** – Lucky Tsaish,
 - Designing content for short courses, micro-credentials, etc. to assist non-acoustics professionals engage with acoustic professionals/consultants and understand reports, etc.
 - Dave Woolworth (check what they are at Nashville). . . Tony Hoover . . . [ASA Academy](#) Michael Vorlander

ED special sessions for ASA #186 Ottawa, Canada (May 13-17, 2024)

- **Artistic vs Technical approaches to Acoustics** – Gordon Ramsey, Olivier Robin, and Andrea Calilhanna
 - Connection between physics & arts . . . connection between acoustics as an art vs math/physics
 - Invited session with panel discussion.
- **Using Math in Acoustics** – Jill Linz, Kurt Hoffman, Dan Russell . . .
 - Undergraduate focus? . . . teaching the math side of acoustics without the scary math.
- **Demonstration Extravaganza . . .** – Olivier Robin . . .

Fall 2024 . . . Virtual ONLY

- **Undergraduate Poster Session . . . SURIEA (maybe Fall 2024)** – Keeta Jones, Dan Russell . . .
 - SURIEA – students, grads, instructors, mentors . . .

Updates from ED subcommittees

SMMfL (Students Meet Members for Lunch) – Martin Lawless, Chair

For the meeting in Nashville, we had 87 student sign-ups and 60 member volunteers with representation from each of the 14 technical committees. Due to the lower number of member volunteers, the automated program was only able to match 79 of the students. We are currently working on matching the remaining 8 students (and hopefully are able to by the time of this meeting, but if not, I may request for some volunteers).

In previous meetings, there had been an issue with the AIP pre-registration system in that not everyone who signed up for SMMfL (students and member volunteers) made it on to the list. Thank you to Zane Rusk and Elaine Moran for working on this issue. We are also now sending out the questionnaire e-mails through Elaine instead of our e-mail address to avoid being placed in spam folders. We think that the issue is resolved on the AIP end as well, but if you think that you checked the box on the pre-registration form, but were not sent a questionnaire, please let me know by e-mailing smmfl.asa@gmail.com.

ED Outreach Subcommittee – Dan Russell, Gordon Ramsey, Kim Riegel, Kurt Hoffman, Brian Monson, Jill Linz, Andrea Calilhanna.

- Lively discussion during our last EDCOM meeting resulted in forming of a subcommittee to explore options for a more effective demonstration outreach activities for future ASA meetings – including a demonstration show with hands-on activities for younger students as well as workshops for teachers.

Sub-committee has not met since Nashville meeting. Perhaps we can re-engage over the summer and fall of 2023 to prepare something for Ottawa in Spring 2024? Or more long-range planning for Spring 2025 in New Orleans.

Teaching Activity Kit 2.0 Subcommittee – Keeta Jones, Andrew Morrison, Kim Riegel, Dan Russell, Andrea Calilhanna, Ben Tucker, David Brown.

GOAL 1: Create a **mini** demo kit with 2-3 lessons plans (~1 for elementary, middle and high school) with the express plan to change it every year. For example, talking tape for 2023, palm pipes for 2024, a sound level meter for 2025 etc.

GOAL 2: Create and maintain a **standard** demo kit made up of tuning forks which can be used for different specific, technical area lesson plans. New lessons can be added from year to year. The standard kit will be available every year, but the small kit would only be available for a single year/until it runs out.

The intent for the Demo Kit program is to become financially self-supporting. As such, we will review the following options for feasibility and access:

1. Educators will buy the kits - price to be determined
2. Seek external funding through grants and award programs
3. A combination of 1 & 2

Proposed Timeline

Dec 2022 - Design 2023 mini kit & standard kit.

Jan-Apr 2023 - Determine cost to create, store, ship, etc. & research external funding options and/or storefront options

May 2023 - Finalize Standard and 2023 Mini kit components & costs

July 2023 - Launch standard & mini kits at AAPT meeting

Dec 2023 - Choose topic for 2024 mini kit

Reports from ASA Outreach and Education Coordinator (Keeta Jones)

Report from SURIEA 2022 (in-person)

- Ten student participants from various ethnic backgrounds that are underrepresented in acoustics, including African, African American, and Latina/o.
- One-week (in-person) first week in June Acoustics Summer School held in Chicago (*Kim Riegel, Eric Reuter, Adrian KC Lee*)
- 1 virtual tour to the Arup SoundLab (<https://www.arup.com/perspectives/soundlab>)
- 10-week research / industry internships with mentors/sponsors
- Funding from ASA Foundation, AIP Venture Fund, NCAC and several mentors
- Five students presenting at Nashville.

