



## THE JACOBS CENTER RESEARCH SEMINAR SERIES

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Psychiatry and Ageing Research,  
University College London

### **TOWARDS A COMPUTATIONAL NEUROSCIENCE OF DEVELOPMENT**

Growing up means becoming an autonomous human that is able to act and make decisions rationally and independently. Although society generally agrees that such a state is reached at age 18, we have relatively little knowledge how the mechanisms underlying decision-making develop and when they mature. Many of the decision-making processes rely on brain areas that are at the top of the cortical hierarchy, such as the prefrontal cortex. These areas, however, continue their maturation long into adulthood, rendering it likely that several aspects of decision-making show similar developmental trajectories reaching far into adulthood. In this talk, Dr. Hauser will show how we can use computational modelling and neuroimaging to understand how brain and cognitive functions develop. He will show how, by using computational modelling, we can tease apart and understand how decision-making mechanisms develop. Dr. Hauser will then show how, by using advanced neuroimaging methods, we can understand the microstructural development of brain functions. Lastly, he will discuss why understanding the normative development of decision-making trajectories is critical to understand how they go awry during adolescence.

**Wednesday, December 13, 2017, 10:30 h**

At the Jacobs Center for Productive Youth Development  
Andreasstrasse 15, 3<sup>rd</sup> floor, AND 3.46, 8050 Zürich