

Arnaud GLOTER

Born 03/11/72, in Montreuil - France

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Professional experience

- 2009–Now : Professor in applied mathematics at Université d'Évry Val d'Essonne.
- 2005–2009 : Associate professor in applied mathematics at Université Paris Est Marne–la–Vallée.
- 2000–2005 : Associate professor in applied mathematics at à l'Université Bordeaux 4.

Education

- 2008 : Habilitation à diriger les recherches : "Quelques contributions à la statistique des processus". Université de Marne–la–Vallée.
- 1997–2000 : PhD in statistics at l'Université de Marne–la–Vallée under the supervision of Mme Valentine Genon–Catalot. Thesis title : "Estimation des paramètres d'une diffusion cachée : intégrales de processus de diffusion et modèles à volatilité stochastique".
- 1996 : DEA (Master) Probability and Applications, *Stochastic processes* at Université Pierre et Marie Curie (with highest honours).
- 1995 : Agrégation de Mathématiques (national math examination, rank : 29th).
- Student at Ecole Normale Supérieur de Cachan, from 1992 to 1996.

Research topics

- Statistics for stochastic processes, diffusion processes, Lévy processes, fractional Brownian Motion, multiplicative cascade processes, multifractal processes, stochastic volatility models, skew Brownian motion, microstructure noise, (integrated) volatility estimation
- Limit theorems, asymptotic study of the likelihood processes, LAMN property, Malliavin calculus
- Non-parametric statistics, minimax risk, invariant density estimation for stochastic processes
- Privacy in statistics, local differential privacy
- Numerical scheme for diffusion processes

- C. Amorino, A. Gloter (2025) Factorization by extremal privacy mechanisms : new insights into efficiency, *submitted* <https://arxiv.org/abs/2507.21769>
- A. Gloter, N. Yoshida. (2025) Drift estimation for rough processes under small noise asymptotic : QMLE approach, *submitted* <https://arxiv.org/abs/2510.09028>
- A. Gloter, N. Yoshida. (2025) Drift estimation for rough processes under small noise asymptotic : trajectory fitting method, *submitted* <https://arxiv.org/abs/2503.03347>
- C. Amorino, C. Dion, A. Gloter, S. Lemler (2025) Nonparametric estimation of the stationary density for Hawkes-diffusion systems with known and unknown intensity, *To appear Ann. Inst. H. Poincaré Probab. Statist.* <https://hal.science/hal-05290064v1>
- A. Gloter, N. Yoshida. (2025) Quasi-likelihood analysis for adaptive estimation of a degenerate diffusion process *To appear Annals of the Institute of Statistical Mathematics*
- C. Amorino, A. Gloter, H. Halconruy (2025). Evolving privacy : drift parameter estimation for discretely observed i.i.d. diffusion processes under LDP *Stochastic Processes and their Applications*, Volume 181, 2025
- C. Amorino, A. Gloter (2025). Minimax rate for multivariate data under componentwise local differential privacy constraints, *Ann. Statist.* 53(3) : 1176-1202 (June 2025). DOI : 10.1214/25-AOS2497
- C. Amorino, A. Gloter (2025). Malliavin calculus for the optimal estimation of the invariant density of discretely observed diffusions in intermediate regime, *Ann. Inst. H. Poincaré Probab. Statist.* 61(4) : 2866-2910 (November 2025).
- A. Gloter, N. Yoshida (2024) Non-adaptive estimation for degenerate diffusion processes. *Journal : Theor. Probability and Math. Statist.* 110 (2024), 75-99
- C. Amorino, A. Gloter (2023). Estimation of the invariant density for discretely observed diffusion processes : impact of the sampling and of the asynchronicity. *Statistics, A Journal of Theoretical and Applied Statistics* Volume 57, 2023 - Issue 1, 213-259
- C. Amorino, A. Gloter (2023). Minimax rate of estimation for invariant densities associated to continuous stochastic differential equations over anisotropic Holder classes *Scandinavian Journal of statistics*, december 2023
- C. Amorino, C. Dion, A. Gloter, S. Lemler, (2022) On the nonparametric inference of coefficients of self-exciting jump-diffusion. *Electron. J. Statist.* 16(1) : 3212-3277 (2022). DOI : 10.1214/22-EJS2019
- S. Delattre, A. Gloter, N. Yoshida (2022) Rate of estimation for the stationary distribution of stochastic damping Hamiltonian systems with continuous observations. *Ann. Inst. H. Poincaré Probab. Statist.* 58(4) : 1998-2028.
- Arnaud Gloter, Nakahiro Yoshida (2021) Adaptive estimation for degenerate diffusion processes. *Electron. J. Statist.* 15(1) : 1424-1472

