

9/24/20 CI Music Hour Recap

Hello, everyone!

Recap

Thursday's Home Base session featured research presentations from Susan and Andres. Susan showed that cochlear implant user discrimination with pure tones is a magnitude worse than normal hearing performance, but that CI performance at some frequencies is still better than the smallest step on a piano (semitone -- 6%). She also pointed out that normal hearing and cochlear implant listeners had a similar sweet spot for speech from 500-4000 Hz. Cochlear implant performance with complex tones worsened as low as 220 Hz which we hope to remedy with improving how the cochlear implant uses timing information.

Andres discussed how fundamental frequency, which defines pitch in music, is poorly encoded by cochlear implants. This prevents good pitch resolution when listening to music. Additionally, cochlear implants cannot easily process the amplitude of most normal sound waves in music, which is needed to hear pitches with harmonics. This issue does not happen with pure tones because they do not have harmonics. Cochlear implants tend to flatten or filter out amplitude in complex sound waves. In his study, he predicted and showed that stimuli with deeper modulation/amplitudes would be easier for CI users to hear.

Virtual Recital

For anyone interested, two musicians from the Santa Monica Symphony are doing a virtual recital today at 5pm Pacific Time. Jakub Hlavka, the violinist, is a good friend (and Nanci knows him, too!) and an excellent violinist. Nicholas Mendez Del Valle, the pianist, has been featured on NPR and has won numerous awards as a soloist. The event is free, however you need to register for the link. All details can be found [here](#) at the Santa Monica Symphony website.

Announcements

Dr. Assal Habibi, from USC's Brain and Creativity Institute, is leading a study in mindfulness and choral participation. The choir will be led by one of USC's choral conductors and will begin rehearsals in October on Monday evenings (Pacific Time). Julianne will be leading an additional rehearsal for CI participants each week (dates to be determined). The group welcomes adults of all ages and levels of musical experience. Please email Julianne (jmpapado@usc.edu) if you are interested in participating in the choir and study, and she will reach out to you with more details.

Next week's CI Music Hour will feature Danielle Barbara! Danielle Barbera, MT-BC, is a board certified music therapist. She received her bachelor of the arts degree in music therapy from Montclair State University in New Jersey in 2018. She completed her internship at Hudson Valley Hospice in Poughkeepsie, New York. She is a practicing music therapist at Matheny Medical & Educational Center in Peapack, New Jersey and for the creative arts agency, Muzique, LLC. Danielle is currently receiving her graduate degree in music therapy from Montclair State University in New Jersey.

Have a great weekend!
Chrysa & Julianne