

# Collegio Carlo Alberto

---

## 7TH WORKSHOP ON BAYESIAN NONPARAMETRICS

MONCALIERI, 21-25 JUNE 2009



Fondazione de Castro



# ***FINAL WORKSHOP SCHEDULE***

## **Sunday, 21st June**

Registration: 12.00-14.25

Opening: 14.25-14.30

Tutorial 1: 14.30-16.00

Chair: Eugenio Regazzini (University of Pavia)

Speaker: **Persi Diaconis** (Stanford University)

Title: *Partial exchangeability and priors for Markov chains*

*16.00-16.30 Coffee Break*

Tutorial 2: 16.30-18.00

Chair: Eugenio Regazzini (University of Pavia)

Speaker: **Nils Hjort** (University of Oslo)

Title: *Bayesian nonparametrics for survival and event history data*

*18.00-19.30 Welcome Cocktail*

## **Monday, 22nd June**

Tutorial 3: 9.15-10.45

Chair: Aad van der Vaart (VU University Amsterdam)

Speaker: **Alan Gelfand** (Duke University)

Title: *Bayesian spatial and functional data analysis using gaussian processes*

*10.45-11.15: Coffee Break*

Tutorial 4: 11.15-12.45

Chair: Aad van der Vaart (VU University Amsterdam)

Speaker: **Michael I. Jordan** (University of California Berkeley)

Title: *Hierarchical nonparametric Bayes with applications*

*12.45-14.30: Lunch*

### Session 1: 14.30-16.00

Chair: Zoubin Ghahramani (University of Cambridge)

14.30-15.15

Speaker: **Gareth Roberts** (University of Warwick)

Title: *Bayesian non-parametric analysis of diffusions*

15.15-16.00

Speaker: **Arnaud Doucet** (The Institute of Statistical Mathematics Tokyo)

Title: *Particle Markov chain Monte Carlo methods for nonparametric Bayesian time series models*

*16.00-16.30: Coffee Break*

### Session 2: 16.30-18.00

Chair: Dipak Dey (University of Connecticut)

16.30-17.00

Speaker: **Yongdai Kim** (Seoul National University)

Title: *Bayesian analysis for multi-state event history data*

17.00-17.30

Speaker: **Chris C. Holmes** (University of Oxford)

Title: *Bayesian nonparametric two-sample testing*

17.30-18.00

Speaker: **Peter Müller** (University of Texas)

Title: *A Bayesian semiparametric method for jointly modeling a primary endpoint and longitudinal measurements*

## **Tuesday, 23rd June**

### Session 3: 9.15-10.45

Chair: Arnaud Doucet (The Institute of Statistical Mathematics Tokyo)

9.15-9.45

Speaker: **Steven N. MacEachern** (Ohio State University)

Title: *Nonparametric Bayesian modelling and soft constraints*

9.45-10.15

Speaker: **Omiros Papaspiliopoulos** (Pompeu Fabra University)

Title: *Posterior simulation for nonparametric hidden Markov models*

10.15-10.45

Speaker: **Subhashis Ghosal** (North Carolina State University)

Title: *Bayesian multi-scale smoothing of astronomical images using the Chinese restaurant process*

*10.45-11.15: Coffee Break*

#### Session 4: 11.15-12.45

Chair: Giovanni Peccati (University of Paris X)

11.15-12.00

Speaker: **Aad van der Vaart** (VU University Amsterdam)

Title: *On gaussian process priors*

12.00-12.45

Speaker: **Judith Rousseau** (University of Paris Dauphine)

Title: *Rates of convergence for the posterior distributions of mixtures of betas and adaptive nonparametric estimation of the density*

*12.45-14.30: Lunch*

#### Session 5: 14.30-16.00

Chair: Chiara Sabatti (University of California Los Angeles)

14.30-15.15

Speaker: **Peter Green** (University of Bristol) & **Natalia Bochkina** (University of Edinburgh)

