

# Committee on Education in Acoustics (EdCom)

## [Meeting Minutes]

5:15 pm Wednesday 25 May, 2016

Salon H, Salt Lake Marriott Downtown at City Creek Hotel, Salt Lake City, UT

The chair called the meeting to order at 5:15 pm.

### I. Welcome + Introductions

- A. Live Streaming! The EdCom meeting was streamed online. Andy Piacsek moderated the streaming.
- B. A sign-in sheet was passed around.
- C. First-Time Attendees and New (and Potential) Member were identified. Approximately 10 new members of EdCOM were in attendance.
- D. Review/Approve previous meeting minutes  
Steve Thompson moved – there was no second – all approved.

### II. Old Business

- A. The chair gave a report on the status of the Education and Outreach Coordinator (EOC) search:
  - 1. Executive Council (EC) approved the full-time position and job description at the Jacksonville Meeting!!
  - 2. The job was posted in January 2016 and applications were received for two months – over 60 applicants
  - 3. A selection committee was formed: Susan Fox, Freddie Bell-Berti, David T. Bradley, Traci Neilsen, and Vic Sparrow
  - 4. Phone interviews of the top six candidates are complete
  - 5. In-person interviews of the top two candidates will take place in Melville, NY on 9 June 2016, with a decision by the search committee to follow shortly
  - 6. New Education + Outreach Thinktank
    - a. Telecom with new EOC ~quarterly
    - b. Networking Dinner between new EOC and Thinktank in Honolulu
      - i. **Funding Request: \$500** [UPDATE: funding request denied by Executive Council]
      - ii. Motion for funding request and second was obtained. Motion passed.
  - 7. Some questions and discussion about the EOC from members included:

## [EdCom: Meeting Minutes]

- i. A request for clarification about the EOC position.
- ii. How do we get representation from K-12?
- iii. We need representation from middle school teachers.
- iv. Lots of members have been involved in their state activities.
- v. Contact Greg Swift from NM – has science standards experience – Steve Garrett suggested [swift@lanl.gov](mailto:swift@lanl.gov)
- vi. Suggestion to have Laura Kloepper involved as she has K-12 experience.

### B. The chair reported that there is a new EdCom Website <asaedcom.org>

1. EC approved \$1500 to hire a student to assist with the development of a new EdCom website
2. Student Website Developer/Designer: Ellie Vamos (Vassar College)
3. Website is up and running! **We need things from YOU:**
  - a. Content review and suggestions (e-mail [education@acousticalsociety.org](mailto:education@acousticalsociety.org))
  - b. High resolution photos (e-mail [education@acousticalsociety.org](mailto:education@acousticalsociety.org))
  - c. URLs for professional websites (we will be in contact)

Question from EdCom member: How to get stuff on the website? Answer: send to David.

### C. The chair reported on the status of the Exploring Sound Website <exploresound.org>

1. Website has been ported over with new design and is up and running, but it needs a lot of work (Activity Kit Subcommittee will be working on this)

### D. The chair reported on the status of our involvement with the Intel International Science and Engineering Fair (ISEF). It was noted that this is an example of the many ways that EdCom is active outside of ASA meetings.

1. [see appendix to these minutes for full report]
2. Judges: Inder Makin, Bruce Towe, Julie Liss, and Paul Sakion

### E. The chair reported on the status of our involvement in the USA Science & Engineering Festival.

1. [see appendix to these minutes for full report]

## [EdCom: Meeting Minutes]

2. Exposition Booth Coordinator: Kyoko Nagao (+20 volunteers)

No questions or comments on C., D. and E.

### F. Booths Initiative – David T. Bradley

1. EC approved \$2,500 for one EdCom rep (Bradley) and one student to attend the 2016 Quadrennial Physics Congress Booth (San Francisco, CA 3-5 November 2016)
2. The plan is to have an EdCom rep and the EOC host a booth for at least one conference a year. Ideas for conferences and **VOLUNTEERS** as booth reps should contact EdCom chair (Bradley)
3. “Swag” will be given out at the booth. Will be used to market the Activity Kit as well (see below)
  - a. Pamphlet and other marketing materials to give away
  - b. Other give-away items (e.g. pens, ear plugs, etc.)
  - c. Can this tie into the Task Force 1 strategic branding initiative?

Question from EdCom member: Does AIP have physics teacher conference? A: yes, AAPT meetings. We are looking for other meetings as well.

We will have Task Force 1 work on the give-away items since it ties into the strategic branding that is part of their charter.

