

AGENDA – ED Com Meeting – ASA #180 “Acoustics in Focus”

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

This virtual online meeting via Zoom was called to order at 4:34pm by ED Comm chair, Dan Russell.

Attendance: (36 members registered for the Zoom meeting, with at least 32 in attendance)

Tyrone Porter, David Berol, Kurt Hoffman, Jim DeGrandis, David Dowling, Gordon Ramsey, Cameron Vongsawad, *John Cormack*, David Brown, Adam Svec, Scott Hawley, Brian Monson, Jack Dostal, Evelyn Hoglund, Andrew Morrison, Cedrik Bacon, Murray Korman, Keeta Jones, Kim Riegel, Peggy Nelson, Andy Piacsek, John Buck, Jill Linz, *Thomas Rossing*, Marion Burgess, Martin Lawless, Thomas Moore, Fredericka Bell-Berti, Rand Rowland, *Victor Sparrow*, *Steve Thompson*, Adrian KC Lee, Scott Sommerfeldt, Mahdi Rarahikia, Dan Russell.

Approval of Minutes from December 2020 ASA 179, Acoustics Virtually Everywhere meeting

Edit: the word “Minutes” was incorrectly spelled at the top of the first page . . .

Motion to approve minutes as posted – *Fredericka Bell-Berti* Seconded – *Gordon Ramsey*

Reflection on the passing of David Blackstock

David T. Blackstock passed away at his home on April 30, 2021. David was a longstanding active member of the Education in Acoustics committee, serving as its third chair from 1968-1972. His textbook, *Fundamentals of Physical Acoustics* is used by many of us who teach graduate level courses in acoustics. David was awarded the Rossing Prize for Acoustics Education in 2007. He was the driving force behind and a fierce champion of SMMfL (students meet members for lunch). In 2019 the ASA student council renamed their mentoring award after him: the Student Council David T. Blackstock Mentor Award (David was the first recipient of the mentor award in 2004), in order to honor his strong support of students and young faculty within ASA. David will be greatly missed.

A touching obituary may be found at: <https://www.dignitymemorial.com/obituaries/austin-tx/david-blackstock-10177774>

NOTE: there will be a special session at ASA 181 in Seattle, sponsored by Physical Acoustics (PA) in memory of David Blackstock. It would be appropriate to have a paper in that session which specifically addresses David's contributions and involvement with the Education in Acoustics committee.

Report from Subcommittees

SMMfL (Students Meet Members for Lunch)

Martin Lawless (SMMfL chair) provided this update: Looks like **very low** numbers for Acoustics-in-Focus, compared to previous meetings. There were some technical problems with the automatic online questionnaire during the registration process. And the low number of responses created some problem with the automated matching algorithm. However, we were able to match 17 students (at least one from every TC except Computational Acoustics) and 14 members. The SMMfL committee continues to work on ideas for innovating the SMMfL program (website, database, etc.).

Special ED Sessions for Acoustics in Focus (June 8-10, 2021)

- **Tuesday, June 8**
 - **1pED – 12:55pm-3:00pm EDT – Reflections on Teaching Acoustics During a Pandemic**
 - 1pED1: Musical acoustics video demonstrations for online classes – *William Hartmann (Michigan State University)*
 - 1pED2: Supporting Hyflex Acoustics Laboratory Sessions – *Scott Hawley (Belmont University)*
 - 1pED3: Teaching Underwater acoustics and sonar during the COVID pandemic – *Murray Korman and Leah Burge (U.S. Navy Academy)*
 - 1pED4: Lessons learned through teaching through a pandemic and looking forward to a post-COVID-19 classroom – *Andrew Morrison (Joliet Junior College)*
 - 1pED5: Aspects of teaching online during COVID-19 that I want to retain when returning to a “normal” classroom – *Daniel Russell (Pennsylvania State University)*
 - 1pED6: Sharing physics through sound: Undergraduate outreach – *Holly Fortner and Brad Conrad (Society of Physics Students)*
- **Wednesday, June 9**
 - **2pCA – 12:55pm-4:10pm EDT – Tutorials on Computation Techniques and Best Practices**

- **Thursday, June 10**

- **3aSC** – 9:30am-12:20pm EDT – **Teaching Speech and Hearing Science to Undergraduates I**
- **3pSCa** – 12:55pm-2:00pm EDT – **Teaching Speech and Hearing Science to Undergraduates II**
- **3pSCb** – 2:15pm-3:15pm EDT – **Teaching Speech and Hearing Science to Undergraduates III**

