



# THE NEURAL ARCHITECTURE OF EARLY SPEECH PERCEPTION

A TALK BY **JUDIT GERVAIN**

DEPT. OF DEVELOPMENTAL AND SOCIAL PSYCHOLOGY  
UNIVERSITY OF PADOVA

**03**

FEBBRAIO

**15:00**

<https://bit.ly/3tUOBas>

SEMINARIO  
IN MODALITA' TELEMATICA

Despite their general immaturity, human infants have sophisticated auditory and speech perception skills. This talk will present EEG and NIRS studies with newborns and older infants investigating the neural mechanisms underlying these abilities. The studies investigate how embedded neural oscillations, hypothesized to be crucial for speech processing in adults, emerge during early human development. The talk will discuss the implications of these findings for language development.



**Judit Gervain** is a Full Professor at the Department of Developmental and Social Psychology. She is trained as a theoretical linguist, obtained a PhD in 2002 in Cognitive Neuroscience under the mentorship of Jacques Mehler from SISSA, Trieste, Italy. She then worked as a post doctoral researcher at the University of British Columbia, Vancouver, Canada. In 2009, she took up a researcher position at the CNRS, in Paris, France, from which she moved to the University of Padua in 2020. Her research focuses early speech perception and language acquisition in typically developing monolingual, bilingual infants as well as in infants with hearing difficulties. She uses behavioral as well as brain imaging techniques to explore the perceptual, linguistic and cognitive development of these infants and their underlying neural correlates. She has done pioneering work in newborn speech perception using near-infrared spectroscopy (NIRS), revealing the impact of prenatal experience on early perceptual abilities, and has been one of the first to document the beginnings of the acquisition of grammar in newborns and preverbal infants. Her work has been published in leading journals, such as Science Advances, Nature Communications, PNAS and Current Biology. She is an associate editor at Developmental Science and Neurophotonic, and a member of the Governing Board of the Society for Near-Infrared Spectroscopy.



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