



**University of  
Zurich** <sup>UZH</sup>

## Department of Economics – Neuroeconomics Seminar

**October 19, 2017 - 17:00 - 18:00**

**Robb Rutledge**

*Max Planck UCL Centre for Computational Psychiatry, University College London*

### **The role of dopamine in decision making and subjective well-being**

The subjective well-being or happiness of individuals is an important metric for societies, but we know little about how the cumulative influence of daily life events are aggregated into subjective feelings. Using computational modeling, I show that momentary happiness in a decision-making task is explained not by task earnings, but by the combined influence of past rewards and expectations. Using a combination of neuroimaging and pharmacology, I find that fluctuations in happiness relate to neural responses in the ventral striatum and to dopamine. Using the same task, I also identify a value-independent role of dopamine in decision making and introduce a new computational model that explains changes in risk taking in both pharmacology data and data collected using large-scale smartphone-based experiments. Finally, I show how computational modeling of happiness can be used to explain individual differences in decision making.