- Chiara Amorino, Arnaud Gloter (2021) Invariant density adaptive estimation for ergodic jump–diffusion processes over anisotropic classes *Journal of Statistical Planning and Inference* Volume 213, Pages 106-129
- Amorino, C., Gloter, A. (2020) Joint estimation for volatility and drift parameters of ergodic jump diffusion processes via contrast function. *Stat Inference Stoch Process*.
- Emmanuelle Clément, Arnaud Gloter. (2020) Joint estimation for SDE driven by locally stable Lévy processes *Electron. J. Statist.* 14(2) : 2922-2956 (2020).
- Chiara Amorino, Arnaud Gloter (2020) Unbiased truncated quadratic variation for volatility estimation in jump diffusion processes *Stochastic Processes and their Applications* Volume 130, Issue 10, October 2020, Pages 5888-5939
- Chiara Amorino, Arnaud Gloter (2020) Contrast function estimation for the drift parameter of ergodic jump diffusion process. *Scandinavian journal of statistics.* Volume47, Issue2 June 2020 Pages 279-346
- A. Gloter, I. Honoré, D. Loukianova (2020) Approximation of the invariant distribution for a class of ergodic jump diffusions, *ESAIM :P&S*, vol.24, p883-931
- E. Clément, A. Gloter (2019) Estimating functions for SDE driven by stable Lévy processes. *Annales de l’Institut Henri Poincaré Probabilités et Statistiques* 55(3) :1316-1348
- E. Clément, A. Gloter, H. Nguyen (2019) LAMN property for the drift and volatility parameters of a SDE driven by a stable Lévy process. *ESAIM :P&S*, vol.23, p136-175
- E. Clément, A. Gloter, H. Nguyen (2018) Asymptotics in small time for the density of a stochastic differential equation driven by a stable Lévy process. *ESAIM :P&S* vol.22 p58 ?95
- A. Gloter, D. Loukianova, H. Mai (2018) Jump Filtering and efficient drift estimation for Lévy driven SDE’s. *Annals of Statistics.* Volume 46, Number 4 (2018), 1445-1480
- E. Clément, A. Gloter. (2017) An application of the KMT construction to the pathwise weak error in the Euler approximation of one-dimensional diffusion process with linear diffusion coefficient. *Annals of Applied Probability*, vol 27(4), p.2419-2454
- A. Gloter, M. Martinez. (2016) Bouncing skew Brownian motions *J Theor Probab* doi :10.1007/s10959-016-0719-z.
- E. Clément, A. Gloter. (2015) Local Asymptotic Mixed Normality property for discretely observed stochastic differential equations driven by stable Lévy processes. *Stochastic Processes and Applications*, 125, p. 2316-2352
- E. Clément, S. Delattre, A. Gloter. (2014) Asymptotic lower bounds in estimating jumps *Bernoulli*, 20(3) p. 1059-1096
- M. Falconnet, A. Gloter, D. Loukianova. (2014) Maximum likelihood estimation in the context of a sub-ballistic random walk in a parametric random environment. *Mathematical Methods of Statistics* 23(3), p. 159-175
- A. Gloter, M. Martinez. Distance between two skew Brownian motion as SDE with jumps and law of hitting time. *Annals of probability*, Volume 41, Number 3A (2013), 1628-1655

