

From the Editor

Arthur N. Popper



Readers of *Acoustics Today* (AT) have often commented that the magazine covers are attractive and well designed. In fact, we take great pride in our covers and seek to make them interesting and eye-catching. In deciding on our cover image, our first choice is to have a figure from an article, but if there is no figure that excites our cover selection team, we invite an artist to create an illustration that represents one of the articles.

Once we have selected the figure, we turn it over to our production group, Opus Design. Opus creates several cover designs that are reviewed by the cover selection team who then makes the final decision on a cover. Once the issue is published, we offer the author of the cover article a high-resolution image of the cover. But if anyone would like a copy of a cover, email me (apopper@umd.edu) and we will try and provide you with a high-resolution PDF or JPEG.

The first article in this issue, by H. Timothy Bunnell, addresses the science behind the artificial voices such as Siri and Alexa that we deal with every day. Tim talks about the different approaches that have been used in speech synthesis and how they have changed over the years.

This is followed by an article by Brandon M. Casper and Matthew A. Babina who discuss human hearing underwater. A major takeaway from the article is that humans are not adapted to hearing underwater and we don't do nearly as well as fishes or marine mammals. In trying to focus on this comparison, the authors found a wonderful photo from a 1929 paper that is the cover of this issue. As an aside, the person at the left in the picture is one of the early experts on fish hearing, Karl von Frisch who won the 1973 Nobel Prize in Physiology or Medicine.

In the third article, Patrick O. Kanold writes about how the "wiring" of the auditory region of the brain during fetal development is influenced by early auditory experiences. In doing this, Patrick considers the

potential influence of the mother singing or speaking on brain development.

In the next article, Robert A. Lutfi and Christopher A. Brown write about the fascinating scholarly contributions of former Acoustical Society of America (ASA) President William A. (Bill) Yost. Bill has made lasting contributions to our understanding of how humans perceive sound, and the article not only talks about these contributions but also puts them into a more general perspective of human hearing. You can learn more about human hearing at <https://bit.ly/AT-psychoacoustics>.

I found the fifth article by Christina J. Naify, Kathryn H. Matlack, and Michael R. Haberman of particular interest because it covers a topic I've heard about but know nothing about, additive manufacturing. Additive manufacturing uses three-dimensional printers to "build" objects that can range in size from tiny circuits to houses. The article provides a wonderful overview and introduction to the topic and focuses the application of the technique to diverse areas of acoustics.

The final article by Sean E. Olive is one that most ASA members will easily relate to, the quality of headphones that many of us use on a daily basis. Sean takes the reader through how headphone quality is evaluated and describes how manufacturers determine what listeners prefer in headphones. Sean does not make any recommendations as to what headphones to get, but I suspect that many of us will start to use his information when we consider purchasing new headphones.

This issue has three "Sound Perspectives" essays. The first one is the last essay in our "Ask an Acoustician" series. The series will be replaced by a new series of essays, again to be developed and "organized" by AT Associate Editor Micheal Dent. Be sure and look for that series in the next AT issue.

In deciding that this would be our last essay in this series, Micheal decided that I should be the subject. I will admit that I was rather reluctant to do this at first, but I was persuaded to agree. I found that answering

the questions that Micheal has been posing to our colleagues for the past four years to be interesting and instructive. Indeed, although most readers will not have been subjects of this series, I invite everyone to look at the questions and think about how they would answer them; you might learn something about yourself! And if you want to look at past pieces, they are all posted at <https://bit.ly/3FjTCeL>.

I also want to thank Micheal for her development, organization, and cowriting all the “Ask an Acoustician” essays. Micheal is a great partner to work with on *AT*, and I am very grateful for her collaboration in so many aspects of the magazine, including her “eagle eye” in doing the final editorial review of most articles.

The second essay is by Tyrone Porter. Tyrone writes a very powerful piece about his experiences as a Black acoustician. Personally, I found the piece very moving and have already encouraged Tyrone to write more about his experiences for future issues of *AT*. I strongly recommend that every member of the ASA read and think about Tyrone’s essay and his experiences.

I also invite other members of the ASA with important and interesting stories that can teach others about issues of diversity to share their stories through our “Sound Perspectives” essays. If you would like to consider doing this, please email me and let me know what you have in mind.

Our third essay is actually a repeat of one we had in the winter 2021 issue about Spanish-Speaking acousticians in the Americas, but in Spanish. When we originally did this essay, I invited the authors to provide a Spanish translation for the *AT* web page. I then realized that many ASA members might value seeing the essay in Spanish, and, with the agreement of the authors, we publish the piece in this issue. Indeed, there are other Spanish-language articles from *AT* on our web pages — please look at <http://bit.ly/AT-Spanish>.

Finally, it is a delight to welcome the newest member of the *AT* family, Bennett Easthon Setzer. Bennett is the son of *AT* Editorial Associate Kat Setzer and her wife Lindsey Easthon. We look forward to Ben being an *AT* intern in perhaps 20 years!

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