Q: Have we contacted ear plug manufacturers for donations? A: not yet, but we will

**Andrew will contact Bill Murphy about possible donations.**

### G. The chair reported on our project to add a new demo to the Hands-On / Listen-Up sessions. The new demo is a Model of the Middle Ear

1. EC approved \$2000 for a University of Texas at Dallas group to develop a version of their educational electro-mechanical model of the middle ear to be used at the SLC and future Listen Up and Get Involved! and Hands-On sessions
  - a. John Hansen (Advisor), Juliana Saba, Son Ta, and Tuan Nguyen

**There was a comment that the explanation for the Middle Ear should be adjusted for middle school students. It is too complicated right now.**

# [EdCom: Meeting Minutes]

Question: should we contact Robert Keolian to get his cochlea model?

Suggestions that the “Chrome music lab” be included as an update to the electronic music demo station. Additionally, a suggestion was made that the documentation should be updated for that demo station.

## III. Subcommittee Updates

### A. Acoustics Education (Rossing) Prize Selection Subcommittee – David T. Bradley

1. Subcommittee Members: David T. Bradley (chair), Lauren Ronsse, Scott Sommerfeldt, Karim Sabra, and Robert Fox
2. Five nominations received (including nominations received within the past 5 years)
3. Recipient: Professor Brad Story of Boston University (to present in Honolulu, HI)

### B. Andrew Morrison made a brief report on the activity of the Teacher Activity Kits Subcommittee

1. [see appendix to these minutes for full report]
2. Changed from an Ad-Hoc Committee of the ASA to a sub-committee of EdCom at the Jacksonville meeting
3. Subcommittee Members: Andrew Morrison (chair), David T. Bradley, Michelle Vigeant, Andy Piacsek, Whitney Coyle, and Daniel Ludwigsen

Bill Murphy has lots of suggests for pamphlets – (Andrew will contact)

Following the meeting Bill Murphy sent the following link to Andrew Morrison:

<https://www.epa.gov/clean-air-act-overview/title-iv-noise-pollution>

Cathy Rogers suggests that we have the kit at meetings and suggests that we have the members play with it so that they can tell their kids teachers about it. (Andrew will contact her)

4. EC approved \$20,000 for kits and \$300 for assessment survey (via Ad-Hoc Committee)
  - a. Assessment underway - extremely positive responses thus far
5. 9 kits sent out in the past six months (449 kits total)
  - a. Subcommittee will focus on marketing the availability of the kit to teachers before the start of the Fall semester
6. Primary goal for next 6 months is to better advertise kit, develop/change kit based on user feedback, and fix the Explore Sound site (work will be done with the new EOC)

# [EdCom: Meeting Minutes]

7. We need more VOLUNTEERS for this subcommittee
8. Funding Request: \$3500 [UPDATE: funding request approved]
  - a. Swag for advertising kit and to be used for Booths Initiative (Morrison to fill out form)  
Motion was made and seconded. Motion carried.
9. Funding Request: \$250 [UPDATE: funding request denied by Executive Council]
  - a. Subcommittee Lunch Meeting at Honolulu (Morrison to fill out form)  
Motion was made and seconded. Motion carried.

## C. Ela Warnecke gave a brief report on SMMfL (Students Meet Members for Lunch) Subcommittee

1. [see appendix to these minutes for full report]
2. Subcommittee Members: David T. Blackstock (chair), Ela Warnecke, Caleb Sieck, and Martin Lawless
3. Statistics
  - a. Total Number of Lunch Matches: 54
  - b. AA(9), AB(2), AO(0), BA(4), EA(0), MU(3), NS(6), PA(5), PP(7), SA(2), SC(7), SP(5), UW(4)  
Question about including Early Career / postdocs? A: that falls under task force 2.

## D. The chair reported (on behalf of Preston Wilson) on the Undergraduate Research Exposition Subcommittee

1. [see appendix to these minutes for full report]
2. Subcommittee Members: Preston Wilson (chair), ADDITIONAL MEMBER(S) NEEDED
3. Statistics
  - a. 5 entries for Jacksonville
  - b. Awards: Joy Westland, Lúcia C. da Silva, Chitanya Gopu, Bernardo H. Murta, and Atousa Nourmahnad (\$400 each)
4. No Expo in Honolulu. Next expo planned for New Orleans.  
There was a bit of confusion on poster sessions at this meeting– we will try to make it more obvious in the future in the Fall call for papers.

