

BRAIN & COGNITION SEMINAR

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“Understanding the dynamics of neurocognitive development using theory-based models “

Tuesday
March 14, 2023
12:15 to 13:15

Campus Biotech

Auditorium H8-03

& Zoom :

<https://unige.zoom.us/j/62694444617?pwd=T2wzQWNMMk9DTEVXZFhwRW94RXEwQT09>

Meeting ID: 626 9444 4617

Passcode: 617330

Abstract : Developmental cognitive neuroscience can only be as rich as the data we have available to us. In this talk I will show how new datasets with increasing temporal richness and novel quantitative approaches allow us to study neurocognitive development in entirely new ways. In the first half of the talk I will propose a new definition of cortical maturity. Leveraging a unique, 12-wave longitudinal neuroimaging sample, the HUBU cohort (N = 90, aged 7 - 21 years), I show how we can chart cortical thickness changes between childhood and late adolescence. We develop a novel, quantitative definition of cortical maturation: the midpoint of cortical thinning (MCT), and demonstrate that it differs between people and between brain regions. In the second half of the talk I will discuss cognitive fluctuation. Individual differences in cognitive abilities are almost universally conceptualized as traits – Stable, relatively unchanging properties of individuals. However, this perspective ignores cognitive fluctuations – Short term changes in cognitive performance within persons. I will argue this is an overlooked yet crucial aspect of cognitive performance, with distinct neural and psychological mechanisms. In this talk I will demonstrate how Dynamic SEM can be used to quantify and tease apart distinct components of cognitive variability.

HUG

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Host : Prof. Patrik VUILLEUMIER

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