Gather.Town

Thank you to Andy Piacsek for setting up an amazing online gathering space:

<https://gather.town/app/lhwwaMoJFhRdAcyH/AcousticsInFocus2021> (password: sound)

This Gather.Town space has many spots for large and small group games, places to gather in groups for virtual conversation, and several private spaces for one-on-one discussions. There is a special room for Education in Acoustics (located in the upper right corner of the map). Members of ED Com are encouraged to gather in the ED room in the morning (before session begin at 9:30am EDT), or in the late afternoon (between the last session and TC meetings) and in the evenings (after TC meetings end around 8:00pm). Nothing formal – just a space for us to hang out and visit.

Update on Education in Acoustics Awards

[2021 Rossing Prize for Education in Acoustics](#)

The 2021 Rossing Prize Selection Committee is:

Dan Russell (ED Com chair 2018-2024)

Andy Morrison (selected by previous ED Com chair – 2018-2021)

John Buck (selected by Chair of Prizes & Special Fellowships Chair – 2018-2021)

David Dowling (selected by Chair of Prizes & Special Fellowships Chair – 2019-2022)

Barbara Shin-Cunningham (selected by ASA president – 2021-2024)

There were no (zero) new nominations for the 2021 Rossing Prize. There was one previous nomination that automatically carried over from 2020. The committee decided not to award the Rossing Prize for 2021. We also agreed to the following plans to increase the awareness of the Rossing Prize both within ASA and other acoustics-related societies and organizations. Specifically the ED COM chair will endeavor to:

- Network with our counterpart acoustical societies in North America, Europe, South America, and Asia and Australia, as well as some other academic professional societies (AAPT, ASEE) in order to try to solicit a larger number of qualified nominations next year.
- Send an announcement about the award to all members of ED COM in the late Summer and late Fall, and a final reminder in January to remind ASA educators to nominate their peers. We have heard from a few people that the current prizes “call for nominations” from ASA buries the Rossing Prize at the end of a long email (or at the bottom of the Prizes website) so that it is not prominently seen.
- Work with Dan Farrell to expand the webpage (<https://asaedcom.org/awards/>) on the ED COM website to more prominently showcase the Rossing Prize, with a direct link to the nomination form.
- Work with ASA social media to broadcast the “call for nominations” through social media channels in the December-January.

Update on JASA Special Issue on Education in Acoustics

Call for Papers: https://asa.scitation.org/jas/info/specialissues/cfp_020421

Preston Wilson and Dan Russell are co-guest editors. Deadline for Manuscript submissions: **October 15, 2021.**

Four (4) manuscripts have been submitted so far (by end of May 2021) and we have received several emails from potential authors expressing intent to submit manuscripts later in the summer/fall.

We need members of the Education in Acoustics Committee to:

- **Write and submit papers for this special session (authors can have multiple papers)**
- **Serve as reviewer for submitted papers**

Anyone who is considering submitting manuscripts is encouraged to email Preston and Dan to let them know, so they can assemble a database of potential authors and paper topics.

ED Special Sessions for Future Meetings

We will plan on holding our “normal” outreach events at each in-person meeting, unless local conditions or interest limit involvement.

- **Hands-On Demos**
- Listen Up and Get Involved

Below are the sessions that have “officially” been agreed upon during previous committee meetings.

ASA #181 – Seattle, WA – (November 29 – December 3, 2021)

- **Highlights in Acoustics Education (preview of the JASA Special Issue)** – Dan Russell and Preston Wilson
 - **(Invited ONLY)** speakers selected from authors who have submitted manuscripts for the JASA special issue on Education in Acoustics.
- **Returning to Teaching Acoustics In-Person in the Post-COVID Era** – Dan Russell, Andrew Morrison,
 - This session focuses on approaches to in-person instruction and teaching of acoustics (for both lecture and laboratory classes) with a specific emphasis on adjustments you have made, or are making, in your teaching style, course content, use of technology, and student engagement for an in-person acoustics classes after a year of teaching online during the COVID-19 pandemic.
- **Tour (or social event) at the Pacific Science Center?** – This venue is currently closed, and we don’t know the status yet for December. Keeta Jones will follow up to see if it will open in time for Seattle meeting.