## E. Graduate Program Database Subcommittee – David T. Bradley

## [EdCom: Meeting Minutes]

1. Subcommittee Members: Matthew Kamrath (chair), **ADDITIONAL MEMBER(S) NEEDED**
2. Work on this will begin in earnest once the Education and Outreach Coordinator is hired

### F. Resume Help Desk Subcommittee Update – David Dowling

1. Subcommittee Members: David Dowling (chair), **ADDITIONAL MEMBER(S) NEEDED**
  - a. Subcommittee will focus on recruiting resume reviewers
2. EC approved \$600 for Help Desk Volunteer lunches at SLC
3. SLC Help Desk Volunteers: Peter Dahl, Jennifer Miksis-Olds, Bill Siegmann, Keith Wilson, Kevin Haworth, and Karim Sabra
4. **Funding Request: \$600** [UPDATE: funding request approved]
  - a. Lunch for Help Desk volunteers at Honolulu (Dowling to fill out form)

What do we need from volunteers? We need help organizing outside the ASA meeting. Ela Warnecke volunteered?

Funding request was made and seconded and passed.

## IV. New Business

- A. Education Committee of the Association of Loudspeaker Manufacturers & Acoustics International  
[see appendix to these minutes for full report from Steve Garrett]  
(ALMA) – Steve Garret  

ALMA is interested in outreach and education because they are in need of new engineers. May attend and be a member for free for faculty and students.

\$200 stipend for students.
- B. Task Force 1: Awareness of Acoustics – Andy Piacsek
  1. [see appendix to these minutes for full report]
  2. Task Force Members: Michael Stinson (chair) + many others!
  3. Primary Objectives:
    - a. Expand the promotion of ASA activities and resources through emerging media and online content

## [EdCom: Meeting Minutes]

- b. Increase awareness and dissemination of ASA Standards
- c. Improve the image of the ASA through a strategic branding initiative
- d. Advance cyber presence via ASA portal, web, and social media development

### 4. Recent Actions:

- a. Explore Sound Logo Design contest - generated 53 creative designs. A panel of 10 judges selected the top five finalists. Surveyed ASA members to vote on top choice.
- b. Investigate possibility of coordinated outreach activities with National Park Services (400 million visitors/year) to promote acoustics (on hold)
- c. Investigate possible role for ASA in administering MOOCs (massive open online courses) for acoustics education (in progress)
- d. Have online interactive content
- e. Hire Education and Outreach Coordinator

### C. Acoustics Recruitment Video – Andy Piacsek

1. ASA Public Relations committee and AIP Media Services produced a short video aimed at getting young (college/high-school age) people interested in acoustics as a career. We will view the video and provide feedback.

Video didn't work. David will email the link and password.

### D. Scientific Presentation Workshop – David T. Bradley

1. Any interest in doing this at Boston?
2. **VOLUNTEERS** to help develop and implement such a workshop?

Should it include knowing your audience and reaching audiences outside scientific communities?

Would it include poster presentations?

Suggestion – funding request to bring Michael Alley to ASA

## V. Meetings

### A. Current Meeting (Salt Lake City)

1. Thank you to the TPOs: Andy Piacsek + Eoin King!
2. Thank you to the Session Chairs!

# [EdCom: Meeting Minutes]

## 3. Special Sessions

- a. 1aEDa Hands-On Acoustics Demonstrations for Middle- and High-School Students
  - i. Monday, Salon D, 9:00 a.m. to 12:00 noon
  - ii. Chair: Kent L. Gee
- b. 1aEDb Strategies for Effectively Communicating Science to Policy Makers, the Media, and the Public
  - i. Monday, Salon A, 10:00 a.m. to 12:00 noon
  - ii. Co-Chairs: Andrew A. Piacsek and Kerri Seger

## 4. Funding Request: \$1,500 [UPDATE: funding request approved]

- a) speaker travel – Rachel Karr (Piacsek to fill out form)
- b. 1pED Listen Up and Get Involved
  - i. Monday, Salon D, 5:30 p.m. to 8:00 p.m
  - ii. Chair: Tracianne B. Neilsen
- c. 2aED Education in Acoustics General Topics
  - i. Tuesday, Salon I, 10:25 a.m. to 11:55 a.m
  - ii. Co-Chairs: Jon P. Johnson and Ryan Nielson
- d. 3aED Education in Acoustics: Student Posters
  - i. Wednesday, Salon G, 8:00 a.m. to 10:00 a.m.
  - ii. Chair: Murray S. Korman

## 5. Comments on the current meeting?

No comments made.

