

# Ask an Acoustician: Lily M. Wang

*Lily M. Wang  
and Micheal L. Dent*

## Meet Lily M. Wang

In this “Ask an Acoustician” essay, we feature Lily M. Wang, recent president and vice president of the Acoustical Society of America (ASA). Lily has been honored many times by the ASA, including being named a Fellow and winning the Student Council Mentor Award, the R. Bruce Lindsay Award, and the F. V. Hunt Postdoctoral Research Fellowship in Acoustics. She has served on and chaired many committees in the ASA at some point. I will let her tell you the rest.

## A Conversation with Lily Wang, in Her Own Words

### *Tell us about your work.*

I’ve been a faculty member in the Architectural Engineering program at the University of Nebraska-Lincoln (UNL) since March 2000 (see [lilywang.unl.edu](http://lilywang.unl.edu)). My research interests are on the effects of noise and reverberation on human performance and comfort and linking room acoustic subjective perception with objective metrics. For the past eight years, I have also served as an academic administrator in the UNL College of Engineering: first as Associate Dean for Graduate Programs and Faculty Development (2013–2018), then as Associate Dean for Faculty and Inclusion (2018–2021). In early July 2021, I moved into a department leader position as director of the Durham School of Architectural Engineering and Construction.

### *Describe your career path.*

When I was younger, I wanted to design concert halls! I learned about acoustical engineering in a high-school textbook, and it instantly clicked that this fit my passions. I love singing and have played piano since the age of 4, but I knew early on that I was not talented enough to make it a living. Architectural acoustics combined my love of music with my enjoyment of math and science. While deciding on which college to attend, I didn’t know of undergraduate programs in architectural acoustics, so instead I pursued a



Bachelor of Science (BS) in civil engineering with a certificate in architecture at Princeton University, Princeton, New Jersey. I incorporated acoustics in other ways during those years. I had summer internships in acoustics (one at Georgia Tech, Atlanta, with Yves Berthelot and another at Jaffe Holden Scarbrough in Norwalk, Connecticut) and wrote my undergraduate senior thesis on the acoustic and structural properties of fabric tension membrane structures under the advisement of David Billington.

I was unable to secure a job in acoustical consulting after finishing undergraduate studies, so I joined the Graduate Program in Acoustics at the Pennsylvania State University, University Park. I intended to complete a Master of Science degree only, but faculty member Victor Sparrow encouraged me to pursue a PhD, convincing me that it would open doors rather than close them, as acoustical consultants had cautioned. I am so glad that I did! My doctoral dissertation focused on using near-field acoustic holography to study sound radiation from bowed violins, supervised by Courtney Burroughs.

I was then ready to join an acoustical consulting firm but felt extraordinarily lucky to be selected for the one postdoctoral fellowship I had applied to, the ASA Hunt Postdoctoral Fellowship to study room acoustics and subjective testing at the Technical University of Denmark, Kongens Lyngby, with Anders Christian Gade. Because there were few academic role models in the United States who taught and did research in architectural acoustics, I never had considered becoming a professor. But while in Denmark, I learned

that UNL wished to recruit a faculty member specializing in building acoustics. I flew from Copenhagen to Omaha to interview in December 1999, then accepted the faculty position shortly thereafter. I convinced myself that if/when I did not get tenure, I would finally join a consulting firm, but I'm still at UNL 21 years later! I am incredibly satisfied that my career has followed this path. Shortly after achieving tenure, I realized that my research could have broader impact if I studied spaces that humans occupy more commonly, such as offices, schools, and restaurants, rather than performing arts facilities. In truth, I believe I would have been unhappy as a concert hall designer. I love working with students and exploring problems more deeply as an academic.

### *What is a typical day for you?*

As an academic administrator, I am in a lot of meetings with university members and external partners on a wide range of topics every day, such as curriculum, student development, fundraising, and external relationships! I truly enjoy academic leadership. I love getting things done and helping to increase the impact of faculty, staff, and students. I still try to dedicate one day a week to my own research; I meet with research team members and make time to work in the lab or field. In the first half of 2021, I was on a faculty development leave (aka sabbatical) and enjoyed being completely immersed in research. I was reminded that it's fun and exciting to gather new knowledge, analyze data, and disseminate results that impact the built environment! I typically get home around 5:30 p.m. on weekdays and spend the rest of the evening as well as weekends focused on family affairs.

