GENTLE INTRODUCTION TO BAYESIAN INFERENCE

University of Zurich[UZH]
English Department

VARIAGE
Variation in (second) language use and development across retirement age

INSTRUCTOR
Prof. Dr. Don van Ravenzwaaij
University of Groningen

DATE
Monday–Tuesday
17 – 18 April 2023

TIME

Mon	09:00–17:00
Tue	13:00–17:00

PLACE
University of Zurich
Room tba
Max. capacity 25 persons

COURSE DESCRIPTION
This two-day workshop will provide a gentle introduction to Bayesian inference. What are the conceptual differences with traditional inference? What is the role of the prior distribution? We will learn about Bayesian parameter estimation, with measures of uncertainty reflected by the posterior distribution and credible intervals. We will also learn about Bayesian hypothesis testing, with strength of evidence quantified by Bayes factors. The workshop will be hands-on, we start by approaching some of the simpler problems by old-fashioned pen-and-paper calculation. We will subsequently turn to the free programming language R, in which we will perform both traditional and Bayesian linear regression and examine what the differences are. The workshop is geared to conceptual understanding and application with a bare minimum of complex equations. The course is aimed at PhD students and interested faculty members.

We will cover the following topics:

- Frequentist versus Bayesian inference
- Prior distributions
- Likelihood functions
- Posterior distributions
- Bayes factors and credible intervals

LANGUAGE
English

INTERESTED?
Please contact simone.pfenninger@es.uzh.ch to register your interest