## B. Honolulu, HI 28 November–2 December, 2016 (joint with ASJ - sessions already finalized)

1. TPOs: Andy Piacsek + Eoin King
2. Special Sessions
  - a. Acoustics Education Prize Lecture
    - i. Invited presentation by the winner of the Rossing Prize for Education in Acoustics
    - ii. Chair: Robin Samlan (please note, TPOs)
  - b. Attractive Educational Methods and Tools in Acoustics
    - i. Attractive methods, tools, and materials for education in acoustics



## [EdCom: Meeting Minutes]

- ii. Co-Chairs: Tracianne Neilsen and Kazuhiko Kawahara
  - c. Computer Programming for Education in Acoustics
    - i. Education in computer programming using sounds and computer programming for education in acoustics
    - ii. Co-Chairs: Victor Sparrow and Hiroshi Suda
  - d. Demonstrations and Tools in Acoustics Education
    - i. Session is open for all demonstrations of educational materials or tools; if serving as a supplement to a paper in another Education in Acoustics session, no additional abstract required.
    - ii. Co-Chairs: Tracianne Neilsen and Akira Nishimura
  - e. Education in Acoustics for Kids (K-12 students)
    - i. Case studies and workshops on education in acoustics for kids (K-12 students) from classrooms, but also from science museums or other extracurricular work.
    - ii. Co-Chairs: Andrew Morrison and Sakae Yokoyama  
Chair for Rossing Prize - Robin Samlan
- C. Boston, Massachusetts 25-29 June 2017 (joint with EAA – MUST FINALIZE sessions this week)
- 1. TPOs: Eoin King + ??? (NEED A VOLUNTEER) – Dan Russell volunteers!!!
  - 2. Special Sessions
    - a. Listen Up and Get Involved
      - i. Chair(s): Education + Outreach Coordinator + Tracianne Neilsen
    - b. Hands-On Acoustics Demonstrations for Middle-School Students
      - i. Chair(s): Education + Outreach Coordinator + Tracianne Neilsen
    - c. Take 5s ??? (typically done during Spring meeting)
      - i. Chair(s): Larry Feth has volunteered with Jack Dostal
    - d. Teaching Tips for the New (or not so New) Acoustics Faculty Member
      - i. Tips for new faculty members who will be teaching courses in acoustics or vibration at undergraduate (introductory or advanced) or graduate levels for the first time. Suggested topics include: course organization, choosing a textbook, pedagogical methods, and strategies for homework and exams.

## [EdCom: Meeting Minutes]

- ii. Chair(s): Andrew A. Piacsek and Daniel A. Russell
- e. Collaborative and Interdisciplinary Acoustics Courses
  - i. Acoustics is an inherently interdisciplinary field. This session will present undergraduate- and graduate-level courses that exemplify this interdisciplinarity. Potential topics could include cross-institutional courses, cross-departmental courses, team-taught courses, and STEAM (Science, Technology, Engineering, ARTS, and Mathematics) courses.
  - ii. Chair(s): David T. Bradley and ???
- f. Graduate Program Poster Session (co-sponsored with Student Council – they will submit form)
  - i. A wide range of Graduate Programs in Acoustics will be presented in poster format including what each university has to offer a prospective student.
  - ii. Chair(s): Chris Jasinski
- g. Other ???
  - i. Chair(s): ???

Public Relation is proposing a co-sponsored session about “Communicating Science to the Public” – Andy Piacsek

Acoustics standards in education session from Noise and ASACOS – looking for invited speakers

The chair will look through the forms for for Murray Korman’s acoustical imaging education session

### D. New Orleans, LA, 4-8 December 2017 (initial session ideas due this week)

- 1. TPOs: Eoin King + ??? (NEED A VOLUNTEER)
  - a. Listen Up and Get Involved
    - i. Chair(s): Education + Outreach Coordinator + Tracianne Neilsen
  - b. Hands-On Acoustics Demonstrations for Middle-School Students
    - i. Chair(s): Education + Outreach Coordinator + Tracianne Neilsen
  - c. Acoustics Education Prize Lecture
    - i. Chair: TBD
  - d. Undergraduate Research Exposition (typically done during Fall meeting)
    - i. Chair(s): Preston Wilson + ???

# [EdCom: Meeting Minutes]

e. Other ???

i. Chair(s): ???

