

Statistical Inference II - Syllabus

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Timetable:

Date	Time	Room
18/09/2023	14.00 - 17.00	TBA
21/09/2023	14.00 - 17.00	TBA
25/09/2023	14.00 - 17.00	TBA
28/09/2023	14.00 - 17.00	TBA
02/10/2023	14.00 - 17.00	TBA

Program:

- Introduction to Bayesian data analysis: prior and posterior distributions for inference.
- One-parameter models: Binomial-Beta, Poisson-Gamma, Exponential-Gamma, and Normal-Normal.
- Methods for prior elicitation.
- Inference based on the posterior distribution (point and interval estimates; hypotheses testing).
- Simulation-based inference: MCMC methods.
- Linear and generalized linear models from a Bayesian perspective.

References:

- ★ Hoff, P. A first course in Bayesian Statistical Methods (2009). Springer.
- Gelman, A., Carlin, J., Stern, H., Dunson, D., Vehtari, A., and Rubin, D. Bayesian Data Analysis, Third edition (2013). Chapman & Hall/CRC Texts in Statistical Science.
- Robert, C. and Casella, G. Monte Carlo Statistical Methods, Second edition (2004). Springer.