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

- **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.

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

- **Psychoacoustics and Acoustics Education** – Martin Lawless and Brian Monson
 - How we perceive sound . . . education about sound perception and human hearing . . . human auditory system.

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

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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
- **Online Resources for Teaching Acoustics (with a music flavor?)** – Andy Morrison and Joe Wolfe?
- **Approaches to Acoustics Education in the Asia Pacific Region** – Marion Burgess and ???
- **Distance Learning for Acoustics Professionals Across International Boundaries** – Marion Burgess and Dan Russell

BREAK OUT ROOM DISCUSSIONS:

Zoom participants were separated into 6 breakout rooms to discuss potential topics for future ED special sessions. Participants were asked to think about three types of special session topics:

- What session topics would **YOU** be most interested in **attending?** (listen to presentations)
- What session topics would **you** most likely want to **contribute** to? (present a paper)
- What session topics would be most helpful to **your students?**

The following ideas for session topics were shared after we regrouped into the larger Zoom meeting. These potential special session ideas will be discussed and explored further in the coming months leading up to the ASA 181 Seattle meeting.

- **What would you keep from the COVID era?** – this would be a follow up session to 1pED from Acoustics-in-Focus. . . *we will get this added to the Seattle meeting before the Call for Papers goes out in June (see the description in the above listing for the Seattle ASA 181 meeting).*
- Helping student understand and prepare for the differences between careers in industry / govt / academic areas . . . helping student find and succeed in jobs after school that are not in academia . . . industry/consulting job training in acoustics
- Extending acoustics to students from less privileged backgrounds (what are the barriers and how to overcome them?) . . . solutions and discussions that could be brought back to our individual departments to help us overcome those barriers in our respective disciplines, departments, and programs
- Undergraduate research experiences – but not just having students share about their research . . . a panel discussion but what their experiences (what worked, what went wrong, student perspectives on how to do REU type things better) . . . this would be helpful for students but also very helpful for faculty and grad students. [*perhaps this could be a follow-up to SURIEA?*]
- Lightning Round sessions – (as were implemented for AiF – submitting abstracts after call for papers deadline, but before the meeting) – more formal than our ED Take 5’s sessions. . . each lightning round session could be specifically focused on a specific aspect of Education, perhaps focused on aspects of education relevant to specific TCs?
- Mentoring . . . (follow-up to recent San Diego session on mentoring grad students) . . . with a specific focus on mentoring junior faculty (not just grad students)
- Education research / pedagogy / concept inventories / measuring outcomes . . .
 - Assessment: where to start/stop . . . how to assess what we do? . . . education theory
 - Laboratory experiments and classroom demonstrations . . . but with educational assessment also, not just “show and tell”
- Science communication – (ED sponsored) . . . (follow up to ASA 173, Boston) but more focusing on more advanced scientific communication skills.
- Newer faculty . . . experiences (lessons learned) from the 1st year (or junior) faculty members
 - Chicago ASA 184?
- Using examples and applications from acoustics to teach other topics (math, physics, engineering, life science, etc) and vice versa
- How to manage math in acoustics courses . . . using/teaching math in acoustics topics . . . undergraduate versus graduate courses . . .
- Helping instructors bring personal experience into the classroom so topics are retained by students?
- Incorporating modern technology (3D printing, maker spaces, etc.)_
- Lab experiment and demonstrations on a budget – many of the “big” demonstration sessions which occur during ASA meetings showcase fascinating advanced demonstrations but require expensive, dedicated equipment not available to faculty members at smaller schools. Sessions that focus on activities that would provide students with hands-on engagement with acoustics topics (not just simple stuff) but that could be performed with less specialized equipment (including smart phones) more commonly available at smaller liberal arts and community colleges.
- **Sequencing . . . part 1, 2, 3, . . . long range planning** . . . this is more of a long range goal – but looking through the above topics in this list, could there be some tracks (spread across several consecutive ASA meetings) that would provide graduate students with insight for: landing (academic?) jobs, surviving the first 1-2 years, teaching tips, mentoring and being mentored, getting promoted.
 - A planned sequence would help for marketing and increasing attendance
 - POMA session summaries would help attendees “catch-up” on missed previous sessions

Reports from ASA Outreach and Education (Keeta Jones)

