

From the President

Stan Dosso



Acoustical Society of America Student Programs

This is my last column as president of the Acoustical Society of America (ASA) because my term ends at the conclusion of the spring 2024 meeting in Ottawa, Ontario, Canada. I will add a few closing words on this at the end of the column, but first I would like to share some thoughts and information on one of the ASA's considerable strengths that I think sometimes flies under the radar.

If you were to ask someone familiar with the ASA what they think are the Society's main programs, I expect almost all would note our internationally leading publications, including *The Journal of the Acoustical Society of America (JASA)*, *JASA Express Letters*, *Acoustics Today*, and *Proceedings of Meetings on Acoustics (POMA)* as well as our twice yearly ASA meetings. These are undoubtedly right answers, but the ASA also provides value and support to members and to the field of acoustics in many other ways, including the area of student programs where much innovative and effective work is ongoing.

It's often said that students are the future of science, and this is without doubt true in the field of acoustics. Hence, exposing students to acoustics, encouraging their interest in the field, and engaging and supporting them in the ASA are vital to the future of the field and of the Society. In this column, I highlight two of the ASA's exceptional student programs: ASA School (where I've had first-hand experience) and the Summer Undergraduate Research or Internship Experience in Acoustics (SURIEA) as well as briefly mention a few others.

ASA School

The idea of an ASA-sponsored "school" in acoustics for graduate students and early-career professionals (e.g., see acousticalsociety.org/asa-school-2024) was spearheaded by Brigitte Schulte-Fortkamp and Judy Dubno, who proposed the concept to the Technical Council in 2011. The plan was to hold the School biennially, over the

weekend immediately preceding the spring ASA meeting in even-numbered years, a schedule we have kept since the first school was held in 2012 (except for 2020 when the Covid-19 pandemic precluded the meeting). I served as an instructor at the 2014 School, then joined Brigitte and Judy as a coorganizer in 2016; Andrew Morrison was an instructor in 2022 and joined the organizing team in 2023.

In addition to providing presentations, hands-on demonstrations, and mentorship in diverse areas of acoustics, the ASA School program was designed to encourage participants to interact and get to know one another, discuss interests and collaborations, and begin to form professional and social networks with their peers, which we trust will benefit them throughout their careers. We also hope that, in a larger sense, offering ASA School on a regular basis enhances the long-term participation and engagement of students and early-career professionals in the field of acoustics and in the ASA, helping to keep the Society strong.

Building on the interdisciplinary nature of the ASA, the theme of "Living in the Acoustic Environment" was selected for the ASA School. Because the weekend time frame was too short to cover all of the ASA's 13 (now 14) technical areas in acoustics, it was decided to consider roughly half of these at each School, and alternate topics from School to School. However, attendees in all technical areas are welcome at every School, with the goal to learn about areas of acoustics beyond their own specializations.

In addition to presentations/demonstrations by invited instructors, School programs also include group and round-table discussions and professional development sessions. Social aspects include a Friday evening welcome reception, Saturday evening School dinner, breakfasts and lunches, and morning and afternoon breaks, all designed to provide participants with ample opportunities to meet and interact with the instructors and with each other. In fact, over the years, we found (and learned

from attendee feedback) that the goals for the School were better met by reducing the number of the instructor presentations relative to other program components. The first School in 2012 had 12 such presentations, which was reduced to 10 in 2016 and to 8 in 2022.

Invited instructors are prominent and diverse acousticians chosen in the appropriate technical areas who also excel in teaching and student mentoring. In all, over the six Schools to date (including 2024), this amounts to more than 50 ASA members who have served as instructors, representing an incredibly talented and accomplished group. We've also had about 350 graduate students and early-career professionals (usually about an 80/20 split) attend ASA Schools to date, and a few attendees at our earlier Schools have later returned as instructors. It's clear at the Schools that participants are engaged and often inspired by the presentations and discussions. I know I am.