Title: *Consistency of Bayesian estimators in SPECT and other inverse problems*

15.15-16.00

Speaker: **Eugenio Regazzini** (University of Pavia)

Title: *Bayesian consistency and classical form of the problem of inverse probabilities*

*16.00-16.30: Coffee Break*

#### Session 6: 16.30-17.30

Chair: Gareth Roberts (University of Warwick)

16.30-17.00

Speaker: **Mark Steel** (University of Warwick)

Title: *Time-dependent stick-breaking processes*

17.00-17.30

Speaker: **Yee W. Teh** (University College London)

Title: *The Mondrian process*

#### Poster Session: 17.30-20.00

Presenters and poster titles are listed at the end of the programme

*Refreshments will be served during the poster session*

## Wednesday, 24th June

### Session 7: 9.15-10.45

Chair: Yongdai Kim (Seoul National University)

9.15-9.45

Speaker: **Fernando Quintana** (Pontifical Catholic University of Chile)

Title: *Flexible univariate continuous distributions*

9.45-10.15

Speaker: **Lancelot F. James** (Hong Kong University of Science and Technology)

Title: *Lamperti Type Laws*

10.15-10.45

Speaker: **Erik Sudderth** (Brown University)

Title: *Shared segmentation of natural scenes using dependent Pitman-Yor processes*

*10.45-11.15: Coffee Break*

### Session 8: 11.15-12.45

Chair: Albert Y. Lo (Hong Kong University of Science and Technology)

11.15-12.00

Speaker: **Zoubin Ghahramani** (University of Cambridge)

Title: *The Indian buffet process and extensions*

12.00-12.45

Speaker: **Francois Caron** (INRIA Bordeaux)

Title: *Random partitions on decomposable graphs*

*12.45-14.30: Lunch*

### Session 9: 14.30-16.00

Chair: Judith Rousseau (University of Paris Dauphine)

14.30-15.15

Speaker: **Jaeyong Lee** (Seoul National University)

Title: *Sparse Bayesian regression with growing number of covariates*

15.15-16.00

Speaker: **Surya Tokdar** (Duke University)

Title: *Joint linear quantile regression: a semi-parametric Bayesian approach*

*16.00-16.30: Coffee Break*

## Session 10: 16.30-18.00

Chair: Maria De Iorio (Imperial College London)

16.30-17.00

Speaker: **Timothy Hanson** (University of Minnesota)

Title: *Some classes of dependent tailfree processes and applications*

17.00-17.30

Speaker: **Luis E. Nieto-Barajas** (ITAM Mexico)

Title: *Rubbery Pólya tree*

17.30-18.00

Speaker: **Pietro Muliere** (Bocconi University)

Title: *Superposition of beta processes*

20.30: *Social Dinner*

## **Thursday, 25th June**

## Session 11: 9.15-10.45

Chair: Jaeyong Lee (Seoul National University)

9.15-9.45

Speaker: **Jim Griffin** (University of Kent)

Title: *Slice sampling nonparametric models*

9.45-10.15

Speaker: **David Dunson** (Duke University)

Title: *Nonparametric Bayes local mixture models*

10.15-10.45

Speaker: **Maria De Iorio** (Imperial College London)

Title: *Bayesian semiparametric meta-analysis for genetic association studies*

10.45-11.15: *Coffee Break*

## Session 12: 11.15-12.45

Chair: Peter Green (University of Bristol)

11.15-12.00

Speaker: **Albert Y. Lo** (Hong Kong University of Science and Technology)

Title: *Bayesian subset selection in regression models*

12.00-12.45

Speaker: **Michael D. Escobar** (University of Toronto)

Title: *Big alpha*

12.45-14.30: *Lunch*

### Session 13: 14.30-16.00

Chair: Francois Caron (INRIA Bordeaux)

14.30-15.15

Speaker: **Dipak Dey** (University of Connecticut)

Title: *Semiparametric Bayesian estimation of random coefficients discrete choice models*

