Collaboration is an essential component of modern science! It allows researchers to pool resources, minimize redundancy, and bolster the quality of work for all participants by enabling them to ask research questions that require broad expertise to answer. Moreover, international collaboration, which may well start with studying or working abroad as an early-career acoustician, opens opportunities to participate in the global community of scientists during a pivotal time in one's career. These experiences make a researcher worldly in their discipline and may facilitate future collaboration with international contacts with diverse cultural backgrounds.

I am the Acoustics Today (AT) 2022 intern. As part of my internship, I will be writing several articles about the experiences of graduate/early-career training abroad. This first article is focused on individuals who were United States based and went to another country; another article will tell the stories of students who have come to the United States. The overwhelming majority of people I spoke to went to study and work in Europe. Focusing on Europe is not intentional. In fact, I am still anxious to speak with people who went to other continents as their experiences may be unique due to differences in culture both in the lab and in society as a whole. If you are willing to share your experiences, please send me an email.

Inspired by my doctoral research in France, my goal is to speak with a variety of Acoustical Society of America (ASA) members to hear the stories of other early-career acousticians who have gone abroad to study or work. These vignettes capture not only the excitement and reward of training abroad but also the hurdles that everyone inevitably experiences. I am hoping that this article encourages younger ASA members to consider these opportunities and be inspired by the stories of their colleagues who have gone abroad for their master’s, PhD, and postdoctoral training.

Philip Robinson (Research Lead, Audio Presence, Facebook Reality Labs Research, Redmond, Washington; see bit.ly/3UfxU3g) funded his PhD research by collaborating with foreign research groups. While a PhD student at Rensselaer Polytechnic Institute, Troy, New York, Philip applied for grants, landing him, sequentially, at Hanyang University, Seoul, South Korea; École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland; and Aalto University, Espoo, Finland, on a Fulbright, noting that, “if you arrive with some funding, it is a lot easier for professors to host you” (personal conversation, 2022). By cobbling together different funding sources, Philip was able to complete his PhD, emphasizing that there is a huge degree of uncertainty during that stage of life.

Currently, Philip oversees a research group with citizens from a dozen nationalities, including some with geopolitical tensions. His time abroad nurtured a certain mental flexibility and empathy that helped him relate to people from different backgrounds, making him a more effective and compassionate team leader. He advises early-career acousticians that “there are more opportunities out there than you know about. Apply for everything and do it, talk to everyone in the ASA, and be bold, the scarier and crazier the better” (personal communication, 2022).

However, piecing together funding for a PhD may not be to everyone’s liking. Instead, completing a master’s degree abroad is one popular path; tuition is considerably lower in many countries compared with that in the United States. Additionally, it is often possible to secure funding through an academic/industry partnership or internal research grants, although certain visas may restrict the maximum working hours per week. I spoke with Chemay Shola (master’s student, Technical University of Denmark, Kongens Lyngby) and Aaron Geldert (master’s student, Aalto University), who both opted to enroll in two-year master’s programs.

Aaron comments, “I had no clue I would like it as much as I did and learn as much as I did” (personal communication,
Chemay, impressed by the strong regional collaboration between the Scandinavian and Baltic countries, found it easier to build connections and network within the acoustics community in those countries. Making friends with locals is harder, so Chemay recommends meeting people through organized activities such as a running club. One perk of being enrolled at the foreign institution rather than be a visiting scholar is that the social and economic advantages of holding student status often includes benefits such as health insurance, subsidized public transport, restaurant vouchers, and student activities.

Jay Johnson (Cirrus Logic, Salt Lake City, Utah) followed a different path to graduate school abroad. While a PhD student studying underwater acoustics at the University of Texas at Austin, Jay was encouraged to collaborate with a research group at the Université Libre de Bruxelles, Brussels, Belgium. Keen to travel but not necessarily interested in moving to Belgium, Jay conducted on-site research during the summers. Jay found it difficult to meet students in Belgium because he was not enrolled in the university. But when asked if he would do it again, Jay replies “100%!” As parting advice, Jay comments that “most people were initially willing to speak French but quickly switched to English” (personal communication, 2022). He recommends a deliberate plan to learn the language and culture. The best approaches are through high-quality classes and language exchange partners.

A common theme about living abroad is that everyone makes mistakes. Language mistakes, cultural faux pas, bureaucratic nightmares, living abroad requires determination. Laura Kloepper (Visiting Assistant Professor, University of New Hampshire, Durham; see colsa.unh.edu/person/laura-kloepper) specializes in ecological acoustics and, during her PhD at the University of Hawai‘i, Honolulu, spent a month as a visiting researcher at Fjord&Bælt, Kerteminde, Denmark (see fjordbaelt.dk/?lang=en) studying harbor porpoises.

Laura laughs about her missteps, in Denmark and elsewhere, emphasizing that we need to “normalize talking about our mistakes” (personal communication, 2022), noting that she continued to collaborate with members of the Danish team for years afterward.

