University of Zurich[UZH]

Department of Economics – Neuroeconomics Seminar

November 5, 2026 - 17:00 - 18:00

Anne Collins
University of California, Berkeley

Deconstructing human reinforcement learning

Reinforcement learning frameworks have contributed tremendously to our better understanding of learning processes in brain and behavior. However, this remarkable success obscures a more complex reality: that the reinforcement learning framework does not capture a single, well-defined neuro-cognitive process. In this talk, I will present results from multiple studies, showing how computational, behavioral and neuro-imaging tools allow us to disentangle the multiple distinct processes that support humans' unique flexibility and adaptability. I will highlight how focusing on a single broad framework (reinforcement learning) – and consequently failing to account for multiple parallel, interacting processes – weakens the generalizability and interpretability of research findings. This comes with important consequences for our understanding of the neural mechanisms that support learning across species, and for individual differences across developmental and clinical populations.