Bayesian Statistics I

Prof. Bernardo Nipoti

Duration: 18 hours

Syllabus:

- Exchangeability and de Finetti's theorem
- The Bayesian framework
- Conjugate prior distributions
- Approximation of the posterior distribution via simulation
- The normal model
- The multivariate normal model
- Hierarchical modelling

Main textbook:

- Hoff, P.D., 2009. *A first course in Bayesian statistical methods*(Vol. 580). New York: Springer.

Other books:

- Gelman, A., Carlin, J.B., Stern, H.S., Dunson, D.B., Vehtari, A. and Rubin, D.B., 2013. *Bayesian data analysis*. CRC press. (free pdf version)
- Robert, C., 2007. *The Bayesian choice: from decision-theoretic foundations to computational implementation*. Springer Science & Business Media.

Additional references will be given during the course.

Schedule:

21/04/21: Class 1 (14.30-17.30)
22/04/21: Class 2 (14.30-17.30)
26/04/21: Class 3 (14.30-17.30)
28/04/21: Class 4 (14.30-17.30)
30/04/21: Class 5 (14.30-17.30)
03/05/21: Class 6 (14.30-17.30)