

Involvement in the Acoustical Society of America Is Key

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Introduction

The past few years have seen many disruptions to our normal routine. This “Sound Perspectives” essay for the Women in Acoustics (WIA) Committee to celebrate the women honored at their luncheons has been delayed and last year’s column focused on documenting the experiences of acousticians during the Cov-Sars2 pandemic. All past WIA columns are at bit.ly/AT-WIA.

Changes to the Acoustical Society of America (ASA) meetings and schedules meant that the WIA Committee only honored two women acousticians during 2020 and 2021: Alexandra Tolstoy at the Acoustics Virtually Everywhere meeting in December 2020 and Fredericka Bell-Berti at the Seattle ASA meeting in December 2021. This column highlights their lives and careers as well as their involvement in the ASA, which both say was important in shaping their career trajectories, professional experiences, and personal enjoyment. Their insights and advice are also summarized with the intent of encouraging all women to continue the traditions of excellent science, professional networking, sincere mentoring, development of friendships, and opportunities for service within the ASA.



Alexandra Tolstoy

Alexandra (Alex) Tolstoy received her BA and MA in mathematics from George Washington University, Washington, DC, and PhD in applied mathematics from the University of Maryland, College Park. In 1980, her first research position was in underwater acoustics at the Navy Research Laboratory (NRL), Washington, DC, where she became a leader of the matched field processing and inversion efforts. She first attended and gave a presentation at the ASA in 1981.

After many productive years at the NRL, Alex became a senior research scientist with Integrated Performance

Decisions, Inc., Middletown, Rhode Island, in 1994. She then became an affiliate faculty at the University of Hawai‘i, Honolulu, and founded ATolstoy Scientific, Inc. Alex was prolific in authoring or coauthoring scientific papers, won the Alan Berman Publication Award for the best paper in the US Navy Information Technology Division in 1988, contributed to the Time–Life Series *How Things Work: Oceans* (Golden et al., 1991), and authored the book *Matched Field Processing for Underwater Acoustics* (Tolstoy, 1993). She holds two patents for the matched field processing tomography techniques that she developed.

In the ASA, Alex was involved first in the Underwater Acoustics Technical Committee (TC) and then also in the Acoustical Oceanography TC after it was established. Alex was elected an ASA Fellow in 1994 and is a member of many other scholarly societies.

Around 1992, Alex realized that there were not many women in many of the TCs, and even the TCs that had many women who were well published did not have many women ASA Fellows. Alex felt that it was the right time for the ASA to organize something that would get the women together, to realize they are not alone, to increase the visibility of women, to provide opportunities for networking, and to overall make things more congenial. The then-current ASA President Hank Medwin agreed that women were often getting overlooked in the ASA and agreed to establish an ad hoc committee of WIA to discuss ways to increase visibility, improve networking, and promote women in the Society. Alex was the first chair of the ad hoc committee. She is pleased with how things have changed for women in the ASA since then and feels like we have made progress toward the ultimate goal that “your contributions should count independent of if you are a man or a woman.” For more on the history of the WIA Committee during the first 25 years, see bit.ly/3On5IIk.

INVOLVEMENT IN THE ASA

Alex retired from acoustics in 2012 and has become an internationally acclaimed artist (see cover). She began painting in 2007, took some classes, and fell in love with watercolors. Her paintings are regularly exhibited both nationally and internationally. She painted a special cover for the fall 2018 issue of *Acoustics Today* and shared her painting “In Tune” (see bit.ly/3pKJUg0) for the virtual booth of the WIA Committee at the December 2020 Acoustics Virtually Everywhere online meeting. Alex encourages us all to pursue artistic activities because they help expand your outlook and interests and keep your mind active. She recommends finding someone whose art you like and taking a class from them, which is how she started with watercolors. Her advice: “You really don’t know what you are capable of until you do it.”



Fredericka Bell-Berti

Fredericka (Freddie) Bell-Berti

was honored at the WIA luncheon in December 2021. Freddie received her PhD from the City University of New York, New York, in speech and hearing sciences. Her early work focused on using electromyographic recordings to study muscular function in the velopharyngeal system and the tongue, a relatively early use of lingual electromyography (EMG). Freddie’s thesis work was carried out at the Haskins Laboratories, New Haven, Connecticut, under the direction of Katherine (Kathy) Safford Harris. Freddie coedited the book *Producing Speech: Contemporary Issues* (Bell-Berti and Lawrence, 1995) and has authored and coauthored many well-cited articles about speech production. Freddie was a professor at St. John’s University, Queens, New York, from 1980 to 2014 and served as chair of the Department of Communications Sciences and Disorders from 2001 to 2010; she is now a professor emerita.