15.15-16.00

Speaker: **Alessandra Guglielmi** (Polytechnic Milan)

Title: *Nonparametric Bayesian mixture modeling for failure time data*

*16.00-16.30: Coffee Break*

### Session 14: 16.30-18.00

Chair: Surya Tokdar (Duke University)

16.30-17.00

Speaker: **Peter Hoff** (University of Washington)

Title: *Generalized marginal likelihoods for semiparametric Bayesian inference*

17.00-17.30

Speaker: **Sonia Petrone** (Bocconi University)

Title: *Bayesian nonparametric regression with temporal constraints*

17.30-18.00

Speaker: **Pierpaolo De Blasi** (University of Turin)

Title: *Bayesian nonparametric estimation and consistency of mixed multinomial logit choice models*

# POSTER SESSION

Presenter: **Isadora Antoniano Villalobos** (University of Kent)  
Title: Bayesian inference for diffusions based on exact simulation

Presenter: **Raffaele Argiento** (IMATI-CNR Milan)  
Title: A simulation-based approach to full Bayesian inference for mixture densities under the normalized generalized gamma prior

Presenter: **Eric Barat** (CEA-LIST) & **Mame Diarra Fall** (L2S/SUPELEC)  
Title: Pitman-Yor Mixtures prior for nonparametric spatial emission tomography

Presenter: **Anirban Bhattacharya** (Duke University)  
Title: Bayesian local mixtures of factor analyzers

Presenter: **Abhishek Bhattacharya** (Duke University)  
Title: Nonparametric Bayesian density estimation on manifolds with applications to planar shapes

Presenter: **Eunice Campiran Garcia** (UNAM Mexico)  
Title: How to use product partitions models to reflect the prior knowledge of the stratification in finite population sampling

Presenter: **Alessandro Carta** (University of Warwick)  
Title: Modelling multi-output stochastic frontier using copulas

Presenter: **Annalisa Cerquetti** (Collegio Nuovo Pavia)  
Title: On a class of Bayesian nonparametric priors derived by subordination of stable processes

Presenter: **James M. Ciera** (University of Padua)  
Title: Fast approximate Bayesian functional mixed effects model

Presenter: **José C.S. de Miranda** (University of São Paulo)  
Title: Proxy maximum probability estimation of Poisson intensities

Presenter: **Chang Dorea** (Universidade de Brasilia)  
Title: On the robustness of Bayesian modelling of location and scale structures using heavy-tailed distributions

Presenter: **Ilenia Epifani** (Politecnico di Milano)  
Title: Priors for vectors of survival functions

Presenter: **Marian Farah** (University of California Santa Cruz)  
Title: Bayesian nonparametric modeling of cross-section vs. LET for the prediction of on-orbit upset rate

Presenter: **Emily Fox** (MIT)  
Title: Sharing features among dynamical systems with beta processes

Presenter: **Kassandra Fronczyk** (University of California Santa Cruz)  
Title: Nonparametric Bayesian regression for replicated categorical responses

Presenter: **Dimitros Giannikis** (Athens University of Economics and Business)  
Title: Clustering of many financial time series using nonparametric Bayesian technics

Presenter: **Dilan Görür** (University College London)  
Title: Efficient sequential Monte Carlo for inference on Kingman's coalescent

Presenter: **Spyridon Hatjispyros & Theodoros Nicoleris** (University of the Aegean)  
Title: Dependent mixtures of Dirichlet processes

Presenter: **Daniel Heinz** (Carnegie Mellon University)  
Title: Non-parametric hyper Markov priors

Presenter: **Ricardo Henao** (Technical University of Denmark)  
Title: Robust processes for latent variables in dynamical factor models

Presenter: **Gudmund Hermansen** (University of Oslo)  
Title: Bayesian nonparametric modelling of covariance functions, with application to time series and spatial statistics

Presenter: **Zhaowei Hua** (University of North Carolina at Chapel Hill)  
Title: Semiparametric Bayes local additive models for longitudinal data

