

Forschungsinstitut für Entwicklungsmedizin



Invitation

Keynote by Charles A. Nelson

Predicting Autism Among Infants at Elevated Likelihood: A (mostly) EEG Biomarker Approach

- Date: **Friday, November 22nd 2024, 10.30 Uhr – 12.00 Uhr**
- Location: Bischofstraße 11, 4020 Linz
- Room: Kommunikationsraum
- Language: English

There is wide support for the notion that the outcome of children diagnosed with autism is superior among those who receive early intervention. However, early intervention is predicated on early identification, and at the present time, the average age of diagnosis in many parts of the world is ~4+ years. Despite concerted efforts by multiple labs around the world, there is thus far little evidence that behavioral measures in the first year of life reliably predict autism at 2 or 3 years of age. One reason for the failure to identify signs in younger infants is how limited the behavioral repertoire is in infants less than 12 or so months. In the program of research I will talk about, I will draw from a longitudinal study focused on tracking infants at elevated likelihood for autism (by virtue of having an older sibling with autism or by growing up in a low resource home) from 3-36 months of age. I will begin by briefly describing a number of behavioral measures obtained in infants <12 months old that appear to be associated with autism outcomes at 2-3 years of age. I will then turn my attention to our use of EEG in making predictions about autism from data obtained in the first 6 months of life. Two clear patterns appear to be emerging from our data thus far: that errors in neural circuitry, inferred from EEG data, appear by 3 months of life. Second, these neural signatures appear to distinguish infants who will subsequently go on to develop autism from those who do not.