To foster personal interaction and mentorship, ASA School attendance is limited to 60 participants. Unfortunately, this has meant that we cannot accept all applicants, particularly as the School's popularity has grown rapidly in recent years. To ensure accessibility, participants pay only a modest registration fee, with the weekend's accommodation and meals provided by the ASA, the ASA Foundation, and industry sponsors. School participants are required to attend and author/coauthor a talk or poster at the following ASA meeting (a list of these is shared so participants can easily attend each other's presentations).

One of the goals of the ASA School is to encourage and promote diversity and inclusivity, which are considered in developing programs and determining attendees. Although continued efforts are needed, we have seen progress such that, for example, for the 2024 School, 58% of attendees identify as male, 37% as female, and 5% as other or preferred not to answer (with instructors and organizers 50/50 male/female). Furthermore, 42% of attendees identify as White, 27% as Asian/Asian American, 11% as Hispanic/Latino, 5% as Black/African American, and 4% as other. Perhaps not surprisingly, the majority (85%) come from the United States and Canada, whereas 7% are from Europe and from Asia and 2% are from Australia.

Our observations and student feedback indicate that the ASA School is achieving its goals and is valued and appreciated by the attendees (and instructors). Participants frequently extoll the presentations and professional development sessions in broadening their interest and understanding in acoustics. However, the comments we hear most commonly involve the significance to individuals, many attending their first ASA function, meeting and connecting with a peer group in acoustics, and feeling welcome in and part of the ASA.

Summer Undergraduate Research or Internship Experience in Acoustics

Although the ASA School is aimed at graduate students and young professionals, SURIEA focuses on undergraduate students in underrepresented groups from across the country in an effort to inspire the next generation of acousticians and make the ASA and the field of acoustics more inclusive, diverse, and welcoming (see acousticalsociety.org/suriea).

SURIEA was developed under the auspices of the ASA Committee to Improve Racial Diversity and Inclusivity (CIRDI), which was formed in 2020. CIRDI was charged with developing initiatives and activities to address the fact that the composition of the ASA membership does not reflect the demographics of the United States population in terms of people of color, who are significantly underrepresented in acoustics and acoustics-related fields (see bit.ly/39rijJ7). This results, in part, from the lack of opportunities for underrepresented groups to be exposed to acoustics as a possible career path at the critical undergraduate stage where such decisions are often made. To address this, CIRDI proposed that the ASA establish and manage a summer research and internship program in acoustics for undergraduate students in underrepresented groups, which was realized when SURIEA was formed in 2021 with Tyrone Porter as committee chair and Peggy Nelson as vice chair.

SURIEA is an intensive summer program in acoustics that emphasizes training, mentoring, and practical experience in preparing students for graduate studies and/or careers in acoustics. SURIEA applicants must be undergraduate students who identify as Black or African

American, Hispanic or Latino, Native American, Native Hawaiian or Other Pacific Islander, or Alaska Native (participation in the program to date has been 55% Black/African American, 39% Hispanic/Latino, and 6% other). The program consists of three distinct elements: classroom sessions, hands-on training, and academic/career development. Through these, interns learn how to conduct acoustics research and analyze acoustic data and how acoustic standards are used in industry. They also contribute meaningfully to an ongoing research project or industry application.

The centerpiece of SURIEA is a paid 12-week internship where each student works in person on a research or industry project in acoustics with an individual mentor at the mentor's home institution (because this requires students to relocate for the summer, a housing allowance is provided). A one-week, in-person short course on the Fundamentals of Acoustics precedes the internships each year to provide an introduction to acoustics and baseline knowledge relevant to all areas of the field. This course also brings all of the participants together at the start to begin to build support networks with each other and the SURIEA instructors and to engage and identify as a cohort. During the summer internship, participants and instructors also meet virtually as a group each week to refine professional skills, practice scientific/technical oral and written communication, and strengthen support networks. Finally, after the internship, students attend an ASA meeting where they again meet in person as a cohort and can participate in student-led activities and social events as well experience the ASA's broad technical program in acoustics. Students are encouraged to present a talk or poster on their internship at the ASA meeting, although this is not a requirement of the program.

