

Ruth Litovsky's Research Highlights

01. Mechanisms of Hearing



Litovsky discovered the mechanisms that are involved in the development of auditory spatial hearing (things like echo suppression, sound localization, and understanding speech in noisy environments) in infants and children. Using that knowledge, Litovsky then integrated studies of human and animal neurophysiology to understand the neural mechanisms behind spatial hearing.



02. Improving Cochlear Implants



Using the insights from the work mentioned above, Litovsky was then able to show the clinical importance of having two or bilateral cochlear implants in individuals who are deaf and choose to receive implants. The aforementioned research also led to work to develop better signal processing approaches that ultimately improve the lives of cochlear implant users.

03. Disabilities Connection

Litovsky then takes the findings, information, and principles gleaned from her studies in the auditory field to help individuals with disabilities including Down syndrome and neurodegenerative conditions like Alzheimer's disease.

