

**ASA School 2016
Snowbird, Utah**

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The Acoustical Society of America (ASA) School 2016 was held on May 21-22, 2016, the weekend immediately preceding the Spring 2016 ASA Meeting in Salt Lake City, UT. This was the third ASA School, following successful ASA schools in 2012 in Kansas City, MO, and 2014 in Providence, RI. The ASA School 2016 provided the opportunity for 60 graduate students and early-career acousticians (**Figure 1**) to learn about and discuss a wide variety of topics in acoustics within the interdisciplinary theme of *Living in the Acoustic Environment*. The school featured lectures and demonstrations by 10 leading acousticians as well as roundtables and discussion groups to expand on the presentations and foster communication across disciplines and technical areas of acoustics. The program also included a welcome reception, school dinner, breakfasts and lunches, and morning and afternoon breaks, which were all designed to provide participants with ample opportunities to meet and interact with the instructors and with each other.



Figure 1. Group photo of ASA School 2016 participants at Snowbird, UT.

A major goal of the ASA School 2016 was to provide a forum for attendees to get to know one another and begin to form professional/social networks with other early-career acousticians, which we hope will benefit the participants throughout their careers. To encourage this, participants introduced themselves to the group individually, using a prepared slide that included a personal photo, a figure representing their interests in acoustics, and information about their educational program or career; these slides were also provided to the participants as a pictorial directory to help them remember and maintain contact with other school attendees. In addition to building interpersonal networks, we hope that, in a larger sense, offering ASA Schools on a regular basis will enhance the long-term level of participation and engagement of students and early-career professionals in acoustics and in the ASA and help keep the Society strong.

The previous two ASA Schools were held in the same hotel (or nearby) as the associated ASA meetings. This year we took advantage of the diverse geography of Utah and held the school at the Cliff Lodge in the ski town of Snowbird. Less than 30 miles from Salt Lake City, Snowbird is located in the rugged Wasatch Mountains and provided a spectacular setting for the school. The Lodge provided comfortable accommodations and excellent meeting facilities with dramatic views of the surrounding peaks. The somewhat isolated setting (compared with a downtown hotel) also had the effect of keeping the participants together during off-time, which seemed to contribute to the interactions and strong sense of group identity that developed over the weekend.

The ASA School 2016 instructors covered a diverse set of topics in acoustics. Thomas Gabrielson illustrated fundamental acoustic concepts through a series of ingenious but simple physical demonstrations that could be carried out in any classroom. Scott Sommerfeldt and André Fiebig considered omnipresent noise and noise control and the impact they can have on well-being and quality of life. Anthony Hoover and Lily Wang discussed architectural acoustics and how the design and construction of buildings, from classrooms to world-class concert halls, impact human performance and perception. Thomas Moore showed how advanced optical measurements, such as laser Doppler vibrometry, allow the visualiza-

tion of sound fields in real-time.

tion of acoustic phenomena, as illustrated with a variety of musical instruments. Christopher Sturdy described an extensive field program studying songbirds, with insight into the connections between animal acoustics, communication, and behavior. Jody Kreiman discussed how our voices serve as an “auditory face,” conveying our personal identity, age, size, health, mood, etc., and voice’s critical role in social functioning. Frederick Gallun explained the acoustical cues associated with spatial localization, how the human auditory system has evolved to extract these cues, and the effects of aging, hearing loss, and brain injury. Peggy Nelson discussed the use of realistic acoustic environments, e.g., noisy restaurants, to measure the benefits, satisfaction, and use of sensory aids for hearing loss, with implications for the use of listener-driven technology. The instructors also took part in roundtable, group, and informal discussions, which ranged from technical questions about the lectures to topics of student interest such as “how to choose/pursue a career in acoustics” and “how to publish a journal paper.”

After the school ended, the attendees completed an evaluation survey to provide feedback and suggestions for future schools. The overwhelming consensus was that the ASA School 2016 was a valuable experience enjoyed by the participants, with most attendees reporting that the school exceeded their expectations. They learned a lot about acoustics, particularly in areas new to them, and valued the opportunity to meet others from diverse backgrounds and interests (participants also noted that they enjoyed the socials, meals, accommodations, and mountain setting). Many student comments indicated that the goals of the school were largely achieved. Typical comments included:

- “I loved the intimate style of this workshop and the informal nature of discussions.”
- “The opportunity to hear and talk to teachers and fellow students has been inspiring.”
- “It was a fantastic experience to network across TCs (Technical Committees).”
- “This was a really wonderful experience and opened my eyes to a larger range of areas and outlooks.”
- “Career insights were very interesting/helpful.”
- “Wonderful experience in a great location. Met so many people I can now connect with in the professional world.”

The most common suggestions were to increase the diversity of acoustical topics covered because not all Technical Committee areas were represented by the presentations and to provide more introductory-level material. Attendees also requested more demonstrations, hands-on experiences, and



Figure 2. Left to right: Judy R. Dubno is a Professor in the Department of Otolaryngology - Head & Neck Surgery, Medical University of South Carolina, Charleston, SC, and served as ASA President from 2014 to 2015. Judy was a coorganizer of ASA Schools 2012 and 2014. Stan E. Dosso is a Professor and Director of the School of Earth and Ocean Sciences, University of Victoria, Victoria, BC, Canada. Stan is chairing the Fall 2018 ASA Meeting in Victoria. Brigitte Schulte-Fortkamp is a Professor of Psychoacoustics and Noise Effects, Institute of Fluid Mechanics and Engineering Acoustics, Technical University of Berlin, Berlin, Germany, and served as ASA Vice President from 2011 to 2012. Brigitte was a coorganizer of ASA Schools 2012 and 2014.

discussions, even if this meant reduced lecture time. Moreover, for the first time, a list of all the oral and poster presentations by the school participants at the ASA meeting that began immediately after the school was distributed to make it easier for participants to attend each other’s presentations. This concept of integrative participation will be included in future ASA Schools.

To keep student costs low and ensure that the school was accessible to all, the registration fee was set at \$50 and the cost of hotel rooms and meals was covered by sponsorships from the ASA (www.acousticalsociety.org), the Acoustical Society Foundation Fund (www.acousticalsociety.org/membership/as_foundation_fund), ADA Acoustics and Media Consultants (www.ada-amc.eu), Harman International (<http://www.harman.com>), the HEAD Genuit Foundation (www.head-genuit.foundation/index_eng.htm), Scantek, Inc. (www.scantekinc.com), and Springer Publishing (<http://www.springerpub.com>). This generous support is gratefully acknowledged.

We three coorganizers of the ASA School 2016 (the coauthors of this article; **Figure 2**) thank the instructors for their insightful presentations and thoughtful discussions. Finally, we especially thank the graduate students and early-career acousticians who attended the school and contributed so much by their presence, enthusiasm, and participation; we hope to see them in the ASA for many years to come.