SURIEA – Summer Undergraduate Research & Internship Experience in Acoustics

Initiative from subcommittee of CIRDI (committee to improve racial diversity and inclusivity) developed a 12-week summer research/internship experience (with stipend) for undergraduate students from under-represented minorities. Funding was obtained from ASA Foundation Fund, AIP Diversity Action Fund, NCAC, Threshold Acoustics. Because of COVID, this year’s SURIEA experience is entirely virtual. Participants include:

- 16 undergraduate students from underrepresented minorities (*more than 170 applications*)
- 16 mentors (*more than 90 applications*)
- 2 graduate student co-coordinators
- 1 STEM/DEI coach

SURIEA consists of a Two-Week Acoustics Summer School (May 17-28) – 3 instructors (*Kim Riegel, Eric Reuter, Adrian KC Lee*) followed by a 10-week research / industry internships with mentors/sponsors. Students are being encouraged to attend and participate in AiF, and funds are available to help get students to ASA 181 in Seattle. We anticipate an article will appear in *Acoustics Today* describing this inaugural SUREIA experience.

International Year of Sound

- Wikipedia edit-a-thon - <https://meta.wikimedia.org/wiki/Wiki4YearOfSound2020>
- 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>
- Student Competition:
 - \$200 – Mary McAnally – 1st in Secondary School category (song lyrics)
 - \$200 – Caius Elliot – tied for 1st in Primary/Middle School category (drawing)
 - \$200 – Arabelle Elliot – tied for 1st in Primary/Middle School category (drawing)

2021 ISEF Winners

First Award: Wanjia Fu, *Why Do Beginners Produce Noise Instead of Music When They Play Musical Instruments? –Taking Erhu for Example*

\$1,500 and free registration for AIF. School awarded \$200, and mentor awarded \$500.

Second Award: Eugene Choi, Irfan Nafi, and Raffu Khondaker, *SoundScape: Real-Time 3D Sound Localization and Classification with Sensory Substitution for the Deaf and Hard of Hearing*

\$1000 and free registration for AIF. School awarded \$100 and mentor awarded \$250.

Third Award: Govardhan Poondi and John Rho, *A Non-Invasive Ear-EEG Hearing Aid to Address the Cocktail Party Problem via Cloud-Based Deep Learning*

\$600.00 and free registration for AIF. Mentor awarded \$150.

Honorable Mention: Chinmayi Ramasubramanian, *Diagnosing the Stage of COVID-19 using Machine Learning on Breath Sounds*

Free registration for AIF

Royster Poster Winners (hosted by East Asian Regional Chapter of ASA)

Teams received a scholarship of US\$2,500, to be applied towards full-time graduate study in acoustics

- Siqian Li, Yaohan Feng, Yue Lei, Kaiyue Zhuang, (Chongqing University) – *Acoustic design of waterscape and their application in psychological rehabilitation*
- Miqing Wang, (Nanyang Technological University) – *Optimal ANC System Arrangement Based on Complete System Analyses Applying COSMOL Multiphysics and MATLAB*

Other Outreach Activities

Booths Initiatives – many societies are still holding virtual meetings this summer/fall, and engagement in virtual booths last year was not ideal. Keeta will be evaluating opportunities for booths at future meetings to gauge availability and options.

ASA Teacher Activity Kits – subcommittee has been meeting, and progress is ongoing, but no specific news to report yet.

Society Civic Science Initiative -- Scientific society staff and volunteer leaders invited to give presentations to SCSi participants (society staff and volunteer leaders) that respond to the question: How does your organization integrate science and society at your annual meetings? We welcome submissions that will showcase events or programs that you have implemented in the past or plan to execute in the future. <https://www.societycivicscience.org/civic-science-at-annual-meetings>

SPS Science Outreach Catalyst Kits (SOCKs) – the 2020-2021 SOCK deals with Sound. These kits are available (free) to any student chapter of SPS or ASA that requests them for outreach activities.

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.

Dan will check with ASA office / EC to inquire whether we would be allowed to hold our official meeting over Zoom prior to ASA meetings.

[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.

Dan will schedule an informal Zoom gathering for interested ED COM members some time near the end of July or beginning of August (before the Fall semester ramps up). We will see what level of interest there is for having some “in-between” meetings where we can discuss topics of interest related to education in Acoustics.

Meeting was adjourned at 6:05pm.

These minutes were compiled by Dan Russell, ED COM chair.