



# Acoustical Society of America: The International Year of Sound and Beyond

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## ABSTRACT

The Acoustical Society of America (ASA) supported and celebrated the International Year of Sound (IYS) through technical and administrative channels. To stimulate the understanding and awareness of the important role that sound plays in all aspects of society, ASA produced short acoustics-themed videos, offered virtual acoustics demonstrations, presented online speakers, arranged a special issue of *Acoustics Today*, hosted a Twitter chat for the *Journal of the Acoustical Society of America* (JASA) and more. Many of these efforts were designed to improve and motivate the public to explore sound, while others were developed to bring the acoustics community together and strengthen networks. The success of these IYS activities was measured in views, website traffic, followers, and other metrics. Much of the ASA IYS program was designed to be short term, however some initiatives have been maintained beyond 2021 due to continued interest and support by members.

**Keywords:** *acoustics outreach, acoustics education, Year of Sound*

## 1. INTRODUCTION

Members of the Acoustical Society of America (ASA) have long been committed to raising noise awareness and doing acoustics themed educational outreach for many years, so when the International Commission for Acoustics (ICA) declared 2020 as the International Year of Sound (IYS) ASA was immediately invested in the mission to highlight the importance of sound in all aspects of life on Earth and to

work toward an understanding of sound related issues. ASA produced short acoustics-themed videos, offered virtual acoustics demonstrations, presented online speakers, arranged a special issue of *Acoustics Today*, hosted a Twitter chat for the *Journal of the Acoustical Society of America* (JASA) and more. For a complete list of all ASA IYS supported activities and initiatives, please see the appendix. The goal of these ASA education and outreach efforts was to improve and motivate the public to explore sound and while there were challenges due to the global COVID-19 pandemic, there is also much to be celebrated.

## 2. GLOBAL PANDEMIC

As a member of the ICA-IYS Liaison Committee, ASA organized events in the USA. The ASA originally planned a minimum of 1 event to occur every month and had a successful start with the US Opening Ceremony featuring scientific talks, live music, and a string quartet. However, after this singular in-person event, the growing coronavirus (COVID-19) pandemic led to the cancellation of all future in-person events. Consequently, in March of 2020, the IYS Steering Committee extended the IYS celebration into 2021, which allowed the ASA to pivot and offer some virtual content for the remainder of 2020 as well as return to some limited in-person events in 2021.

## 3. VIRTUAL SUCCESS

Luckily, not all IYS 2020 activities had to be canceled or postponed, such as the release of the special IYS video series. In partnership with the American Institute of Physics (AIP), four brief videos (available at <http://ow.ly/iOHL50NXAbF>) geared towards a popular audience were produced and released throughout the year to highlight acoustics. Additionally, each video has a corresponding webpage (see <https://exploresound.org/asa-iys-videos/>) which links to related open access articles in *Acoustics Today* encouraging people learn even more about the topic. These videos have been viewed nearly 5000 times

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and are still used to promote acoustics via the ASA social media accounts.

Social media campaigns were another IYS activity that flourished during 2020. For World Hearing Day 2020, #JASachat on Twitter encouraged users to chat with the editors and authors of the Noise-Induced Hearing Loss Special Issue of *Journal of the Acoustical Society of America* (JASA): <http://ow.ly/C6vc50NXzLi>. On Instagram stories, users could take part in #MysterySoundMonday to listen and learn about sounds by reading lay language papers from ASA Meetings. Similar campaigns were done for International Noise Awareness Day and National Protect Your Hearing Month.

Another activity that proceeded relatively unchanged, was the special IYS issue of *Acoustics Today* (at <http://ow.ly/loBN50NXzTb>). This special issue was created for students, teachers, and leaders in industry, government, and academia to showcase the breadth of sound around us. The articles included were chosen from the more than 300 that had been previously published in the magazine to represent not only diverse areas of interest in the ASA but also to highlight some of the issues that might be of most interest to the readers. In addition to the IYS special issue, *Acoustics Today* also collaborated with Ingenierías to present Spanish translations of select articles (see <http://ow.ly/78tn50NXA3R>).

Unlike the previous activities, most other events had to be cancelled, postponed, or reimaged. In the summer of 2020, ASA featured three virtual presentations using Zoom. AnnMarie Thomas author of *Making Makers: Kids, Tools, and the Future of Innovation*; David Carreon Bradley<sup>1</sup>, a member of the Board of Directors for SACNAS; and Nicole Holliday, who has written for NPR, Bloomberg News, and The Washington Post. The organizing committee intentionally featured speakers from a range of backgrounds to pique interest in our non-acoustician audiences. Additionally, this diverse set of speakers was invited to welcome them into ASA and to uplift their voices within the field of acoustics. To help spread the word, the ASA put out press releases for each speaker to encourage media, scientists, audio enthusiasts, students, educators, and families to tune in. Each event was well attended, and the recorded videos (available at <http://ow.ly/1nfu50NXAPL>) have been viewed over 6,000 times. We hope to continue this virtual speaker series, and because all previous speakers

<sup>1</sup>Andrew Morrison, series co-organizer, filled in when David Carreon Bradley was unable to present.

were from academic institutions, future invitees will highlight industry professionals.

