Chiara Amorino

Curriculum Vitae

Université du Luxembourg
Maison du Nombre
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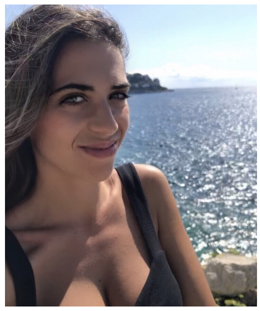

Education

Sep 2020 – Now — **Postdoc in Applied Mathematics**, Université du Luxembourg, Esch-sur-Alzette, Luxembourg.
Supervisor: Prof Mark Podolskij.
Project: Statistical Methods For High Dimensional Diffusions (STAMFORD), funded by ERC Consolidator grant.

Oct 2017– Aug 2020 — **PhD in Applied Mathematics**, LaMME, Université Paris-Saclay, France.
Supervisor: Prof Arnaud Gloter.
Title: Bias correction for the drift and volatility estimation of a jump diffusion and non-parametric adaptive estimation of the invariant measure.
Jury: Alexandre Brouste (Rapporteur), Fabienne Comte, Arnaud Gloter, Agathe Guilloux, Eulalia Nualart (Rapporteur), Fabien Panloup, Mathieu Rosenbaum.

2015 - 2017 — **Master Degree in Mathematics**, Universitá Statale di Milano, Italy.
Dissertation title: "Randomization method and backward differential stochastic equations for optimal control", under the supervision of prof. Marco Fuhrman.
Grade: magna cum laude ("110/110 e lode", with First-Class Honours)

Sep 2016 - Jan 2017 — **Visiting student**, Université Paris VII Diderot, France.
Master M2MO : Modelisation Aléatoire

2012 - 2015 — **Bachelor's degree in Mathematics**, Universitá Statale di Milano, Italy.

Major research interests

Jump diffusion processes, high dimensional statistics, volatility estimation, limit theorems, Malliavin calculus, nonparametric statistics, Stein's method, McKean-Vlasov SDEs, minimax risk, convergence rate, Lévy - driven SDE, thresholding methods.

Publications

Feb 2022 — C. Amorino, A. Gloter. Estimation of the invariant density for discretely observed diffusion processes: impact of the sampling and of the asynchronicity (Submitted, `https://arxiv.org/pdf/2203.01055.pdf`)

Oct 2021 — C. Amorino, A. Gloter. Minimax rate of estimation for invariant densities associated to continuous stochastic differential equations over anisotropic Holder classes (Submitted, `https://arxiv.org/pdf/2110.02774.pdf`)

Jan 2021 — C. Amorino, E. Nualart. Optimal convergence rates for the invariant density estimation of jump-diffusion processes (*ESAIM: Probability and Statistics*; pp. 126-151, `https://www.esaim-ps.org/articles/ps/abs/2022/01/ps210004/ps210004.html`)

Nov 2020 C. Amorino, C. Dion, A. Gloter, S. Lemler. On the nonparametric inference of coefficients of self-exciting jump-diffusion (Under minor revision for Electronic Journal of Statistics, `https://arxiv.org/pdf/2011.12387.pdf`)

Nov 2020 C. Amorino. Rate of estimation for the stationary distribution of jump-processes over anisotropic Holder classes (*Electronic Journal of Statistics*; pp. 5067-5116, `https://doi.org/10.1214/21-EJS1913`)

Jan 2020 C. Amorino, A. Gloter. Invariant density adaptive estimation for ergodic jump diffusion processes over anisotropic classes (*Journal of Statistical Planning and Inference*; pp. 106 - 129, `https://www.sciencedirect.com/science/article/pii/S037837582030121X`)

Oct 2019 C. Amorino, A. Gloter. Joint estimation for volatility and drift parameters of ergodic jump diffusion processes via contrast function (*Statistical Inference for Stochastic Processes*; pp. 1 - 88, `https://link.springer.com/article/10.1007/s11203-020-09227-z`)

Apr 2019 C. Amorino, A. Gloter. Unbiased truncated quadratic variation for volatility estimation in jump diffusion processes (*Stochastic Processes and Applications*; pp. 5888 - 5939, `https://doi.org/10.1016/j.spa.2020.04.010`)

Jul 2018 C. Amorino, A. Gloter. Contrast function estimation for the drift parameter of ergodic jump diffusion process (*Scandinavian Journal of Statistics*; pp. 1 - 68, `https://doi.org/10.1111/sjos.12406`)

Talks

Jun 20-24, 2022 **International Symposium of Nonparametric Statistics**
Paphos, Cyprus (invited).

Jun 13-16, 2022 **Third Italian Meeting on Probability and Mathematical Statistics**
Bologna, Italy (invited).

Apr 26, 2022 **Workshop at Universitat Pompeu Fabra Barcelona**
Barcelona, Spain (invited).

Mar 10, 2022 **Séminaire de Probabilités et Statistique du laboratoire Modal X**
Nanterre, France (invited).

Feb 9, 2022 **Workshop at National University of Ireland**
Maynooth, Ireland (invited).

Dec 9, 2021 **Séminaire de Probabilités et Statistique du CERMICS**
Paris, France (invited).