- E. Clément, S. Delattre, A. Gloter. An infinite dimensional convolution theorem with applications to the efficient estimation of the integrated volatility. *Stochastic Processes and their Applications* 123 (2013) 2500–2521
- E. Clément, A. Gloter. Limit theorems in the Fourier transform method for the estimation of multivariate volatility. *Stochastic Processes and their applications*, vol 121, Page 1097–1124, 2011
- E. Bacry, A. Gloter, M.Hoffmann et J.F. Muzy. Multifractal analysis in a mixed asymptotic framework. *Annals of applied probability*, 20(5) :1729-1760, 2010 2010
- A. Gloter et M.Hoffmann Nonparametric reconstruction of a multifractal function from noisy data. *Probab. Theory Related Fields*, 146(1-2) :155-187, 2010
- A. Gloter et M. Sørensen. Estimation for stochastic differential equations with a small diffusion coefficient. *Stochastic. Process. Appl.*, 119 :679–699, 2009.
- A. Gloter et E. Gobet. LAMN property for hidden processes : The case of integrated diffusions. *Ann. Inst. H. Poincaré Probab. Statist.*, 44 :104–128, 2008.
- E. Bacry, A. Gloter, M.Hoffmann et J.F. Muzy. Long time behavior for the partition function of multiplicative cascades. *Proceedings of IWAP08 (International Workshop on Applied Probability, Compiègne, France, July 2008)*
- A. Gloter et M. Hoffmann Estimation of the Hurst parameter from discrete noisy data. *Ann. Statist.*, 35 :1947–1974, 2007
- A. Gloter. Efficient estimation of drift parameters in stochastic volatility models. *Finance Stoch.*, 11 :495–519, 2007.
- A. Gloter. Parameter Estimation for a discretely observed integrated diffusion process. *Scand. J. Statist.*, 33 :83–104, 2006.
- A. Gloter et M. Hoffmann Stochastic volatility and fractional Brownian motion. *Stochastic. Process. Appl.*, 113 :143–172, 2004
- A. Gloter. Parameter estimation for a discrete sampling of an integrated Ornstein-Uhlenbeck process. *Statistics*, 35 :225–243, 2001.
- A. Gloter et J. Jacod. Diffusion with measurement errors. I. Local asymptotic normality. *ESAIM : Prob. & Stat.*, 5 :225–242, 2001.
- A. Gloter et J. Jacod. Diffusion with measurement errors. II. Optimal estimator. *ESAIM : Prob. & Stat.*, 5 :243–260, 2001.
- A. Gloter. Discrete sampling of an integrated diffusion process and parameter estimation of the diffusion coefficient. *ESAIM : Prob. & Stat.*, 4 :205–227, 2000.
- A. Gloter. Estimation du coefficient de diffusion de la volatilité d’un modèle à volatilité stochastique. *C. R. Acad. Sci., Série I*, 330 :243–248, 2000
- A. Gloter. Estimation des paramètres d’une diffusion cachée : intégrales de processus de diffusions et modèles à volatilité stochastique. *Thèse de l’université de Marne-la-Vallée, rédigée sous la direction de V. Genon-Catalot*, Janvier 2000.