### *How do you feel when experiments/projects do not work out the way you expected them to?*

I feel frustrated when things go awry, but I take deep breaths and draw my focus away from stewing emotionally about it and focus instead on working to unknot and solve the problems we're experiencing. I believe this is at the heart of being an engineer, an identity with which I strongly resonate. Engineers solve problems, leading to innovations that have a great impact on human well-being and society.

### *Do you feel like you have solved the work-life balance problem? Was it always this way?*

I find that work-life balance or, more specifically, how we integrate our professional and personal lives is a very personal matter. Each person will make decisions for their own life and come to their own "solution." Here are some of the choices I have made with regard to work-life integration. I have always felt deeply fulfilled and satisfied by

my professional work; I can never imagine giving it up. I married in my mid-30s and recall that, up until then, I was OK with the idea of never being married or having children. Now, though, I've been married for 16 years and have 2 amazing daughters, Violet and Florence. I have experienced a different deeply fulfilling joy in raising a family. I have deliberately tried to blur the lines between professional and personal because I want to be a role model and acknowledge that both aspects of life are important. I've brought my children to many conferences; colleagues may recall that I brought two-month-old Violet to a 2007 Concert Hall Research Group Summer School and nursed her in the back of the room! I include my children in social activities with my research group. My daughters know the names of many of my colleagues and students and vice versa. Although I can't be super active in school parent groups, my husband David Yuill (also a professor at UNL) and I both take time to attend children's activities. Having academic jobs has allowed us to maintain flexible schedules.

The choices one makes certainly do affect how this work-life integration plays out. For our part, my spouse and I have tried to make ones strategically that result in this integration being easier for both of us, particularly because neither my husband nor I have extended family nearby. Some examples are: we chose to purchase a house close to the University so that we could go home or to the schools quickly; we chose to allocate more of our budget toward personal childcare in our home rather than in other material goods; and I have made career decisions that are fulfilling professionally but allow me to be active in my children's lives at their different stages (much different when they were ages 3 and 5 from now when they are 11 and 13).

### *What makes you a good acoustician?*

My love of music and all things related to sound; years of deliberate ear training to experience how sound behaves in buildings; a desire to always keep learning; and investing in persistence, resilience, and leadership skills.

### *How do you handle rejection?*

Initially, I often feel disappointed and emotionally angry and tangled; it's natural human behavior. But I give myself the appropriate space, time, and distraction to separate and not get embroiled in those negative feelings until I can face the feedback more objectively rather than emotionally. Then I look for the constructive comments in the feedback and seek to become better by learning from those.

**What are you proudest of in your career?**

I am most proud of how I may have contributed to changing the demographics of the architectural acoustics field, particularly in the ASA, since I first attended the ASA Wallace Clement Sabine Centennial Symposium in 1994. I recall being one of only two females in the room at an ASA Technical Committee on Architectural Acoustics meeting; it is very different now. Many of the amazing and diverse students that I've mentored over the past 21 years are actively participating and having great successes in the field of building acoustics! Although it's gratifying to see my own research have influence on the design of acoustics in spaces, it's satisfying on a deeper level to see the cumulative impact of my former students.

**What is the biggest mistake you've ever made?**

I wish I had slept more when I was in my 20s and 30s! I really didn't get enough sleep until after my children were born. I realize this seems counter to the common belief of how one sleeps *less* with infants, but I took the advice to heart to sleep whenever the baby sleeps (and that's a lot)! Although all of the hard work early in my career certainly aided in my success, I do think it was a mistake not to prioritize sleep in those days. Getting an appropriate amount of sleep results in a healthier and more productive life all-around.

**What advice do you have for budding acousticians?**

Grow your networks as much as possible; joining the ASA and attending professional conferences is a great way to start! Look for multiple diverse mentors who will share their experiences and advice but still respect and understand that you will necessarily carve your own path.

**Have you ever experienced imposter syndrome? How did you deal with that if so?**

Yes, indeed. My feelings of imposter syndrome seem to flare up most in two circumstances. The first is when I find myself among powerful confident persons whom I do not know well, when I feel my underrepresentation more keenly (being the only female or Asian in a group, for example) and/or when I have not had an opportunity to demonstrate my "right" to be in the room. Then a story starts in my head that those persons have little understanding or caring about my accomplishments, that I am being overlooked and not included! I often deal with this circumstance by taking a deep breath and reminding myself that I "do" have the right to be in the room. I go through a predefined list in my mind

of my strengths and accomplishments that I've memorized to stave off the bad thoughts!