E. 175th Meeting, Minneapolis, Minnesota, 7-11 May 2018

F. 176th Meeting, Victoria, Canada, 5-9 November 2018

G. 177th Meeting, Louisville, Kentucky, 13-17 May 2019

H. 178th Meeting, TBD

I. 179th Meeting, Chicago, Illinois, Spring 2020

J. 180th Meeting, Cancun, Mexico, Fall 2020

## VI. Other New Business

A. No other new business was raised.

## VII. The chair reminded all EdCom representatives of the following Talking Points to take back to TCs:

### A. VOLUNTEER OPPORTUNITIES:

1. Review and contribute to new <asaedcom.org> site (Everyone!)
2. Booths Initiative volunteers (~2)
3. Activity Kit Subcommittee (~2) – Cathy Rogers
4. Undergraduate Research Exposition Subcommittee (~1) Murray Korman
5. Graduate Program Database Subcommittee (~1) John Buck
6. Resume Help Desk Subcommittee (~1) Ela
7. Scientific Presentation Workshop (~2) Michelle Vigeant, John Buck
8. TPO for 2 years (Boston, New Orleans, Minneapolis, and Victoria)

B. New Education and Outreach Coordinator to be hired soon (June 2016)!

C. See Meeting Program, Call for Papers, and NEW EdCom Website <asaedcom.org> for regularly occurring EdCom initiatives

1. Listen Up and Get Involved
2. Hands-On Acoustics Demonstrations for Middle-School Students
3. Undergraduate Research Exposition (no Expo in HI)
4. Rossing Prize in Acoustics Education
5. Acoustics Graduate Program Database

## [EdCom: Meeting Minutes]

### D. SMMfL (Students Meet Members for Lunch)

1. We will need a larger, sustained pool of volunteers to host student lunches

### E. Resume Help Desk

1. We will be in touch with members to find more volunteers to work the Help Desk

### F. Stronger connection to all TCs

1. Thank you to the TC reps for EdCom! We are actively seeking new EdCom members from all TCs.

Please pass the word!

### VIII. The meeting was adjourned at 6:35pm

## [EdCom: Meeting Minutes]

### IX. Appendix (Reports)

#### **USA Science & Engineering Festival (USASEF) report from Kyoko Nagao**

The Acoustical Society of America (ASA) provided a special exhibition at the USA Science & Engineering Festival at Walter E. Washington Convention Center in DC on April 16-17, 2016. The Festival is the world's largest STEM (science, technology, engineering and math) education outreach biennial event to purely inspire future scientists and engineers. This year, ASA participated as a part of Big Top Physics, a joint exhibit organized by other organizations such as APS, OSA, AAPT, SPS. Twenty-two ASA volunteers inspired curious children and adults by providing simple hands-on demos like boom-whackers to very high-tech demos such as speech synthesis or 3D audio effect using individualized head transfer function. ASA demos were organized by the Women in Acoustics and the DC and Philadelphia chapters of ASA.

#### **Report from Undergraduate research Exposition Subcommittee by Preston Wilson**

At the Jacksonville meeting, there were five winners:

Joy Westland, Central Washington University  
Lúcia C. da Silva, Federal University of Santa Maria, Brazil  
Chitanya Gopu, Boston University  
Bernardo H. Murta, Federal University of Santa Maria, Brazil  
Atousa Nourmahnad, Swarthmore College

They each received \$400.

You may recall that we normally have 10 or so entries, but at Jacksonville, we only had five, so we decided to give each participant an award.

The subcommittee is composed of me and Joseph F. Vignola <[vignola@cua.edu](mailto:vignola@cua.edu)> from Catholic U.

Please find attached past forms for the Undergraduate Research Exposition (URE) special session planning form, and the past request for funds for that activity.

Unless the EDCOM objects, I would like to see this continue. These sessions are normally held at the Fall meeting taking place domestically. The upcoming Fall meeting will be in Honolulu, so perhaps we should postpone the next URE until Fall 2017, which will be New Orleans.

I will be at the EDCOM meeting on Wednesday.

#### **Report from SMMfL:**

SUBCOMMITTEE REPORT

# [EdCom: Meeting Minutes]

## STUDENTS MEET MEMBERS FOR LUNCH (SMMfL)

### Committee on Education in Acoustics

Salt Lake City ASA Meeting, May 25, 2016

From its inception in the 1990s, until the Jacksonville ASA Meeting last fall, SMMfL was administered by a single person. Fredericka Bell-Berti, then Chair of the Acoustics Education Committee, came up with the idea and served as the first administrator. Scott Sommerfeldt was the administrator from 1997 until 2002, succeeded that year by David Blackstock. From the beginning it was a one-man show. Email as communication vehicle for the program was partially used at the 2002 Pittsburgh Meeting and came into full use at the 2003 Nashville Meeting. The student emailed the administrator to request participation. The student was asked to provide a great deal of information about him/herself in order that a member appropriate for that student could be found. The administrator then used email to seek a specific member appropriate for that student. When a suitable member agreed to the match, the administrator notified the student and asked student and member to complete the actual lunch arrangements themselves. This process was sometimes quick (two or three emails) but more often laborious (many emails with sometimes lengthy delays in between). The main advantage was the individual attention each student's request was given. The big negative was the great amount of time required. From Nashville (2003) through Pittsburgh (2015) an average of 12.3 student-member lunches were arranged. The lowest number was six at Nashville (2003), the largest 28 at Baltimore (2010). A major deficiency was that the program was not well known. Only a small number of ASA students knew about the program.

