



**University of
Zurich** ^{UZH}

Department of Economics – Neuroeconomics Seminar

November 3rd, 2022 - 17:00 - 18:00

Peter Dayan

Max Planck Institute for Biological Cybernetics

Peril, Prudence and Planning as Risk, Avoidance and Worry

Risk occupies a central role in both the theory and practice of decision-making. Although it is deeply implicated in many conditions involving dysfunctional behavior and thought, modern theoretical approaches to understanding and mitigating risk in either one-shot or sequential settings, which are derived largely from finance and economics, have yet to permeate fully the fields of neural reinforcement learning and computational psychiatry. I will discuss the use of dynamic and static versions of one prominent approach, namely conditional value-at-risk, to examine both the nature of risk avoidant choices, encompassing such things as justified gambler's fallacies, and the optimal planning that can lead to consideration of such choices, with implications for offline, ruminative, thinking. I will show that not taking risk into account might lead to systematic errors in estimating other aspects of decision-making.