Mentors in the SURIEA program are chosen from applicants in academia or industry based on their ability to integrate a minority student intern into an active and supportive research group and to provide opportunities for scientific, practical, and career development. Mentors also assist in finding housing, and are expected to take part in all aspects of SURIEA over the summer and to maintain relationships with students in the program remotely and at conferences over the next few years. Mentors are not expected to provide funding for the student or the program, although some do so voluntarily.

The ASA is committed to funding five students in the SURIEA program each summer, and thanks to the generous support of mentors and external sponsors, additional students are accepted each year, although the number of applicants exceeds the capacity of the program. SURIEA has run since 2021 with up to 15 students in each of the first three summers and in the 2024 summer to come. Internship projects are diverse and often fascinating, including, as a few examples, studying humpback whale songs, modeling ultrasonic beams, investigating social identifiers in speech, analyzing hearing loss with computational models, mapping the human spinal cord with passive acoustics, developing a cell phone app to track urban noise, and auralization in room acoustics.

I have attended SURIEA get-togethers at ASA meetings and can attest to the enthusiasm for acoustics, sense of identity and pride in their cohort, and appreciation for the program among the students, many of whom seriously consider further studies or a career in acoustics. SURIEA is, without a doubt, one of the most innovative and progressive student programs I know of anywhere.

Other Acoustical Society of America Student Programs

In addition to the ASA School and SURIEA, highlighted here, the Society has many other programs for students. One is the ASA Student Council (see bit.ly/3TYFaU7), which includes members from each of the ASA technical committees (TCs) who transmit information and represent student interests within their TC. The Student Council organizes several student events at each ASA meeting, providing a welcoming and active peer/social group. Serving on the Student Council also provides leadership opportunities and an introduction to the ASA organization; many ASA leaders started out on the Student Council.

The ASA has an extensive program of fellowships and scholarships to recognize excellence and provide financial support for graduate/undergraduate students and postdoctoral scholars in various acoustics disciplines, in some cases supporting underrepresented groups. The Society also offers a variety of student transportation and conference attendance grants and subsidies. Many TCs offer Best Paper Awards to students or early-career presenters at ASA meetings, and *POMA* offers five student awards for conference papers published after each

meeting. For information on all of the programs above, see bit.ly/4aev9Yx.

Finally, in recognition of the growing importance of education initiatives, the ASA Committee on Education in Acoustics is being reorganized as a new Administrative Committee on Outreach and Education plus a new Technical Specialty Group (TSG) on Education in Acoustics. A TSG organizes technical sessions at ASA meetings in new or evolving areas not within the scope of existing TC, and can be the first step in establishing a new TC. The new committee will support activities promoting acoustics education at all levels, such as developing educational tools for teachers and planning outreach activities for school-age students at ASA meetings. The new TSG will focus primarily on education at the university level but will also include younger students. A key ASA staff member in all this is Education and Outreach

Coordinator Keeta Jones, who works closely with various groups to propose and implement activities for promoting acoustics.

Signing Off

Returning now to the end of my tenure as ASA president, it has been a privilege to serve the Society that represents my professional home and is one of the highlights of my career. I have particularly appreciated working together with many dedicated and exceptional members and staff. Although many more deserve recognition, I must particularly acknowledge ASA Past President and President-Elect Peggy Nelson and Barbara Shinn-Cunningham, respectively, Vice President Ann Bradlow, Treasurer Judy Dubno, ASA Executive Director Susan Fox, and ASA Director of Operations Elaine Moran. Finally, I thank *Acoustics Today* Editor Arthur N. Popper for his expert assistance in writing these columns.

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