



UNIVERSITÀ
DEGLI STUDI
DI PADOVA



PHD COURSE
IN STATISTICS

Specialist Course | Cycle XXXVIII

June, 2023 | Campus S. Caterina

Bayesian Data Analysis and Computation

Brunero Liseo – Andrea Tancredi
Sapienza, Università di Roma

June 19	09.30 – 12.00	BL - Prior distributions for Bayesian Inference: Objective vs. Subjective
	15:00 – 17:30	BL - Posterior simulation and Monte Carlo methods
June 20	09.30 – 12.00	BL - Markov Chain Monte Carlo and other computational methods
	14:00 – 16:30	BL – Prediction, Model Selection and Testing
June 22	15.00 – 17.30	AT - MCMC in practice: linear models, generalized linear models and other case studies
June 23	09.30 – 12.00	AT – Mixture models and hierarchical models
	14.30 – 17.00	AT - Approximate Bayesian Computation and sequential Monte Carlo methods

Instructors : BL is Brunero Liseo, AT is Andrea Tancredi

<https://www.stat.unipd.it/ricerca/courses-202223-xxxviii-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

June, 19th (9.30-12) - Room Uggé

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

June, 19th (15-17.30) - Room Uggé

Posterior simulation and Monte Carlo methods

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

June 20th (9.30-12) - Room Uggé

Markov Chain Monte Carlo and other computational methods

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

June, 20th (14-16.30) - Room Uggé

Prediction, Model Selection and Testing

June, 22th (15-17:30)

MCMC in practice: linear models, generalized linear models and other case studies

Ref. Slides and other material provided by the instructor

June 23th (9.30-12) - Room Uggé

Mixture models and hierarchical models

Ref. Slides and other material provided by the instructor

June 23th (14:30 -17:00) - Room Uggé

Approximate Bayesian Computation and sequential Monte Carlo methods

Ref. Slides and other material provided by the instructor