SURIEA 2023

- Reviewing applications for Mentors and participants for SUREIA 2023
- Exploring funding sources for 2023 and beyond. (add link to SURIEA sponsorship)
- **Anyone interested in serving on the SURIEA subcommittee???**

Plans for BOOTHS and STEM Fairs for 2023

- Budget Requests (need to be submitted in Nashville) (items not crossed out were voted to be submitted for 2023).
- **\$5000 – Booths Initiative**
 - **SACNAS – Oct 2023 (~\$2750) => students (more medical) undergrad + grad**
 - ~~AAPT – July 2023 (~\$2050) => Teachers (especially high school and college)~~
 - ~~AAAS – March 2003 (~\$2200)~~
 - **NSBP – Nov 2023 (~2000) => students (physics)**
 - ~~SWE – Oct 2023 (~6000, other more affordable sponsorship opportunities available)~~
- **\$2000 – Booth Kits – purchase and distribution of ASA swag items at outreach events.**
- **\$9700 – ASA sponsorship of ISEF (International Science & Engineering Fair)**
 - **Winners from the 2022 ISEF**
 - First Award to Amara Jean Orth: ANIM040 - Secret Sounds of Bees: Analysis of Honey Bee Vibroacoustics Using Hidden Markov Models
 - Second Award to Chinmayi Ramasubramanian: ANIM003 - Averting Human-Elephant Conflict Using Machine Learning on Elephant Vocalizations
 - Third Award to Gwyneth Liu: EGSD012 - Novel Model of an Adaptive Wave Energy Converter With Spectral Analysis-Based Sea State Classification
 - Honorable Mention to Anu Iyer: ROBO037 - Systematic Parkinson Audio Recognition Construct (SPARC): A Novel Approach Implementing a Machine Learning Method To Diagnose Parkinson's Disease Using Voice Features
 - **ASA has signed on to participate as a Special Award Organization for ISEF 2023.**
- ~~\$3000 – ASA sponsorship of USASEF (USA Science & Engineering Festival)~~
 - ~~ASA last participated in 2020 (virtual), have not participated since.~~
 - ~~Consider other STEM Outreach Events like the ISEF Education Outreach Day~~
 - **Find another avenue to participate in for 2023/2024**
- \$3000 – ASA sponsorship for PhysCon
 - Did not participate in 2022 Physics Congress since it occurs every 3-4 years . . . next occurrence is 2025 in Denver. We will request funds in 2024 (support a specific workshop focused on sound/acoustics if possible)

Andrew Morrison => mentioned that there is no need to be in panic mode regarding budgets and spending requests.

Discussion #1: EDCOM Zoom before ←vs→ in-person during ASA conference

For the last 3 years (6 meetings) our EDCOM meetings have been held over Zoom, during the week BEFORE the actual ASA meeting, along with all (most?) of the other “administrative” committees. There are advantages and disadvantages of holding our meetings over Zoom before ASA week. Should we keep doing Zoom or should we return to in-person during the ASA meeting? (for Chicago? Australia?)

OPEN DISCUSSION:

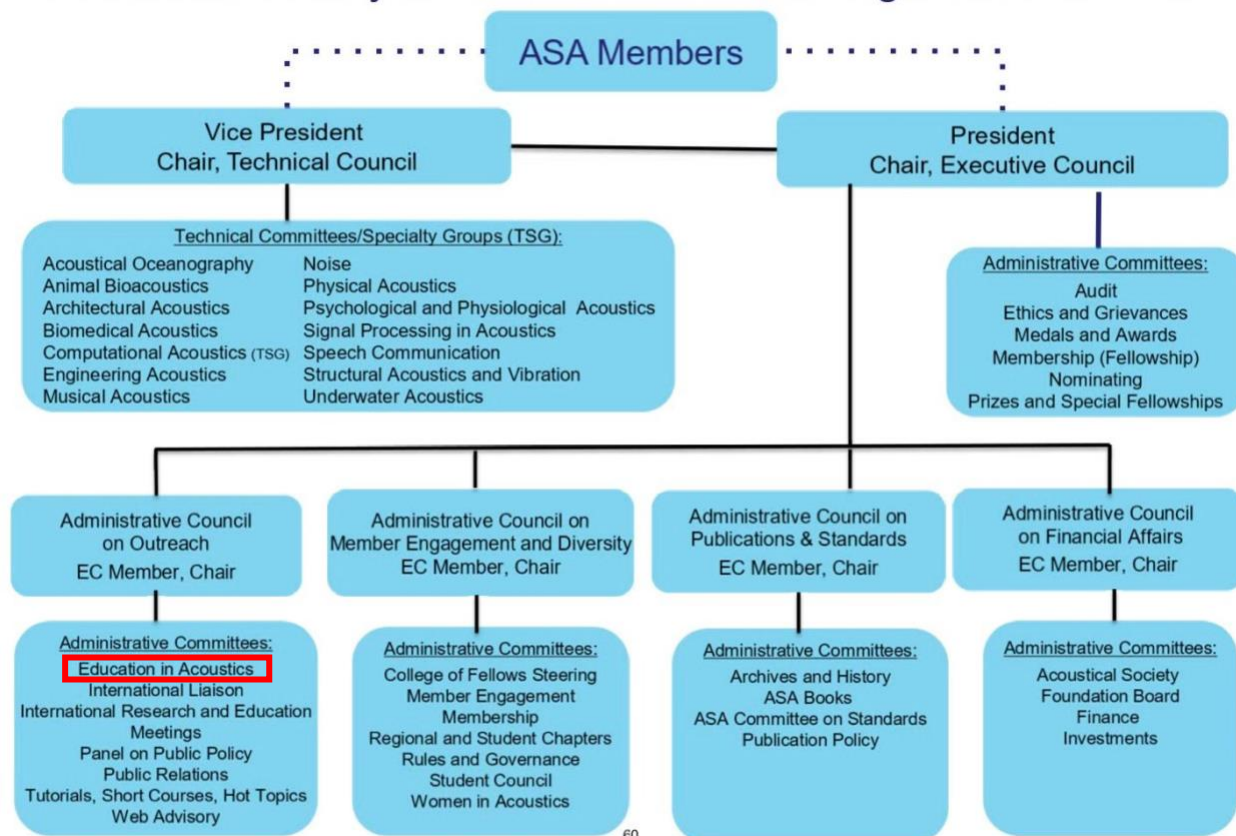
There was good discussion over Zoom and in the chat. Overall consensus (though not unanimous) is to keep meeting virtually (over Zoom) prior to the ASA meeting week. Online meetings allow non-US members to attend and participate in discussion. No matter when/where we meet, there will always be people who are not able to attend. But, the overall response is strongly in favor of continuing to meet online over Zoom for now, as it seems to be working quite well.