A sea change occurred as the Jacksonville Meeting approached last fall. For the first time the online preregistration form (ASA web site) included a check box whereby students could ask to participate in the SMMfL program. The response was terrific but overwhelming. In addition to the 9 students who emailed their requests directly to Blackstock, 40 more checked the box. The existing procedure could not handle the flood, and only major assistance by Elaine Moran and many TC chairs and representatives made it possible to find enough appropriate (it was hoped) members to fill the checkbox requests. The matching was swift and hectic, not careful and painstaking, since the only thing known about each checkbox student was his/her email address, university, and first and second technical area preferences.

To meet the challenge posed by the great increase in requests, Chairman Bradley, at the Jacksonville meeting of the Acoustics Education Committee, appointed three Student Council volunteers—Ela Warnecke (Johns Hopkins), Martin Lawless (Penn State), and Caleb Sieck (UT Austin)—to work with Blackstock. The single-administrator system thus morphed into a 4-person subcommittee. The subcommittee met at Jacksonville and developed a plan to handle the large increase in requests produced by the checkbox system. First, Ela proposed that Google Forms be used with questionnaires for students who check the SMMfL box on the online preregistration form. Responses to the Student Questionnaires would be equivalent to the information formerly required of the student under the old email request system. Ela immediately drafted the Student Questionnaire, which we quickly critiqued, revised, and adopted. Second, we asked Elaine Moran to add another checkbox, this one for members who would like to volunteer to meet students under SMMfL. Eventually, shortly after the Jacksonville Meeting, ASA found itself able to include the member checkbox in the online preregistration form. Ela then drafted the Member Questionnaire, which was also quickly critiqued, revised, and adopted. Third, Martin volunteered to write a computer program to use the responses from the Student and Member Questionnaires to match all students with appropriate members selected from the volunteer member pool. Fourth, since we were transitioning from the old email-based system to the new checkbox-questionnaire system, it was agreed to continue allowing use of the email system for those students who preferred to use it. What have been the results? When online preregistration closed, on April 25, for the Salt Lake City Meeting,

## [EdCom: Meeting Minutes]

79 students had checked the student checkbox, and 71 members had checked the member checkbox. Ela emailed students and members directions for using Google Forms to access their respective questionnaires. Recipients had until May 1 to complete their questionnaires; 53 students and 54 members did so. Using the questionnaire responses, Martin ran his code and obtained 49 student-member matches. That left four students who had to be matched manually by Blackstock the old way, i.e., by email inquiries. Of the 49 code-matched pairs, two were unacceptable because student and member already knew each other. The two students were matched with other members manually. One student entered the process by emailing Blackstock directly, i.e., not using the checkbox to request participation. So of 54 students who asked to participate via questionnaire or direct request, 47 matchings were done by Martin's code, seven by manual selection (email). Here is the breakdown of the 54 pairings by (student) Technical Committee:

AB - 2  
AA - 9  
BA - 4  
MU - 3  
NS - 6  
PA - 5  
PP - 7  
SP - 5  
SC - 7  
SA - 2  
UW - 4

After the Meeting students and members are always asked for feedback about their experiences. We plan to use the post Salt Lake City feedback to try to evaluate the success, or lack thereof, of the questionnaire-code procedure.

In summary, I am enthusiastic about the new procedure for handing SMMfL requests. Without the new procedures proposed and implemented by the new members of the subcommittee, it would have been impossible to process the huge increase in requests that the checkbox system produced. I have no doubt that if all the students and members who checked the boxes had followed through by submitting questionnaires, Martin's code could have successfully matched over 90% of the requests.

We still have much to do. The questionnaires need to be revised to make the results more transparent. The code can probably be improved to use all the information in the questionnaire responses. But the maiden voyage of the new system has been very successful.

### **Report from Steve Garrett about request from ALMA:**

I am writing to request that a New Business item be added to next week's EdCOM agenda. Tim Leishman and I are members of the Education Committee of the Association of Loudspeaker Manufacturers & Acoustics International (ALMA). They are acutely aware that most of their best transducer engineers are approaching retirement (as are those in the Navy transducer establishment) and they are trying to encourage student interest in loudspeakers, headphones, audio engineering, etc. Since a bidding war breaks out every time one of my students completes his/her graduate degree, I know that this shortage is real. (The winning bids have come mostly from Bose, Apple, or Motorola.)

