Impact of emotion, motivation, and social relevance in non-autistic development and Autism Spectrum Conditions: Insights from EEG and simultaneous EEG-fMRI studies

The main focus of my research is to understand how the brain selectively enhances relevant content throughout the visual processing pathway, with a particular emphasis on activity within the visual cortex. I will present EEG and simultaneous EEG-fMRI data from different stimulus domains (including faces, facial expressions, language and symbolic stimuli) and experimental paradigms that give evidence for rapid and flexible sensory amplification of relevant content starting at the earliest stages of stimulus processing.
Additionally, I will demonstrate how simultaneous EEG -fMRI acquisition might enable precise tracking of relevant information processing, combining high temporal and spatial resolution through methods like representational similarity analysis (RSA). Finally, I will present data on altered stimulus processing in Autism Spectrum Conditions and its potential relationship to autistic symptomatology.