Neurolinguistics Lab

Research

Click here [1] to watch an interview for the University of Venice Ca'Foscari: "Semantic and Syntactic Processing in the Human Brain"

We study the neural bases of linguistic knowledge and processing. Linguistic knowledge (about how phonemes combines into morphemes and words, which in turn combine into complex meanings) is characterized by Linguistic Theory; processing ability stems from the implementation of this knowledge in cognitive structures that are supported by neural mechanisms. Our lab studies the intricate relation between these, that results in that rich ability that we humans have - the ability to express ourselves freely, and understands others who do so. We try to get a glimpse of the linguistic brain in health as well as in brain disease.

The scientific study of brain-language relations (a k a Neurolinguistics) seeks to obtain precise measures of behavior and its related brain activity. To this end, we conduct complex behavioral experiments, guided by state-of-the-art linguistic technology, aided by advanced neuroimaging technologies: we measure the time-course of behavior with complex linguistic expressions, and use Magnetic Resonance Imaging to measure its neural reflexes in children, healthy adults, and individuals with focal and diffuse brain damage.

Our collaborators:

- Katrin Amunts [2], University of Düsseldorf and Forschungszentrum Jülich
- Isabelle Deschamps [3], Université Laval
- Stefan Heim [4], RWTH University, Aachen and Forschungszentrum Jülich
- Yonatan Lowenstein [5], ELSC, Hebrew University
- Angela Friederici [6], Max Planck Institute for Cognitive & Brain Science

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