

Title: Workshop: Introduction to Bayesian Modeling

Instructor: Martin Schnuerch

Abstract:

This workshop provides an overview of core principles of Bayesian statistics and Bayesian modeling in psychology. After an introduction to the fundamental concepts (probability as a degree of belief, Bayes' rule), the course covers the following topics with a mixture of theoretical introductions and hands-on exercises in R:

- Bayesian estimation
ML vs. Bayesian estimation, prior specification, derivation of posterior
- MCMC sampling
Metropolis-Hastings, Gibbs sampling, software
- Hypothesis testing/Model comparison
Bayesian approaches to testing, Bayes factors

Assignment: TBA

Credits: 2 workshop days