Discussion #2: Should EDCOM request elevation to a Technical Committee?

The Education in Acoustics Committee is an Administrative Committee – not a Technical Committee . . . even though we do many things that Technical Committees do (organize special sessions, award prizes to students and faculty, associate editors for POMA and JASA, etc.). Our Administrative Committee status means we report to the Administrative Council on Outreach (funds requests, etc.).

Here is the current ASA org chart showing that ED is an administration committee, under the Administration Council on Outreach.

Acoustical Society of America Committee Organizational Chart



OPEN DISCUSSION: what would be pros / cons of ED being elevated to a Technical Committee?

There was lively discussion about this question. Some of the key points raised are summarized below (though not all comments were captured).

Freddie Bell-Bertie – the issues is more than just who we report to . . . we need to change in the way reporting is managed . . . not being funneled through . . . not being able to do what we need to need. We need to find a way to advertise our meetings . . . maybe another way that is not as hard or time consuming

Gordon Ramsey – we ARE doing education research . . . even though we don't do the same kind of research as typical TC members might. Similar issues in AAPT . . . physics education wanted recognition by AAPT/APS – Education became a recognized physics education research category.

Keeta Jones – pointing out things in the Chat . . . certain % have to identify TC as their primary “home” within ASA. Need to check the rules. Is this even a possibility?

Matt Kamrath – can we do “both” . . . have a TC focused on Education and a smaller committee that focuses on Outreach (working more closely with Keeta).

Kim Riegel – enough work for two separate entities . . . having a TC focused on Education would help showcase the importance of Education for ASA . . . lends weight to how important education. Need 2% to put ED as their first TC choice . . . but don't need to maintain 2%?

Andrea Calilhanna – ways for ED to champion the fact that we do research . . . attitudes for education research . . . gathering evidence that we are a public face of ASA

Subha Maravuda – supports this idea . . . will talk to Peggy Nelson and Elaine Moran to find out about the process. Have Dan take some time at the Monday Tech Council to discuss this option . . . we already have a large group (38-45 attending our meetings).

Keeta Jones – what can ED do in the meantime? . . . have an admin meeting the week before (during ASA admin week to handle admin \$\$ stuff) and then have an in-person meeting during ASA week (planning sessions, discussing education stuff, working session). DO THIS FOR CHIGAGO . . . (member engagement, regional chapters do this).

Matt Kamrath – checked out EDCOM website . . . Zoom link is there . . . it would be nice for ALL admin committees to have some information somewhere at ASA website . . . committee name, what the committee does, when they meet . . .

Michelle Vigeant – on International Research and Education committee – mostly gives out \$\$ to foreign students who need financial help.

Andrea Calilhanna – getting back to the 2% . . . how to we get word out about education? . . . teaching is not as glamorous as research

Post-Nashville ASA 183 Update:

EDCOM Chair (Dan Russell) made a short presentation at the Technical Council meeting on Monday afternoon (Dec. 5) during the Nashville meeting. PowerPoint slides are appended to these minutes.

During the Technical Council meeting there was positive response (no opposition) from TC chairs, who agreed to mention the issue during their TC meetings. However, there were many questions raised about the process and the rules for establishing a new TC . . . This will be discussed during the EDCOM meeting for ASA 184 Chicago.

7:00pm – Call to Adjourn:

Moved by: Freddie Berti-Bell

Seconded (*enthusiastically*) by: Juli Simon

Screenshot with the faces of the members who had their cameras turned on!