Presenter: **Alejandro Jara** (Universidad de Concepcion)  
Title: A novel class of mixtures of multivariate Pólya trees

Presenter: **Mark Jensen** (Federal Reserve Bank of Atlanta)  
Title: Bayesian semiparametric stochastic volatility modeling

Presenter: **Maria Kalli** (University of Kent)  
Title: Mixtures of stick-breaking processes

Presenter: **George Karabatsos** (University of Illinois-Chicago)  
Title: A Bayesian nonparametric causal model

Presenter: **Dohyun Kim** (Seoul National University)  
Title: Bayesian subspace clustering with Indian Buffet process

Presenter: **Gwangsu Kim** (Seoul National University)  
Title: The time varying survival analysis by Bayesian bootstrap

Presenter: **Michalis Kolossiatis** (University of Warwick)  
Title: Bayesian nonparametric modelling of grouped data with an application to stochastic frontiers

Presenter: **Willem Kruijer** (University Paris Dauphine)  
Title: Adaptive Bayesian density estimation with location-scale mixtures

Presenter: **Heng Lian** (Nanyang Technological University)  
Title: Posterior convergence and model estimation in Bayesian change-point problems

Presenter: **Claudio Macci** (University of Rome Tor Vergata)

Title: Large deviations for Bayesian estimators in first-order autoregressive processes

Presenter: **Juan-Carlos Martinez-Ovando** (University of Kent)

Title: An alternative nonparametric time-series model

Presenter: **Takashi Matsumoto** (Waseda University)

Title: Dirichlet process EM algorithm for semi-supervised learning

Presenter: **Andriy Norets** (Princeton University)

Title: Bayesian modeling of joint and conditional distributions

Presenter: **Debdeep Pati** (Duke University)

Title: Bayesian nonparametric regression with an unknown predictor-dependent residual distribution

Presenter: **Maria Joao Polidoro** (Instituto Politecnico Porto)

Title: A Bayesian methodology for models adequacy

Presenter: **Cecilia Prosdocimi** (Univeristy of Padua)

Title: Countable mixtures of Markov chains

Presenter: **Sandra Ramos** (ISEP)

Title: Semiparametric Bayesian approach to gene profile classification

Presenter: **Eva Riccomagno** (University of Genova)

Title: Causal analysis with chain event graphs

Presenter: **Abel Rodriguez** (University of California Santa Cruz)

Title: Nested partition models

Presenter: **Carlos Erwin Rodriguez** (University of Kent)

Title: Sampling the mixture normal model

Presenter: **Daniel Roy** (MIT)

Title: On the computability of de Finetti measures

Presenter: **Matteo Ruggiero** (University of Pavia)

Title: Gibbs sampling the two-parameter Poisson-Dirichlet process and its diffusion limit

Presenter: **Catia Scricciolo** (Bocconi University)

Title: Rates of convergence for Bayes and ML estimators of mixtures of exponential power densities

Presenter: **Dario Spanò** (University of Warwick)

Title: Genealogy and dual processes associated with time-dependent Dirichlet processes, and their polynomial eigenfunctions

Presenter: **Matthew Taddy** (University of Chicago)

Title: Conditional modeling for survival data

Presenter: **Mahlet Tadesse** (Georgetown University)

Title: Bayesian nonparametric model for integrating genomic data sets

Presenter: **Takaaki Tokuda** (Waseda University)

Title: Maximum a posteriori estimation for Dirichlet process language models

Presenter: **Sinead Williamson** (University of Cambridge)

Title: A sparse, infinite topic model based on the Indian Buffet process

Presenter: **Fei Xiang** (University of Kent)

Title: Bayesian consistency for regression model

Presenter: **Hao Wu** (Free University Berlin)

Title: Artificial Conditional Dirichlet Processes

Presenter: **Oliver Zobay** (University of Bristol)

Title: Mean field inference for the Dirichlet process mixture model