The other circumstance is when I focus on traditional measures of technical achievements in academia, such as the number of papers published or the number of citations or the h-index or technical area awards. Because my metrics are lower than others who are highly respected in the field, this also makes me feel like an imposter at times. I will feel twinges of regret and wonder if it's an indication that I am not good enough, particularly technically. To deal with this, I bring myself back to accepting that I've made the choices I've made for good reasons through the years. Yes, those personal choices have resulted in the "impact" metrics I have, but I try to be self-compassionate and truthfully face that I made those choices often because my goals were never explicitly to have high impact metrics. I would most certainly be less happy if I had prioritized such choices.

**What do you want to accomplish within the next 10 years or before retirement?**

I am very excited about my new position as director of the UNL Durham School of Architectural Engineering and Construction and to use the leadership skills I've gained over my career to nurture and grow the impact and reputation of our school in the coming decade. Although I will always have an enduring passion for architectural acoustics, I am thrilled to be working more broadly now on building science. A primary focus is to grow the school's involvement and impact with sustainability, smart buildings, and community engagement. I see our mission as discovering and disseminating knowledge around how we can improve the design, construction, and operation of buildings for human well-being.

**Bibliography**

- Altomonte, S., Allen, J., Bluysen, P., Brager, G., Hescong, L., Loder, A., Schiavon, S., Veitch, J., Wang, L., and Wargocki, P. (2020). Ten questions concerning well-being in the built environment. *Building and Environment* 180, 106949. <https://doi.org/10.1016/j.buildenv.2020.106949>.
- Brill, L. C., Smith, K. H., and Wang, L. M. (2018). Building a sound future for students: Considering the acoustics in occupied active classrooms. *Acoustics Today* 14(3), 14-22.
- Lee, J., and Wang, L. M. (2020). Investigating multidimensional characteristics of noise signals with tones from building mechanical systems and their effects on annoyance. *The Journal of the Acoustical Society of America* 147, 108-124. <https://doi.org/10.1121/10.0000487>.
- Peng, Z. E., and Wang, L. M. (2016). Effects of noise, reverberation and foreign accent on native and non-native listeners' performance of English speech comprehension. *The Journal of the Acoustical Society of America* 139, 2772-2783. <https://doi.org/10.1121/1.4948564>.
- Wang, L. M., and Brill, L. C. (2021). Speech and noise levels measured in occupied K-12 classrooms. *The Journal of the Acoustical Society of America* 150(2), 864-877. <https://doi.org/10.1121/10.0005815>.

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## ASA School 2022



# Living in the Acoustic Environment

21-22 May 2022  
Englewood, CO

**ASA School 2022** is an Acoustical Society of America event for graduate students and early career acousticians in all areas of acoustics to learn about and discuss a wide variety of topics related to the interdisciplinary theme *Living in the Acoustic Environment*. ASA School 2022 follows on the success of four previous ASA Schools starting in 2012, and will provide opportunities for meeting instructors and fellow attendees, mentoring, discussing research topics, and developing collaborations and professional relationships within acoustics.

### Program and Costs

ASA School 2022 will take place at the Hilton Denver Inverness in Englewood, CO, a resort and spa 30 minutes from Denver. Lectures and demonstrations followed by discussions will be given by distinguished acousticians in a two-day program covering topics in *architectural acoustics, animal bioacoustics, biomedical acoustics, engineering acoustics, musical acoustics, noise, psychological and physiological acoustics, and speech communication*. Although ASA School 2022 will focus primarily on these 8 technical areas, graduate students and early career professionals in all areas of acoustics are encouraged to attend to achieve a broader understanding of the diverse fields of acoustics.

The registration fee is \$50. Hotel rooms at the Hilton Denver Inverness for two nights (single occupancy) and meals will be provided by ASA. Participants are responsible for their own travel costs and arrangements including transportation to the Hilton Denver Inverness. Transportation from the Hilton Denver Inverness to the ASA meeting location in Denver at the close of ASA School 2022 will be provided and paid by ASA. The COVID-19 vaccination and mask policies in effect in May 2022 will be followed at ASA School 2022.

### Participants and Requirements

ASA School 2022 is targeted to graduate students and early career acousticians (within 5 years of terminal degree) in all areas of acoustics. Attendance is limited to 60 participants who are expected to attend all School events and the ASA meeting immediately following on 23-27 May 2022. ASA School attendees are required to be an author or co-author on an abstract for presentation at the ASA Denver meeting.

### Application and Deadlines

The application form and preliminary program will be available online in December 2021, at [www.AcousticalSociety.org](http://www.AcousticalSociety.org).