## [EdCom: Meeting Minutes]

As part of their effort, ALMA has made membership free for faculty and students and they are providing \$200 subsidies and free registration to students to attend their annual meetings during the first week of January, two days before the Consumer Electronics Show, in Las Vegas, NV. (It is a convenient time for student participation since classes rarely resume before the second week in January.) I've attached their promotional flyer for students and below is the link to "student member center" at their website.

[http://www.almainternational.org/member\\_center/student\\_member\\_center](http://www.almainternational.org/member_center/student_member_center)

ALMA is interested in outreach activities (*e.g.*, loudspeaker "road show" for high schools, acoustics kits for classroom teachers) and I am sure they would benefit from access to the ASA kits. I've already provided them with my "PVC Loudspeaker" first-year-seminar materials and the "shoebox loudspeaker" kit that was developed by our Penn State graduate students. ALMA is also developing a "model curriculum" for undergraduates, a list of recommended audio engineering textbooks, and a list of educational institutions that offer transducer-relevant engineering degree programs.

### **Task Force 1 report from Andy Piacsek**

Task Force 1: Awareness of Acoustics

ASA engages and informs members of industry, educational institutions, government agencies, and consumers to recognize important scientific acoustics contributions

#### Objectives

Expand the promotion of ASA activities and resources through emerging media and online content

Increase awareness and dissemination of ASA Standards

Improve the image of the ASA through a strategic branding initiative

Advance cyber presence via ASA portal, web, and social media development

Objective 1.1 was identified as the area of initial emphasis. The Standards Director is actively working on Objective 1.2.

Task Force 1: current members:

Mike Stinson, chair

Jay Bliefnick

Carr Everbach

Dan Farrell

Kurt Fristrup

Josh Gladden

Mark Hamilton

Matthew Kamrath

Laura Kloepper



# [EdCom: Meeting Minutes]

Andone Lavery  
Martin Lawless  
Andrew Morrison  
Traci Neilsen  
Lawrence Norris  
Andrew Piacsek  
Andrew “Pi” Pyzdek  
Brigitte Schulte-Fortkamp  
Vic Sparrow  
Christopher Struck  
Carol Tippit Woolworth  
Suzi Wiseman

## Task Force 1: Objective 1.1 Actions

Various Actions were identified at ASA Jacksonville and in the intervening months – work on these is ongoing

Action #1: work with Search Committee for Education Coordinator to revise job description (Laura Kloepper, David T. Bradley)

Job description was modified to include (a) title Education and Outreach Coordinator, (b) experience creating content and curriculum, (c) live web presence skills, (d) need not be local to Melville.

This action has been completed.

Action #2: Explore Sound Logo Design contest

(Andone Lavery, Andy Piacsek, Carol Tippit Woolworth, Carr Everbach, Dan Farrell, Elaine Moran, Matthew Kamrath, Mike Stinson, Susan Fox, Suzi Wiseman)

The contest generated 53 creative designs for the Explore Sound website logo. A panel of 10 judges selected the top five finalists:



An ASA-wide online vote determined the winner:



## [EdCom: Meeting Minutes]

This action has been completed.

Action #3: Investigate possibility of coordinated outreach activities with National Park Services (400 million visitors/year) to promote acoustics

(Kurt Fristrup, Jay Bliefnick, Suzi Wiseman, Brigitte Schulte-Fortkamp)

Due to unforeseen circumstances, no progress has been made. This action is currently on hold.

Action #4: Accelerate implementation of online presence (e.g., interactive noise budget tool, commuting) through additional web developer support.

(Dan Farrell, Susan Fox)

Funding has been allocated to hire support staff as necessary to support Web Office Manager Dan Farrell. Thus far, have not needed to hire anyone.

This action is on hold.

Action #5: Investigate possible role for ASA in administering MOOCs (massive open online courses) for acoustics education.

(Lawrence Norris, Andy Piacsek, Andrew Morrison, Laura Kloepper)

After ASA Jacksonville, there was e-mail discussion about MOOC opportunities for ASA

A subcommittee was set up, chaired by Lawrence Norris

Teleconference held on 3 May 2016. Many issues identified for further investigation

Plan to hold meeting of the subcommittee during ASA Salt Lake City

This action is currently in progress.

