Olivier WINTENBERGER
Professor Dr. in Applied Mathematics and Actuary

Personal Informations

E-mail: `olivier.wintenberger@upmc.fr`
Url: `http://wintenberger.fr`
Work address:
LPSM (Bureau 15-16 206), Boîte 158
Sorbonne Université
4 place Jussieu
75005 Paris, FRANCE

Research interests: Heavy tailed processes, Weak dependence, Statistics for Markov chains, Online learning, Exponential inequalities.

Employment

2013-	**Professor**, LPSM, Université Pierre et Marie Curie, Paris, France organizer of the Industrial Statistics and Data Science ISUP program (2020 -) organizer of the ISUP1 and BECEAS examination (2017- 2020) co-organizer of the Actuarial ISUP program (2013-2014)
2014-2016	**Guest professor**, Mathematical institute, Copenhagen University, Denmark
2011-2014	**Affiliate researcher,** Laboratoire de Finance et Assurance, Centre de Recherche en Economie et STatistique, Malakoff, France
2008-2013	**Assistant Professor,** CEREMADE, Université Paris Dauphine, Paris, France co-organizer of the actuarial program
2004-2007	**Teaching Assistant:** École polytechnique, Palaiseau, France

Education

2012	**Habilitation à diriger des recherches**, CEREMADE, Dauphine, France
2007-2008	**Postdoctoral position** (with T. Mikosch, 1st semester) Laboratory of Actuarial Mathematics, Copenhagen, Danemark
2007	**Phd in Applied Mathematics** (supervisors: J.-M. Bardet and P. Doukhan) Laboratory: SAMOS, Université Panthéon-Sorbonne, Paris, France
2004	**Master degree** in Applied Mathematics, Université Diderot, Paris, France **Diploma of Statistician-Economist** of the ENSAE, Paris, France

Research management

2020-	**Associate Editor**, Stochastic Models,
2016-	**Associate Editor**, Bernoulli,
2014-	**Associate Editor**, Extremes,
2012-2016	**Associate Editor**, Dependence Modeling,
2014-2017	**Principal Investigator of AMERISKA**, an ANR network on Statistics for heavy tailed processes, applications in food and climate risks management,
2012-2014	**Scientific collaboration program**, French embassy of Copenhagen,
2014-2019	**Workshop co-organizer**, EVT and then VeLo at Jussieu, UPMC.
2019-2020	**Conference co-organizer**, Valpred 1-2, Aussois.
2019	**Tutorial organizer**, EVA, Zagreb.
2018	**Conference co-organizer**, Kick-off conference of the LPSM, Paris.
2017	**Challenge organizer**, Prediction of Spatio-Temporal Extremes at EVA 2017, Delft.
2017	**Conference co-organizer**, Heavy Tails and Long Range Dependence, Telecom, Paris.
2014-2015	**Conferences organizer:** - Université d'été des Actuaires, UPMC.
	- "Dependence, Limit Theorems and Applications", IHP.
	- 60th birthday of T. Mikosch, KU.
	Masterclass organizer, Mathematical Foundations of Heavy Tailed Analysis.
2018-2020	**Member of scientific board**, Advestis.
2014-	**Member of board**, Banque Finance Assurance of the SFDS society.

