Five Questions With….

Ning Zhou, PhD

Ning Zhou, PhD, is an Assistant Professor in the Department of Communication Sciences & Disorders. She completed her PhD in hearing sciences at Ohio University and then headed to the Kresge Hearing Research Institute, Department of Otolaryngology at University of Michigan as a post-doctorate research fellow. Dr. Zhou joined the ECU faculty in 2013. She is the Director of the Auditory Prosthesis Psychophysics and Perception Lab and her research is focused on understanding the relative importance of spectral and temporal processing acuity for perception, and designing optimal processor mapping strategies for cochlear implant users. She has over 20 publications in peer-reviewed journals and has presented her work at national and international conferences. Dr. Zhou actively engages students in her research.

1. What do you like best about working at ECU?

Parking is great at ECU. I really mean that! What drew me to ECU was that the department has a working clinic that does cochlear implant mapping and gives me great access to participants. Colleagues are extremely supportive of me as a new faculty member getting my research going. Resources are also great for both teaching and research. There has not been an article that I could not find using the ECU Library's electronic database.

2. What do you find most exciting about your research and its potential?

In my lab, we are trying to prove that the condition of the auditory periphery predicts, at least partly, the outcome of a cochlear implant. It is intuitive to assume that for the cochlear implant to work, you have to have reasonably good neural survival – an excitable auditory nerve. My recent research used a psychophysical non-invasive measure that may be used to probe the condition of the auditory nerve in implanted ears. Bilaterally implanted users may have differences in speech recognition between the two ears. Our preliminary results have shown that this asymmetry can be explained by the ear differences in neural health estimated by the non-invasive measure. My current research is trying to differentiate the effects of neural density and neural function, or quantity versus quality. This has great implications. With this knowledge, we will find ways to most optimally stimulate a degenerated system electrically, which works in ways that are very different from acoustic hearing.
3. What excites you about teaching?

Education in and of itself is very exciting. Seeing the students leaving my classroom with new knowledge is a very rewarding experience, especially when they realize that the things they learn from my courses is not isolated knowledge and may help them better understand concepts in other classes or clinic. For example, a good understanding of the physics of sound is helpful for understanding how the change in physical properties of the sound changes the perception by the brain.

4. What do you hope students take away from their experiences working with you on your research?

I hope that students would leave my lab with a good understanding of the general processes of how a research project is done; a process that involves critically reviewing existing data, developing a research question, designing the experiment, collecting data, analyzing, writing, and publishing. For more advanced graduate level students, I hope for them to be able to develop their own research ideas from conducting a successful or unsuccessful research project. The latter is probably more important, as research fails more often than most people think. Nonsignificant results can be the beginning of great discoveries. I would be very happy if my students walk out of my lab knowing how to get there.

5. What is your favorite teaching or research moment?

My favorite research moment would be to prove my hypothesis. The more unintuitive or unlikely the hypothesis is, the greater the moment.