**Report on ASA participation at 67<sup>th</sup> International Science and Engineering Fair (ISEF), Phoenix, AZ, May, 2016 Inder Makin, MD, PhD, Associate Professor, A.T. Still University of Health Sciences, Mesa, AZ**

The Acoustical Society of America (ASA), participated as a Special Awards Organization (SAO), at the Intel-sponsored International Science and Education Fair (ISEF), held in Phoenix, AZ, May 8 – 13, 2016. This event had 1700 high school students (9 – 12 grade), from more than 75 countries as finalists to present their research in different areas of pure and applied sciences. The finalists were competing for approximately US\$ 4 million cash awards as well as other recognition. ASA participated as one of about 57 Special Award Organizations (SAO), to select winners in their own special area of interest, namely acoustics. Since 1978, ASA has been participating in ISEF. While presentation of SAO awards, the Acoustical Society of America stands out as the first organization on the podium!

## [EdCom: Meeting Minutes]

Out of 1750 finalist reports in 22 scientific areas, a manual and electronic search was conducted to identify various projects related to acoustics. Acoustics being a broad field, specific searches with keywords related to specialized areas of physics, instrumentation and application were conducted. A total of 48 projects were identified. Searching and reviews of abstracts and project documentation enabled the number of topical acoustics-related projects to be filtered down to 14 projects. The team of four judges decided to visit each project station together, while the student presenters were absent from their posters. Based on their area of expertise and interest, the judges spent substantial time reviewing various other projects. The first debrief session on Day 1, based on the presented material and project documentation at each booth enabled a soft ranking of the projects, as well as provided a plan for in-person interviews with the short-listed students the following day. The ASA judging team interviewed each of the student researchers among the shortlisted projects. During the second debrief, in addition to verbal discussion, project notes, and additional provided documentation was considered prior to ranking the winners.

A first and second cash prize of \$1,500 and \$500 respectively, with additional rewards to the schools and mentors, was awarded to two teams, while certificates of honorable mention were given to three additional teams. The winner of the first prize was Kim Dae Hyun, of Pung Duck High School, Gyeonggi Province, South Korea with his project entitled, "Generation of Beat Sound of Korean Bell with a Bicycle Rim." Mr. Dae Hyun analyzed the characteristics of Korean bells vs. European bell designs and then synthesized the operation of the revered King Seong-deok, 19-ton bell to its base and beat frequencies. Through analysis he replicated the operation using a 66 cm diameter bicycle ring and designed a physical contraption to operate similar to the 2.25 m-high bell. Finally the functionality was validated with time and frequency domain measurements. The second-prize winners were Adrian Lenkeit, and Jan Mattias Schäfers, from Michael Gymnasium, Bad Munstereifel, Germany, with their project entitled, "Acoustic Microfluidics with Tiny Droplets." This duo designed piezo-based surface wave systems where they were able to demonstrate controlled oscillation and movement of droplets and bubbles. They simulated the oscillatory processes using n-body simulations, by maximizing the processing power of a high-end laptop.

Honorable Mention was awarded to three additional groups: (1) Mukund Venkatakrishnan, from duPont Manual High School, Louisville, Kentucky, entitled, "Development of the First Ever Low-Cost Open-Source Hearing Test and Hearing Aid." (2) Yiwei Song, High School Affiliated to Fudan University, Shanghai, China, "A Feasible Solution to High Frequency Loss Based on Transposing Fundamental Frequency." (3) Marie-Anne Irene de Gier, and Bram Janssen, from Atheneum College Hageveld, Heemstede, Netherlands, "The Wobble: A Sustainable Noise Barrier Consisting of Noise Absorbing Materials and a Revolutionary Shape." Each of these projects were sophisticated with highly engaged students, who did not shy from implementing functionality by micro-controller programming, signal processing and feature optimization, field and human testing, transmission loss analysis as well as making acoustic measurements.

The ASA judging team included, Bruce Towe, PhD, Professor Emeritus, School of Biological and Health Systems Engineering, Arizona State University (ASU), Julie Liss, Ph.D., Professor, Department of Speech and Hearing Science, ASU, Paul Sakion, BS, MBA, Principal Elephant Tech Consulting, and Inder Makin, MD,

## [EdCom: Meeting Minutes]

PhD, Associate Professor, A.T. Still University, School of Osteopathic Medicine, (SOMA). Dr. Makin was Chair of the judging team and presented the awards on behalf of ASA at the SAO ceremony.

I have had the opportunity to judge this event before. The energy and high caliber of projects was impressive as earlier. To cite the sentiment of the judging group, “The quality of the student projects in acoustics was extremely high. Even more impressive was the quality of the students themselves when presenting their research. They are obviously intelligent, but also articulate, poised, professional in appearance, and accomplished presenters.” The interdisciplinary judging group enabled evaluation of a wide array of acoustics-related projects. I would encourage other ASA-members to get involved with this forum, and check out this website to get a better feel for this event. <https://student.societyforscience.org/intel-isef>