PhD-Post-Doc students

2019-	**Joseph De Vilmarest**, Adaptive Kalman recursion regret analysis, Industrial PhD EDF
2019-	**Gloria Buritica**, The rank transform in EVA analysis of the climate, Supervised with P. Naveau.
2019-	**Nicklas Werge**, Mini batch algorithms for stationary time series prediction, Supervised with A. Godichon, Paris^2 and Advestis co-funding
2017-2020	**Nicolas Meyer**, High Dimensional Learning for Extremes.
2014-2020	**Vincent Margot**, Rule Induction Algorithms for Regression Analysis. Supervised with J.P. Baudry and F. Guilloux, Industrial PhD, Research scientist.
2014-2017	**Charles Tillier**, Heavy Tailed Analysis to Assess Food Risks. Supervised with P. Bertail, Maître de conférences, UVSQ.
2014-2017	**Johannes Heiny**, Extreme Eigenvalues of Sample Covariance and Correlation Matrices. Supervised mostly by T. Mikosch, Post-Doc at Bochum.
2009-2012	**Cai Sixiang**. Bootstraping Extreme Statistics for Financial Applications. Supervised with J. L. Prigent and Paul Doukhan. Finance analyst.
2019-2020	(Post-Doc) **Riccardo Passeggeri**, EVA analysis of renadom fields, FSMP funding.
2018-2019	(Post-Doc) **Eric Adjakossa**, Online Aggregation of Kalman Filters, EDF funding.
2015-2016	(Post-Doc) **Pierre Gaillard**, Adaptive and Sparse Online Learning, Researcher at INRIA.
2018- 2019	(Research assistant) **Joseph de Vilmarest**, ENS Ulm.
2012-2013	(Research assistant) **Ferdinand Torron**, ENS Cachan.

Awards and invitations

2015   **Visiting Researcher position** (August), Torun, Poland
2013   **OFPR Lecture**, ENSAE, France
2013   **PhD Course** on Extremes in Space and Time, Copenhagen, Denmark
2012   **PhD Course**, Thematic cycle, UCP, France
2011   **Elsevier Travel** award, New Frontier in Applied Probabilities.
2009   **Graduate Student Travel** award, Graybill VIII.
2007   **Laha Travel** award, IMS.

Publications

[1] T. Mikosch, M. Rezapour and O. Wintenberger (2019) *Heavy tails for an alternative stochastic perpetuity model*, SPA, online first.

[2] B. Basrak, O. Wintenberger and P. Zugec (2019) *On total claim amount for marked Poisson cluster models*, Advances in Applied Probability, Online first.

[3] O. Wintenberger (2018) *Editorial: special issue on the extreme value analysis conference challenge "Prediction of extremal precipitation"*, Extremes, 21, 425-429.

[4] R. Kulik, P. Soulier and O. Wintenberger (2018) *The tail empirical process of regularly varying functions of geometrically ergodic Markov chains* accepted for publication in SPA.

[5] R. S. Pedersen and O. Wintenberger (2017) *On the tail behavior of a class of multivariate conditionally heteroskedastic processes*, Extremes, 21, 261-284.

[6] F. Blasques, P. Gorgi, S. J. Koopman and O. Wintenberger (2018) *Feasible Invertibility Conditions for Maximum Likelihood Estimation for Observation-Driven Models*, EJS, 12, 1019-1052.

[7] O. Wintenberger, (2017) *Exponential inequalities for unbounded functions of geometrically ergodic Markov chains. Applications to quantitative error bounds for regenerative Metropolis algorithms*, Statistics, 51.

[8] C. Tillier and O. Wintenberger (2017) *Regular variation of a random length sequence of random variables and application to risk assessment*, Extremes, 21, 27-56.

[9] O. Wintenberger, (2016) *Optimal learning with Bernstein Online Aggregation*, Machine Learning, 106.

[10] C. Francq, O. Wintenberger and J.-M. Zakoïan, (2016) *Goodness-of-fit tests for extended Log-GARCH models and specification tests against the EGARCH*, TEST, Online first.

[11] T. Mikosch and O. Wintenberger (2016) *A large deviations approach to limit theory for heavy-tailed time series*, Probab. Th. Rel. Fields 166, 233-269.

[12] O. Wintenberger (2015) *Weak transport inequalities and applications to exponential and oracle inequalities*, EJP, 20, 114, 1–27.

[13] T. Mikosch and O. Wintenberger (2014) *The cluster index of regularly varying sequences with applications to limit theory for functions of multivariate Markov chains*, Probab. Th. Rel. Fields 159, 157-196.

[14] J. Trashorras and O. Wintenberger (2013) *Large deviations for bootstrapped empirical measures*, Bernoulli, 20(4), 2014, 1845–1878.