Nov 26, 2021 **Séminaire de Probabilités et Statistique de l'INRIA PASTA**
La Petite Pierre, France (invited).

Nov 25, 2021 **Séminaire de Probabilités et Statistique de l'IECL - Université de Nancy**
Nancy, France (invited).

Nov 22, 2021 **WIP seminar - Luxembourg University**
Esch-sur-Alzette, Luxembourg (invited).

Oct 21,2021 **Stochastic processes and statistics workshop at Humboldt-Universitat zu Berlin**

Berlin, Germany (invited).

Mar 11, 2021 **Probability and Statistics seminar - Luxembourg University**
Esch-sur-Alzette, Luxembourg (invited).

Jan 21, 2021 **Séminaire de Statistique du LMRS**
Rouen, France (invited).

Jan 12, 2021 **Webinar Se Mi Narri di Matematica**
Pavia, Italy (invited).

Sep 21, 2020 **Séminaire Parisien de Statistique**
Paris, France (invited).

Jul 2, 2020 **Defense PhD**
Évry, France.

Jun 10-12,2020 **Dynstoch 2020 (Canceled, due to Covid-19 emergency)**
Aarhus, Denmark.

May 20,2020 **Workshop Humboldt-Universitat zu Berlin**
Berlin, Germany (invited).

May 10-15,2020 **Jeunes Probabilistes et Statisticiens 2020 (Canceled, due to Covid-19 emergency)**
Saint Pierre d'Oléron, France.

Mar 24-27, 2020 **German Probability and Statistics Days 2020 (Canceled, due to Covid-19 emergency)**
Dresden, Germany.

Mar 19, 2020 **Web conference École Polytechnique**
Paris, France (invited).

Sep 2-6, 2019 **StatMathAppli 2019**
Frejus, France.

Jun 17-20, '19 **Second Italian Meeting on Probability and Mathematical Statistics**
Vietri sul Mare, Italy.

Jun 12-14, '19 **Dynstoch 2019**
Delft, The Netherlands.

Review activity

Referee for scientific journals: *Annals of Statistics*, *Applied Mathematics and Computation*, *Bernoulli*, *Cogent Economics and Finance*, *Electronic Journal of Statistics*, *Journal of Computational and Applied Mathematics*, *Mathematical Methods in the Applied Sciences*, *Statistica Sinica*, *Stochastic Processes and Applications*.

Academic Tutoring

Supervision of Bachelor Thesis

Bachelor of science in Mathematics at Université du Luxembourg. Esch-sur-Alzette, Luxembourg.

Supervision of Master Project

Master of science in Mathematics at Université du Luxembourg. Esch-sur-Alzette, Luxembourg.

Associate of the Maths Team

Training for high-school students interested in participating in mathematical contests. Esch-sur-Alzette, Luxembourg.

Teaching activities

Feb 2022 - Sep 2022	Lecture for 'Continuous Time Models in Mathematical Finance' with G. Peccati, Master of Mathematics at Université du Luxembourg. Esch-sur-Alzette, Luxembourg
Sep 2021 - Feb 2022	Lecture for 'Probabilistic Models in Finance', Master of Mathematics at Université du Luxembourg. Esch-sur-Alzette, Luxembourg
Feb 2021 -Sep 2021	Lecture for 'Analyse et Applications 2', Bachelor of science in Physics at Université du Luxembourg. Esch-sur-Alzette, Luxembourg
Oct 2017 - Aug 2020	Computer lab (in R) for 'Analyse des Données', Bachelor of science in Bioinformatics and Biology at Université d'Évry Val d'Essonne. Évry, France
Oct 2017 - Aug 2020	Exercises for 'Analyse des Données', Bachelor of science in Bioinformatics and Biology at Université d'Évry Val d'Essonne. Évry, France
Oct 2017 - Aug 2020	Exercises for 'Probabilités', Bachelor of science in Informatics and Bioinformatics at Université d'Évry Val d'Essonne. Évry, France
Oct 2017 - Aug 2020	Exercises for 'Statistiques', Bachelor of science in Informatics and Bioinformatics at Université d'Évry Val d'Essonne. Évry, France

Languages

Italian	Mother tongue
English	Fluent
French	Fluent
Spanish	Intermediate
German	Beginner

Computer Skills

LaTeX, Python, R, SAS, Matlab, C

Administrative tasks

2014 - 2016	Students' representative at Universitá Statale di Milano. Milano, Italy
2010 - 2012	Students' representative at I.I.S. Alessandro Volta. Lodi, Italy

Extra-curricular activities

Feb 2017 **Representation of KPMG Italy during the KICC business game** Business consulting team work. KPMG Innovation and Collaboration Challenge is about creating an idea for a company in order to transform its current business model. The business cases are characterised by the importance of Big Data and Fin Tech. *Milan, Italy*

Jul 2016 **Modelling week ECMI**, an exchange week between University and Industry in which we modeled mathematically some real-life problems. My team worked on the data mining in a dataset with noise. *Sofia, Bulgaria*

Mar-Jun 2015 **Teaching internship at the high school I.I.S. A. Volta** *Lodi, Italy*

2011 - 2017 **Math tutor** *Lodi - Milan, Italy*