Valentin De Bortoli

Curriculum Vitae

GENERAL

Birth	13 octobre 1993
Address	64 Avenue du Général Leclerc, Paris
Mail	valentin.debortoli@gmail.com

EDUCATION

Msc, Mathématiques Vision et Apprentissage 2016-2017
ENS Paris Saclay, Cachan

Agrégation externe 2015-2016
ENS Paris Saclay, Cachan
19th/300

First year graduate study 2014-2015
ENS Paris Saclay, Cachan

Bsc, Mathématiques Fondamentales 2013-2014
ENS Paris Saclay, Cachan

Higher School Preparatory Classes 2011-2013
Lycée aux Lazaristes, Lyon

Baccalauréat 2011
Lycée Saint Ambroise, Chambéry

PROFESSIONAL EXPERIENCE

Postdoctoral researcher 2020-...
Oxford University
In collaboration with Arnaud Doucet.

Phd student 2017-2020
Centre de Mathématiques et de Leurs Applications (CMLA), Cachan
Advisors: Agnès Desolneux, Bruno Galerne, Arthur Leclaire.

Teaching assistant 2017-2020

ENS Paris Saclay

Differential calculus Teaching Assistant (undergraduate level), reference: Frédéric Pascal. Optimization Teaching Assistant (graduate level), reference: Alain Trouvé. Hilbertian analysis and Fourier analysis Teaching Assistant (agrégation), reference: Frédéric Pascal.

Intern 2017

CMLA

Advisors : Agnès Desolneux, Bruno Galerne and Arthur Leclaire.

Intern 2015

San Diego State University

Advisor: Jérôme Gilles.

JOURNAL

Review of wavelet-based unsupervised texture segmentation, advantage of adaptive wavelets 2018

Huang, De Bortoli, Zhou, Gilles

IET image processing

Patch redundancy in images: a statistical testing framework and some applications 2019

De Bortoli, Desolneux, Galerne

SIAM Imaging Science

Efficient stochastic optimisation by unadjusted Langevin Monte Carlo. Application to maximum marginal likelihood. 2019

De Bortoli, Durmus, Pereyra, F. Vidal

Statistics and Computing

Redundancy in Gaussian random fields 2020

De Bortoli, Galerne, Leclaire

ESAIM: Probability and Statistics

Maximum likelihood estimation of regularisation parameters in high-dimensional inverse problems: an empirical Bayesian approach. Part I: Methodology and Experiments 2020

F.Vidal, De Bortoli, Pereyra, Durmus

SIAM Imaging Science

Maximum likelihood estimation of regularisation parameters in high-dimensional inverse problems: an empirical Bayesian approach. Part II: Theoretical Analysis 2020

De Bortoli, Durmus, F.Vidal, Pereyra

SIAM Imaging Science

Maximum entropy methods for texture synthesis 2021

De Bortoli, Desolneux, Durmus, Galerne, Leclaire

SIAM Journal on Mathematics of Data Science

CONFERENCE

Macrocanonical models for texture synthesis 2019

De Bortoli, Desolneux, Galerne

SSVM

ABC with the Sliced-Wasserstein Distance 2019

Nadjahi, De Bortoli, Durmus, Badeau, Simsekli

ICCASP

Quantitative Propagation of Chaos for Stochastic Gradient Descent in Wide Neural Networks 2020
De Bortoli, Durmus, Fontaine, Simsekli
NEURIPS

SUBMITTED

Convergence of diffusion and their discretizations: from continuous to discrete processes and back 2019
De Bortoli, Durmus

Continuous and Discrete-Time Analysis of Stochastic Gradient Descent for Convex and Non-Convex Functions 2020
Fontaine, De Bortoli, Durmus

Bayesian imaging using P&P priors 2021
Laumont, De Bortoli, Almansa, Delon, Durmus, Pereyera

TALKS (CONFERENCE AND MINISYMPOSIUM)

- CIRM Imaging Semester (2018) – Patch redundancy in images: a statistical testing framework and some applications
- SSVM (2019) – Macrocanonical models for texture synthesis
- NEURIPS (2020) – Quantitative Propagation of Chaos for Stochastic Gradient Descent in Wide Neural Networks
- Hausdorff School on MCMC (2020) – Continuous and Discrete-Time Analysis of Stochastic Gradient Descent for Convex and Non-Convex Functions
- SIAM CSE (2021) – Beyond the classical variational regularization: when Bayesian and learning methods come to rescue

SEMINARS

- Centre Borelli (Imaging seminar) – ENS Paris Saclay (2018)
- Institut Denis Poisson – Université d'Orléans (2018)
- Institut de Mathématiques de Bordeaux (Probability and Imaging seminar) – Université de Bordeaux (2019)
- Centre Borelli (Imaging Seminar) – ENS Paris Saclay (2019)
- Laboratoire de Mathématiques et Applications (ANR MISTIC) – Université de Poitiers (2019)
- Centre de Mathématiques Appliquées de l'École Polytechnique (SIMPA seminar) – École Polytechnique (2019)
- Centre de Mathématiques Appliquées de l'École Polytechnique (PEIPS seminar) – École Polytechnique (2019)

- Département d'informatique (DATA Seminar) – ENS Ulm (2019)
- Cosines B4Health Seminar (2020)
- Laboratoire de Mathématiques et Applications (ANR MISTIC) – Université de Poitiers (2020)
- Laboratory for Computational and Statistical Learning (Machine learning seminar) – University of Genova (2020)
- Statistical Department – Oxford University (2020)
- Centre Borelli (Machine Learning seminar) – ENS Paris Saclay (2020)
- Cosines B4Health Seminar (2021)
- Laboratoire de physique (SISYPHE Seminar) – ENS Lyon (2021)

OTHER

Languages	French (mothertongue) English (advanced) (627/677 TOEFL exam) Italian (basic) Spanish (basic)
Programmes	MATLAB, LaTeX, PYTHON, EMACS
O.S	Linux, Windows