Reminiscing about her experience abroad, Laura advises “say yes to everything! Graduate students might be stressed, but for many, it is actually one of the least structured times you will have in your life before you have a family, house,” adding that this experience helped inform her as a future principal investigator about how different labs operate.

Sometimes plans change in unexpected ways when abroad. Take Martin Lawless (Assistant Professor, State University of New York Maritime College, Throggs Neck, New York) who began a postdoc at Sorbonne University, Paris, France. A problem arose, however, when Martin received an offer for a tenure-track position in the United States during his first week in Paris. With a negotiated start date and a gracious postdoctoral adviser, Martin, who works in architectural and perceptual acoustics, was still able to complete some research objectives before moving back to the United States ahead of schedule.

Besides the science, the attitude in France toward work/life balance left an impression on Martin, who says “I didn’t work Saturday or Sunday, didn’t think about work, and came in on Monday mornings completely refreshed, completely productive” (personal communication, 2022)

In reflecting on his time in Paris, Martin is impressed by the spirit of collaboration and open science platforms, noting that his position was funded through a consortium of six European Union universities and that a lot of funding requires data to be made publicly available.

While working on her PhD in musical acoustics, Whitney Coyle (Associate Professor, Rollins College, Winter Park, Florida; see bit.ly/3zCpwU6) received a National Science Foundation Graduate Research Opportunities Worldwide Grant, allowing her to study at a foreign institution of her choice. Whitney completed her Pennsylvania State University PhD as a visiting scholar at the Laboratoire de Mécanique et d’Acoustique, Marseille, France (see lma.cnrs-mrs.fr).

Like Martin, Whitney found the expectations of work/life balance required an adjustment; the building is inaccessible after hours and on weekends, holidays are respected, and frequent coffee breaks are central to laboratory culture. Additionally, Whitney found that the mentorship style, where PhD students are treated as colleagues and given wide latitude in their research, was a major change from her experience in the United States.

One complication, however, was that her obligations to complete the dissertation following US graduate school
requirements did not always align with the expectations of a doctoral candidate in the French laboratory. Whitney advises students involved in multiple institutions to carefully delineate the specific role of each mentor relationship and to "be clear about your goals for going abroad" (personal communication, 2022).

Whitney remarks on another difference between her experience in France and the United States: most PhD programs in Europe require a master’s degree. Without regular classroom interactions, it was hard to befriend her colleagues. But, as time went on, Whitney was able to meet more people while also maintaining a professional connection to the United States by attending ASA conferences.

Whitney also mentions that, like many academics, she experienced imposter syndrome, which was exacerbated by the foreign environment; when she didn't understand a topic, she was unsure whether her confusion was a deficit in knowledge or simply a problem of communication. Her advice? “Who cares if you don't know the answer, find it. Go ask, even if it is embarrassing.”

The motivation to study abroad varies from person to person. Whitney wanted to work with a specific research group. Chemay, on the other hand, wanted to work within the hearing aid industry in Europe; this made a master's in Denmark, a country with a long history of hearing health research, an appealing option. Indeed, Chemay began a part-time internship at the Eriksholm Research Centre, Snekkersten, Denmark, within months of arriving.

Some students are motivated by adventure, learning languages, and expanding their world view, whereas others may be drawn to a country with family connections. Whitney cautions students to understand their motivations and make their decisions accordingly. Similarly, Laura advises students to develop a concrete plan with measurable objectives of a successful trip, especially if it is a shorter visit.

Everyone agrees that moving abroad comes with a host of challenges. Plunging into a new culture, learning a new language, navigating bureaucracy; life in a new country takes work that can be an unwelcome distraction from education and social integration.

However, many people found a supportive network among their colleagues. Aaron described a community of international students willing to share their experiences navigating shared challenges. And when Whitney had a hostile landlord experience in Marseille, a fellow PhD student was able to help resolve the situation, something Whitney's level of French would not permit.

Success abroad requires seeking help from people who understand the system, speak the language, and can advocate on your behalf through their understanding of the local culture. Many find that the experience of being an outsider can teach valuable lessons. For example, Laura and Whitney comment that their time abroad taught them skills for communicating with people who may struggle with English. Speaking slowly, articulating, avoiding slang, and rephrasing sentences, when necessary, may be more natural to those who have struggled in a foreign language themselves.

Although everyone I spoke with recounted challenges experienced abroad, the overarching narrative was one of learning experiences that continue to benefit their personal and professional growth to this day.

So, my own most embarrassing moment? Early on, to practice my nascent French, I asked my adviser if he would “like to have the meeting in his bedroom or mine?” having mixed up the word chambre (bedroom) with bureau (office). The embarrassment has long since faded, and I am forever grateful that I had the opportunity to make that mistake.

Acknowledgments
Thank you to everyone who agreed to talk with me about their experiences abroad. Additionally, I appreciate Zane Rusk and Colby Cushing for connecting me with many of these people.