



UNIVERSITÀ
DEGLI STUDI
DI PADOVA



PHD COURSE
IN STATISTICS

Specialist Course | Cycle XXXVII

May - June, 2022 | Campus S. Caterina

Bayesian Data Analysis and Computation

Brunero Liseo – Andrea Tancredi
Sapienza, Università di Roma

May 23	09.30 – 12.00	BL - Prior distributions for Bayesian Inference: Objective vs. Subjective
	15:00 – 17:30	BL - Posterior simulation and Monte Carlo methods
May 24	09.30 – 12.00	BL - Markov Chain Monte Carlo and other computational methods
	15:00 – 17:30	BL - Linear Models: variable selection and model checking
June 6	15.00 – 18.00	AT - MCMC in practice: generalized linear models, mixture models
June 7	09.30 – 12.00	AT - Hierarchical Bayesian Models
	14.30 – 17.00	AT - Approximate Bayesian Computation and Sequential Monte Carlo

Instructors : BL is Brunero Liseo, AT is Andrea Tancredi

<https://www.stat.unipd.it/fare-ricerca/courses-202122-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

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

May, 23rd (9.30-12) - Room SC40

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, 23rd (15-17.30) - Room SC30

Posterior simulation and Monte Carlo methods

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

May 24th (9.30-12) - Room Cucconi

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, 24th (15-17.30) - Room Cucconi

Linear Models: variable selection and model checking

Ref. Slides and other material provided by the instructor

June 6th (15-18) - Room SC20

MCMC in practice: generalized linear models, mixture models)

Ref. Slides and other material provided by the instructor

June 7th (9.30-12) - Room SC60

Hierarchical Bayesian Models

Ref. Slides and other material provided by the instructor

June 7st (14:30 -17:00) - Room SC60

Approximate Bayesian Computation and Sequential Monte Carlo

Ref. Slides and other material provided by the instructor