Freddie feels blessed to have been mentored by Kathy, who introduced Freddie to the ASA as a relatively new graduate student. At the spring meeting in Philadelphia in April 1969, Freddie was amazed at the warm welcome as she registered and then awed by the incredible session on speech perception. Freddie has been a regular attendee and presenter at the ASA since her first presentation in 1972. Of those early years, she remembers that “being accepted as a member of the scientific community with no one asking what degrees I had” convinced her that the ASA was a great place to be. Freddie has continued the

tradition of excellent mentoring for more than 100 student research projects, the majority of which were carried out by female students. More than 20 of those students have presented their work at ASA meetings.

Freddie became an ASA Fellow in 1991 and has served on several committees including the Executive Council, ASA Foundation Board, Speech Communications TC, Nominations Committee, Tutorials Committee, Women in Acoustics Committee, and Medals and Awards Committee. Additionally, Freddie served as chair of the Committee on Education in Acoustics (1994–1997), the Long-Range Planning Committee (2000–2003), and the Committee on Prizes and Special Fellowships (2012–2014). Freddie continues to be active in the ASA and has just completed service as the chair of the Committee on Archives and History (2016–2022).

Freddie’s involvement in her church, the Eastchester Presbyterian Church in the Bronx, New York, began decades ago but has increased dramatically since her retirement. She currently serves as Clerk of Session at the church and served on the Board of Directors of the church’s after-school program for many years. Freddie is active in the Presbyterian Women’s Group at the church and is involved in many other activities. Freddie is also a member of the Board of a new nondenominational Fourth Day program, Footsteps in the Sand, a lay-led organization to strengthen church leadership.

Involvement in the Acoustical Society of America

Alex and Freddie both shared their thoughts about how the ASA has helped them over the years, how the ASA has evolved, and offered advice for those early in their careers.

Science

From Alex’s first ASA meetings, she has been impressed with the quality of the presentations and the interesting results that are presented. She enjoyed sharing ideas with knowledgeable, accomplished people. Freddie also expressed this sentiment: “One of the joys of being at ASA meetings over the years has been the chance to discuss science with folks from around the world and never having to worry that an idea I expressed would appear in someone else’s work.” The high degree of integrity and respect promotes scientific inquiry at the highest levels.

The opportunity to network with others in your field is a key benefit of participating in ASA meetings. A fundamental part of networking is letting people know what you have done and sharing your ideas. One way to do this is to attend meetings of the TCs, contribute to the discussions, and, in particular, volunteer to chair special sessions at upcoming meetings. Although networking often requires effort and sometimes going out of your comfort zone, the importance of developing a network of peers and senior people in your field is extremely important. For more networking tips, see bit.ly/AT-Nielsen.

Mentoring is an important responsibility of all acousticians and other scientists, engineers, and professionals because it advances both research and professions. Alex mentioned how important it is to find a mentor who is more senior than yourself, knows how things are done, and is willing to share advice: “A mentor is also someone who looks out for you and thinks of you when opportunities arise.” Both Freddie and Alex are grateful for those who mentored them and encourage everyone, at any level, to find opportunities to mentor others. ASA meetings provide a wonderful opportunity to mentor others, such as the Students Meet Members for Lunch Program, the student reception, the ASA school, and early-career events. An excellent article about mentoring that is helpful for both mentors and mentees was published in *Acoustics Today* (Gee and Popper, 2017).

Social

Although networking and mentoring have a social aspect, both Alex and Freddie stressed how grateful they were for opportunities to socialize and make friends through the ASA. Freddie described it this way: “I’ve made friends — folks I would never have gotten to know any other way. And I don’t mean ‘acquaintances’ — I mean real friends, folks whose families I know — or know a lot about; folks I’ll see at meetings and other places.” These friendships develop over time and are a treasured part of ASA meetings. Breaks during sessions and the meetings’ socials are a great place to meet new people and chat with those we know. However, those of us who have been participating in the ASA need to conscientiously look out for those who are new, talk to them, and introduce them to others.

Service

The ASA also provides many volunteer opportunities to serve on technical and administrative committees. Service on these committees provides a way to meet people in and beyond your area of specialty, gain an understanding of how the ASA operates, and develop an appreciation for the many who contribute so much time and energy to making the ASA a wonderful professional home. A list of all the committees and a form to indicate your desire to volunteer are found at acousticalsociety.org/volunteer.

Summary

The WIA Committee was grateful for the opportunity to honor Alex Tolstoy and Freddie Bell-Berti and appreciate their scientific contributions, mentoring, friendships, and service. They have both been great examples, role models, and friends to many, especially to those in the ASA. We sincerely hope that their experiences will prompt all of us to be more involved in the ASA and to be inclusive and welcoming to others as we strive to promote the core values of the Society, which were recently approved by the Executive Council and posted on the website at acousticalsociety.org/policy-statements.

References

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