



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

## Department of Economics – Neuroeconomics Seminar

**March 1, 2018 - 16:00 - 17:00**

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### **Optimal Perceptual Decision Making with Limited Representational Resources**

Bayesian inference has been a successful and principled model framework for explaining perceptual behavior. However, in many cases, it has been difficult to convincingly justify the choices of the model parameters (i.e. the likelihood functions and prior beliefs) needed to explain the data. I will demonstrate how we used the efficient coding hypothesis to derive a new and better constrained formulation of the Bayesian observer model. The new model makes a set of rather surprising and counter-intuitive predictions that, however, are supported both by neural and psychophysical data. I will discuss the general implications of the new framework for our understanding of perceptual behavior.