



UNIVERSITÀ
DEGLI STUDI
DI PADOVA



PHD COURSE
IN STATISTICS

Specialist Course | Cycle XXXVI

May - June, 2021 | On-line

Bayesian Data Analysis and Computation

Brunero Liseo – Andrea Tancredi
Sapienza, Università di Roma

May 20	10.00 – 13.00	BL - Prior distributions for Bayesian Inference: Objective vs. Subjective
May 24	10.00 – 13.00	BL - Posterior simulation and Monte Carlo methods
May 25	10.00 – 13.00	BL - Markov Chain Monte Carlo and other computational methods
May 31	10.00 – 13.00	BL - Linear Models: variable selection and model checking
June 1	10.00 – 13.00	AT - MCMC in practice (Linear, Generalized linear and other models)
June 3	10.00 – 13.00	AT - Hierarchical Bayesian Models
June 4	10.00 – 13.00	AT - Approximate Bayesian Computation and Sequential MC

Instructors : BL is Brunero Liseo, AT is Andrea Tancredi

<https://www.stat.unipd.it/fare-ricerca/courses-202021-xxxvi-cycle>

www.stat.unipd.it/ricerca/dottorato-di-ricerca | phd@stat.unipd.it

BAYESIAN DATA ANALYSIS AND COMPUTATION

Brunero Liseo – Andrea Tancredi | Sapienza, Università di Roma

Programme: please refer to <https://sites.google.com/a/uniroma1.it/brulis/insegnamenti> for an almost final version of the slides

May, 20th

Prior distributions for Bayesian Inference: Objective vs. Subjective

Ref. G. Consonni, D. Fouskakis, B. Liseo, I. Ntzoufras,
Prior distributions for objective Bayesian analysis,
Bayesian Analysis 13 (2), 627-679

May 24th

Posterior simulation and Monte Carlo methods

Ref: <https://warwick.ac.uk/fac/sci/statistics/staff/academic-research/johansen/teaching/mcm-2007.pdf>

May 25th

Markov Chain Monte Carlo and other computational methods

Ref: <https://warwick.ac.uk/fac/sci/statistics/staff/academic-research/johansen/teaching/mcm-2007.pdf>

May 31st

Linear Models: variable selection and model checking

Ref. Slides and other material provided by the instructor

June 1st

MCMC in practice (Linear, Generalized linear and other models)

Ref. Slides and other material provided by the instructor

June 3st

Hierarchical Bayesian Models

Ref. Slides and other material provided by the instructor

June 4th

Approximate Bayesian Computation and Sequential MC

Ref. Slides and other material provided by the instructor