

Workshop

My First Bayes: Why and How to Run Your First Bayesian Model

Organizational details

Instructor: *Prof. Rens van de Schoot, Utrecht University*
Date: April, 15 2014, 09:30 - 18:00
Location: Room 601 (basement), Licher Str. 66, 35394 Giessen
ECTS: –

Aims

During this short workshop you will be gently introduced into Bayesian statistics. Bayesian statistics are becoming more and more popular among applied researchers to answer their research questions. This is especially due to the availability of Bayesian estimation methods in software like Mplus where it is very easy to switch to Bayesian statistics. The purpose of this workshop is to explain why and how to use Bayesian statistics without going into the mathematical details.

Course Contents

If you ever wondered why

- a p-value can be used to falsify a null-hypothesis but not to validate it?
- you are testing the null hypothesis even when it is never among your hypotheses of interest?
- it is sometimes difficult to interpret the results of classical hypothesis testing?

You will be happy to learn about Bayesian model selection which provides an answer to each of these questions.

If you ever encountered one of the following issues

- a data set too small for your complex model,
- non-normally distributed parameters/variables,
- negative variances or correlations larger than one

You will be happy to learn about Bayesian estimation because it explicitly addresses each of these issues.

If you ever wanted to compute

- the probability that your hypothesis is correct after observing the data (which is not what the p-value does)
- a 95% interval reflecting your knowledge about a parameter of interest (which is not what the confidence interval does)
- the degree of support for each of the models in your model selection competition.

During the course you will learn how to compute these issues with Bayesian statistics.

Recommended reading

It is recommended to read these two tutorial papers that are provided as downloads on Stud.IP before the course:

<http://onlinelibrary.wiley.com/doi/10.1111/cdev.12169/abstract>

<http://www.frontiersin.org/journal/10.3389/fpsyg.2013.00770/abstract>

Target group

Doctoral candidates and postdoctoral researchers at GGS

Course language

English

Registration

Please register by April 1, 2014 via Stud.IP: https://studip.uni-giessen.de/studip/details.php?sem_id=1b41437f2ef0383bb83307d474a040c1&send_from_search=1&send_from_search_page=sem_portal.php%3Fkeep_result_set%3D1