



Thursday, January 25, 2024, 14:00 hrs

Stephanstrasse 1A

Dorothea Erxleben Room (C004)/Seminar Room Library, Ground Floor

Guest Lecture

Dr Marisa Nordt

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Cortical recycling in high-level visual cortex during childhood development

Human ventral temporal cortex (VTC) contains category-selective regions that respond preferentially to ecologically relevant categories such as faces, bodies, and words. How do these regions develop during childhood? In this talk, I will present our work in which we addressed this question in a longitudinal study. We used functional magnetic resonance imaging to measure longitudinal development of category-selectivity in school-age children. We discovered that, from childhood to the teens, face- and word-selective regions in VTC expand, but limb-selective regions shrink and lose their preference for limbs. Critically, as a child develops, increases in word-selectivity are linked to decreases in limb selectivity, revealing that during childhood, limb-selectivity in VTC is repurposed into word-selectivity. These results provide evidence for cortical recycling during childhood development. I will end the talk by showing analyses that examine the longitudinal development of distributed category representations in VTC and give an overview on ongoing projects.