Conference, seminar, invitation : 2010-present

- December 2025 : Invitation CMStatistics 2025 - London (Online)
- October 2025 : 65th ISI World Statistics Congress - The Hague, Netherland
- December 2024 : Invitation CMStatistics 2024 - London (Online)
- December 2023 : Invitation CMStatistics 2023 - Berlin (Online)
- July 2023 : 64th ISI World Statistics Congress - Ottawa, Canada
- 6-9 June 2023 : SIAM Conference on Financial Mathematics and Engineering, Philadelphia,
- December 2022 : CMStatistics 2022 - ERCIM - CFE, London,
- December 2021 : Conference CMStatistics 2021 - ERCIM - CFE, London,
- 30 nov-3 dec 2021 : Conference III Jornadas Ecuatorianas en Matemáticas - Equateur (virtual)
- 22-26 Mars 2021 : "Nonlocal Operators and Markov Processes II" conference. Lecture on "Malliavin calculus for jump processes and statistical applications" (Univ. Dresdes, virtual : prac.im.pwr.wroc.pl/~bogdan/nomp-II.html)
- December 2020 : Conference CMStatistics 2020 - ERCIM - CFE, London,
- December 2019 : Conference CMStatistics 2019 - ERCIM - CFE, London,
- October 2018 : Invited professor (2 weeks) and conference, Institute of Statistical Mathematics - Tokyo,
- February 2018 : Invited professor (2 weeks) and conference, Tokyo University
- December 2017 : 9^{ème} conférence française d'économétrie, Discussion on the paper 'Volatility regression with fat tails' by Jihyun Kim & Nour Meddahi
- August 2017 : XXXIV. International Seminar on Stability Problems for Stochastic Models (Debrecen, Hongrie)
- 5-7 April 2017 : 5th to April 7th Dynstoch congress Statistical Methods for Dynamical Stochastic Models (Siegen, Allemagne).
- 2-5 February 2016 : Workshop Frontiers in Stochastic Modelling for Finance, Padoue
- Mars 2015 : Workshop « Statistique Asymptotique des Processus Stochastiques X », Le Mans.
- 7-11 February 2015 : Paris-Southeast Asia Conference in Mathematical Finance, (Siem Reap)
- 10-12 September 2014 : Congres Dynstoch, Statistical Methods for Dynamical Stochastic Models (Warwick)
- 30 June - 3 July 2014 : Invitation au 3^{ème} « Institute of Mathematical Statistics Asia Pacific Rim Meeting » (Taipei)
- 20 March 2014 : Invited to discuss a paper at « 7th Financial Risks International Forum » (Paris)
- 18-19 December 2013 : Workshop "Statistics for Stochastic Processes and Analysis of High Frequency Data", Organisé par Université Paris 6 et Université de Tokyo (Paris)
- 12-13 March 2013 : 5th Florence-Ritsumeikan workshop on Stochastic Processes and Applications to Finance and Risk Management (Florence)
- August 2012 : Journée MAS, session "Statistique des processus de Lévy et des diffusions".
- 7-9 June 2012 : congrès Dynstoch Statistical Methods for Dynamical Stochastic Models (Paris)
- December 2011 : Conference "Computational and Financial Econometrics" (CFE'11, London).
- June 2011 : Conference "Statistics and Modeling for Complex Data", Marne la Vallée, (présentation et organisation de la session "Statistics for finance")
- 21-24 Mars 2011 : Workshop "Statistique Asymptotique des Processus Stochastiques VIII" (Le Mans).

- 12 avril 2010 : Ecole Polytechnique. Seminar FIESTA ("Financial Risk" chair)
- 18 fev-5 mars 2010 : Invited professor Tokyo university. Participation at the Workshop "*Stochastic Analysis and Statistical Inference V*" (Tokyo)

Teaching experience

- 2009-présent. Teaching at the *Université d'Evry*.
 - Lecture "Stochastic calculus" Master 2 *Quantitative Finance*, 48h.
 - Lecture "Intro à l'économétrie financière" Master 2 *Ingénierie financière*, 12h.
 - Lecture "Traitement des données de marché : aspects statistiques" Master 2 *Ingénierie financière*, 12h.
 - Lecture "Probabilités" Master 1 *Ingénierie Mathématique*, 36h(C/TD).
 - Lecture and practical classes "Mise à niveau en C" Master 1 *Ingénierie Mathématique*, 26h.
 - Lecture "Espace de Hilbert" *L3 Mathématiques*, 19,5h.
 - Lecture "Compléments d'Analyse" *L2 Mathématiques*, 19,5h
 - Lecture "Modélisations et applications" *L2 Mathématiques*, 10hC+10hTD
- 2005-2009. Teaching at the *Université de Marne-la-Vallée*.
 - Lecture "Traitement des données de marché : aspects statistiques" Master 2 *Mathématiques et Applications*, 12h.
 - Lecture and practical classes "Analyse des données sous SAS" Master 1 *Ingénierie Mathématique, Informatique et Statistique*, 42h.
 - TD "Statistiques empiriques" Master 1 *Ingénierie Mathématique, Informatique et Statistique*, 24h.
 - TD "Probabilités" Licence L3 *Mathématiques*, 36h.
 - Lecture and tutorials "Probabilité et statistique" Licence L2, *Sciences de la Matière*, 30h.
 - Lecture and tutorials "Analyse" Licence L2, *Sciences de la Matière*, 60H.
- 2000-2004. Teaching at the *l'université Bordeaux IV*.
 - Lecture "Math financières" Master 1 *Ingénierie Économique*, 20h.
 - Lecture "Séries temporelles", Master 1 *Ingénierie Économique*, 20h.
 - Lecture "Statistiques", Master 1 *Ingénierie Économique*, 20h.
 - Lecture "Optimisation" Maîtrise d'*Économétrie*, 20h.
 - Lecture "Optimisation dynamique", maîtrise d'*Économétrie*, 20h.
 - Lecture "Méthodes numériques", Maîtrise d'*Économétrie*, 8h.
- 1997-2000 Teaching as PhD student at *Université Paris 12 Creteil*