In December of 2020, the Education in Acoustics Committee (EdCom) developed “Acoustics at Home” (see at <http://ow.ly/S7K650NXBiS>), a virtual demonstration event designed to replicate the educational and fun features of a typical hands-on session at an in-person ASA Meeting. The one-hour Zoom meeting consisted of short, pre-recorded demonstrations constructed from everyday household items with the goal of helping people experience and understand various acoustic properties. ASA now has a collection of nine 5-minute videos in topics such as how to make music using glass bottles, how to build a model of the speaking apparatus using a duck call, and ways to explore harmonics with an electric razor. After all the demonstration videos were shown, live attendees were able to interact with the volunteer demonstrators. Some asked for teaching tips and book recommendations and while others shared some of their own demonstration ideas. In the future, we may even ask for viewer-submitted videos to further engage attendees. The live event was well attended, with just under 100 viewers and, at the time of writing, the recorded videos have been viewed 959 times. Due to the online longevity of this virtual event, EdCom is currently planning to film future in-person demonstrations so that people can view them asynchronously and still learn about sound at home.

#### 4. RETURNING TO IN-PERSON

Slowly, the world returned to in-person gatherings and events, which allowed ASA to reschedule some IYS activities, such as the IYS Wikipedia Workshop and Edit-a-thon. In November of 2021, workshop attendees learned the basics of Wikipedia editing and how to make substantive changes to articles within their area of expertise. Thanks to this editing campaign, nearly 100 Wikipedia edits were made and over 100 references were added.

The ASA also organized a sound walk during the 181<sup>st</sup> Meeting in Seattle, Washington. Participants were able to visit locations presenting interesting sonic features and collect physical acoustical sound level data, and perception data. This sound walk led to the organization of another public event in 2022, which invited the media to explore urban acoustics.

Another IYS project that ASA returned to in 2021 was the wearable sound level meter (WSLM); a device intended to

increase awareness of sound in everyday situations by wearing it at public events and discussing topics such as decibels, noise exposure, government mandated limits, and other related acoustics topics. The device employs a MEMS microphone on a hat calibrated to provide reasonably accurate and consistent measures which display on a small screen worn around the chest. Several ASA chapters have taken the device to acoustics events and received positive feedback.

## 5. BEYOND THE YEAR OF SOUND

Thanks to what was learned from the challenges of partially celebrating IYS through a pandemic, ASA outreach efforts have grown and improved. Since 2020, ASA has embraced online events. Through more digital and virtual platforms, the Society continues to connect with our members, and beyond to anyone interested in acoustics.

While general ASA virtual events are not strictly limited to the education realm, many of them still serve a similar outreach capacity by making acoustics more accessible to the public, such as the East and South East Asia Regional Chapter Acoustics Masters Lecture Series (available at [eseaasa.org](http://eseaasa.org)) and the ASA Webinar Series (available at <http://ow.ly/uqxK50NXBGe>). Both of these ongoing virtual series were partially inspired by the success of IYS virtual activities. These types of virtual events provide ongoing learning and engagement opportunities for ASA members and nonmembers alike.

In addition to these webinars, ASA has also learned that what works well in a virtual space can also be incorporated during in-person meetings. For example, having a standing Zoom room is great way to let people attending an event meet an ASA member or expert who is not physically in the same space. This is extremely beneficial when ASA exhibits at partner events.

Many ASA IYS activities were intentionally designed to have a limited lifespan, but as has been evidenced, elements of nearly all IYS programming lives on in the Society today.

## 6. ACKNOWLEDGMENTS

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## 7. APPENDIX

- Acoustics at Home – virtual science of sound demonstrations
- Acoustics themed Science Outreach Catalyst Kits (S.O.C.K.) with Society of Physics Students (SPS)
- Chapter Hosted Activities
  - East and Southeast Asia (ESEA) – Acoustics Masters Lecture Series (virtual)
  - Spanish Speaking Acousticians (SSA) – Virtual event series
- ExploreSound.org – special IYS content
- International Commission for Acoustics (ICA) My World of Sounds International Competition – US participants
- Ingenierías collaboration – Spanish translations of Acoustics Today articles
- IYS Press Releases with American Institute of Physics (AIP)
- Social Media Campaigns
  - International Noise Awareness Day
  - Mystery Sound Mondays
  - National Protect Your Hearing Month
  - UNESCO Week of Sound
  - World Hearing Day
- Special Acoustics Today Issue – digital only
- Special Session at ASA 181<sup>st</sup> Meeting – 5aAA. Architectural Acoustics, Computational Acoustics, Noise, Physical Acoustics, and Education in Acoustics: International Year of Sound Potpourri
- US Opening Ceremony
- Video Series
- Virtual Speaker Series
- Wearable Sound Level Meter
- Wikipedia Editing workshop & Edit-a-thon with the National Institute for Occupational Safety & Health (NIOSH)