

Listening to the Ear Listen to the Brain

Sriram Boothalingam

What we hear is often what we want to hear. This remarkable ability of the brain to gate useful information while filtering out noise from the auditory environment is not fully understood. Our goal is to understand how the ear and the brain, specifically the feedback neural networks, work together to achieve this feat in humans. In this talk, I will present two studies: (1) on cortical feedback: does the ear turn itself down before speaking? (2) on developing novel hearing screening tools: can we repurpose ear echoes to as a comprehensive hearing screening tool?

Bio:

Sriram Boothalingam is a Senior Lecturer in the Linguistics Department at Macquarie University and a Senior Scientist at the National Acoustic Laboratories. He studies the collaborative dynamics of the ear and brain using otoacoustic emissions (echoes from the ear), EEG, and neuromodulation. His work is aimed at understanding the ear-brain-behavior link in human communication with applications for earlier detection, more personalized, and effective diagnostics, and treatments for people with hearing difficulties.