[15] P. Alquier, X. Li and O. Wintenberger (2013) *Prediction of time series by statistical learning: general losses and fast rates*, Dependence Modeling, 1, 65-93.

[16] C. Francq, O. Wintenberger and J.-M. Zakoïan (2013) *GARCH models without positivity constraints: Exponential or Log GARCH?*, Journal of Econometrics 177, 34-46.

[17] O. Wintenberger (2013) *Continuous Invertibility and Stable QML Estimation of the EGARCH(1,1) Model*, Scandinavian Journal of Statistics 40, 846-867.

[18] T. Mikosch and O. Wintenberger (2013) *Precise large deviations for dependent regularly varying sequences*, Probab. Th. Rel. Fields 156, 851-887.

[19] J.-M. Bardet, W. Kengne, and O. Wintenberger (2012) *Detecting multiple change-points in general causal time series using penalized quasi-likelihood*, Electron. J. Statist. 6, 435-477.

[20] P. Alquier, O. Wintenberger (2012) *Model selection and randomization for weakly dependent time series forecasting*, Bernoulli 18 (3), 883-913.

[21] K. Bartkiewicz, A. Jakubowski, T. Mikosch, O. Wintenberger (2011) *Stable limits for sums of dependent infinite variance random variables* Probab. Th. Rel. Fields 150, 337-372.

[22] O. Wintenberger (2010) *Deviation inequalities for sums of weakly dependent time series*, Elect. Comm. in Probab. 15, 489-503.

[23] I. Gannaz, O. Wintenberger (2010) *Adaptive density estimation under weak dependence*, ESAIM Probab. Statist. 14, 151-172.

[24] J.-M. Bardet, O. Wintenberger (2009) *Asymptotic normality of the Quasi Maximum Likelihood Estimator for multidimensional causal processes*, Ann. Statist. 37, 2730-2759.

[25] P. Doukhan, O. Wintenberger (2008) *Weakly dependent chains with infinite memory,* Stoch. Proc. Appl. 118, 11, 1997-2013.

[26] P. Doukhan, O. Wintenberger (2007) *An invariance principle for weakly dependent stationary general models*, en collaboration avec P. Doukhan, Probab. Math. Statist. 27, 1, 45-73.

Book chapters and conference proceedings

[27] P. Gaillard and O. Wintenberger (2018) *Efficient online algorithms for fast-rate regret bounds under sparsity*, Accepted for the poster session of NIPS.

[28] V. Margot, J.P. Baudry, F. Guilloux and O. Wintenberger (2018). *Rule Induction Partitioning Estimator*. In International Conference on Machine Learning and Data Mining in Pattern Recognition (288-301). Springer.

[29] N. Thiemann, C. Igel, O. Wintenberger, and Y. Seldin (2017) *A strongly quasiconvex PAC-Bayesian bound*. In Proceedings of Machine Learning Research, 76 (ALT).

[30] P. Gaillard and O. Wintenberger, (2017) *Sparse Accelerated Exponential Weights*, Accepted for AISTAT 2017, JMLR.

[31] N. Ragache, O.Wintenberger (2006) *Convergence rates for density estimators of weakly dependent time series*, Dependence in Probability and Statistics, (Eds P. Bertail, P. Doukhan and P. Soulier), Lecture Notes in Statist. 187, 349-372.

Preprints

[32] S. Mentemeier and O. Wintenberger. *Asymptotic Independence ex machina - Extreme Value Theory of Diagonal SRE.*

[33] V. Margot, J.-P. Baudry, F. Guilloux and O. Wintenberger. *Consistent Regression using Data-Dependent Coverings.*

[34] C. Dombry, C. Tillier and O. Wintenberger. *Hidden regular variation for point processes and the single/multiple large point heuristic.*

[35] N. Meyer and O. Wintenberger. *Sparse regular variation.*

[36] J. de Vilmarest and O. Wintenberger. *Logarithmic Regret for parameter-free Online Logistic Regression.*