Doctoral advisement

- Advisor of Chiara Amorino thesis defended in July 2020.
- Co-advisor (50 %) of Huong Nguyen thesis defended in December 2018 (*co-adviser : Emmanuelle Clément, UPEM*).

Academic responsibilities

- January 2025–Present : Associate Editor « Bernoulli »
- April 2022–December 25 : (co-)Editor in chief « Statistical inference for stochastic processes ». <https://www.springer.com/journal/11203>
- January 2022–present : Head of the mathematics department of the Université d'Évry. <http://www.math-evry.cnrs.fr/departement/doku.php>
- September 2022–August 2025 : Head of the first year master program in Mathematics Université Evry Paris - Saclay (site Evry)
- January 2014–December 2019 : Head of the lab « Laboratoire de Mathématiques et Modélisation d'Évry ». <http://www.math-evry.cnrs.fr/>
- September 2010–August 2013 : Head of the first year master program in Mathematics Université d'Évry
- January 2015 - October 2018 : Elected member of the research council. Université d'Évry.
- 2012- Jan 2015 : Elected member of the teaching council. Université d'Évry.
- Referee for H.D.R. (doctoral habilitation) of Mme Céline Duval (2020, Université de Paris)
- Referee for the PhD thesis of M. J.B. Monnier (2011, Université Paris Diderot) ; the PhD thesis of M. Qidi Peng (2011, Université de Lille) ; the PhD thesis of de Romain Guy (2013, Université Paris Diderot) ; the PhD thesis of Nina Munkholt Jacobsen (2015, Université de Copenhague) ; the PhD thesis of Clément Rey (2015, ENPC) ; the PhD thesis of Pierre Gruet (2015, Université Paris Diderot) ; the PhD thesis of Emil Jorgensen (2017, Université de Copenhague), the PhD thesis of d'Anna Melnykova (2020, Université de Cergy).
- Jury member for the the PhD thesis of M. Benjamin Favetto (2010, Université Paris Descartes) ; of Emeline Schmisser (2010, Université Paris Descartes) ; of Huang Lorick (2015, Université Paris Sorbonne) ; of Igor Honoré (2018, Université d'Évry) ; of Grégoire Szymanski (2024, Ecole polytechnique) ; of Raphaël Maillet (2024, Univ. Paris Dauphine)
- Referee for *Annales de l'IHP, Annals of stat., Annals of the institute of statistical mathematics Computational statistics and data analysis, Economic notes, Electronic journal of statistics, ESAIM P & S, Finance and stochastics, Journal of econometrics, Journal of the american statistical association,*

Journal of nonparametric statistics, Journal of multivariate analysis, Journal of statistical planning and inference, Latin American Journal of Probability and Mathematical Statistics, Mathematics of Computation, Quantitative finance, Scandinavian journal of stat., Stat. and proba. letters, Statistic and decision, Statistical Inference for Stochastic Processes, Stochastic processes and applications,...