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Last update: June 2024

Jean-Michel Zakoïan

Professor

Academic Positions

Sept. 2007- **Professor at ENSAE-CREST**, *Co-director of the Finance-Lab (2007-2021).*
on secondment from Lille University.

2000- **Full Professor in Applied Mathematics**, University of Lille.
Exc. class (CNU 2014), 1st class (CNU 2008).

1993-2000 **Associate Professor**, Department of Mathematics, Lille 1 University.

1992-1993 **CORE post-doc Fellowship**, Louvain-la-Neuve, Belgium.

Education

1997 **Habilitation à Diriger des Recherches**, University Lille 1.
a 2nd Thesis required to supervise PhDs.

1990 **PhD thesis in Applied Mathematics (Statistics)**, University Paris 9.

1985 **Msc. in Economics and Statistics**, ENSAE.

Editorial Positions

2013- **Journal of Time Series Analysis**, *Associate Editor.*

2012- **Econometric Theory**, *Associate Editor.*

2019-2023 **Scandinavian Journal of Statistics**, *Associate Editor.*

2020 **Journal of Econometrics**, *Guest Co-Editor (with J.V.K. Rombouts, O. Scaillet, D. Veredas)*, special issue on "Nonlinear Financial Econometrics" (vol. 217, issue 2).

2012-2014 **Stat**, *Associate Editor.*

2011-2015 **Annals of CFE (CSDA)**, *Guest Associate Editor.*

Awards, distinctions and grants

2021-2025 Coordinator for CREST of the ANR project "MLforRisk"

2020 Fellow of the Journal of Econometrics

2016-2020 Coordinator for CREST of the ANR project "MultiRisk"

2010-2013 Member of the ANR project 180403 "ECONOM&RISK"

2013 Multa Scripsit Award Econometric Theory

2021 Academic Fellow of Institut Louis Bachelier

Research interests

Volatility and GARCH modeling

Risk measures and estimation risk, systemic risk

Nonstationarity, bubbles, noncausal and explosive processes

Probability properties (stationarity, mixing) of nonlinear time series

━━━━━━ # Publications

Books

[1] FRANCQ, C. AND J.M. ZAKOÏAN (2009) : *Modèles GARCH : structure, inférence statistique et applications financières.* Economica, 605 pages.

[2] FRANCQ, C. AND J.M. ZAKOÏAN (2010) : *GARCH Models: Structure, Statistical Inference and Financial Applications.* John Wiley, 503 pages.

[3] FRANCQ, C. AND J.M. ZAKOÏAN (2019) : GARCH MODELS: STRUCTURE, STATISTICAL INFERENCE AND FINANCIAL APPLICATIONS, 2ND EDITION. John Wiley, 504 pages.

Refereed Journal Articles

[4] FRANCQ, C., KANDJI, B. M. AND J.M. ZAKOÏAN (2024): "Inference on multiplicative component GARCH without any small-order moment". **Econometric Theory** forthcoming.

[5] FRANCQ, C. AND J.M. ZAKOÏAN (2023): "Local Asymptotic Normality of general conditionally heteroskedastic and score-driven time-series models". **Econometric Theory** 39, 1067–1092.

[6] FRANCQ, C. AND J.M. ZAKOÏAN (2023): Testing hypotheses on the innovations distribution in semi-parametric conditional volatility models. **Journal of Financial Econometrics** 21, 1443–1482.

[7] FRANCQ, C. AND J.M. ZAKOÏAN (2023): "Optimal estimating function for weak location-scale dynamic models". **Journal of Time Series Analysis** 44, 533–555.

[8] FRANCQ, C. AND J.M. ZAKOÏAN (2022): "Adaptiveness of the empirical distribution of residuals in semi-parametric conditional location scale models". **Bernoulli** 28, 548–578.

[9] FRANCQ, C. AND J.M. ZAKOÏAN (2022): "Testing the existence of moments for GARCH processes". **Journal of Econometrics** 227, 47–64.

[10] FRANCQ, C. AND J.M. ZAKOÏAN (2020): "Virtual Historical Simulation for estimating the conditional VaR of large portfolios." **Journal of Econometrics** 127, 356–380.

[11] GOURIÉROUX, C., MONFORT, A. AND J.M. ZAKOÏAN (2019): "Consistent Pseudo-Maximum Likelihood Estimators and Groups of Transformations." **Econometrica** 87, 327–345.

[12] CEROVECKI, C., FRANCQ, C., HÖRMANN S. AND J.M. ZAKOÏAN (2019): Functional GARCH models: the quasi-likelihood approach and its applications. **Journal of Econometrics** 209, 353–375.

[13] FRIES, S. AND J.M. ZAKOÏAN (2019): Mixed Causal-Noncausal AR Processes and the Modelling of Explosive Bubbles. **Econometric Theory** 35, 1234–1270.

[14] FRANCQ, C. AND J.M. ZAKOÏAN (2018): "Estimation risk for the VaR of portfolios driven by semi-parametric multivariate models." **Journal of Econometrics** 205, 381–401.

[15] FRANCQ, C., WINTENBERGER, O. AND J.M. ZAKOÏAN (2018) "Goodness-of-fit tests for Log-GARCH and EGARCH models." **Test** 27, 27–51.

[16] GOURIÉROUX, C. AND J.M. ZAKOÏAN (2017): "Local explosion modelling by noncausal process". **Journal of the Royal Statistical Society: Series B (Statistical Methodology)** 79, 737–756.

[17] FRANCQ, C. AND J.M. ZAKOÏAN (2016): "Estimating multivariate GARCH models equation by equation." **Journal of the Royal Statistical Society: Series B (Statistical Methodology)** 78, 613–635.

[18] DAROLLES, S., FRANCQ, C., LEFOL, G. AND J.M. ZAKOÏAN (2016): "Intrinsic liquidity in conditional volatility Models." **Annals of Economics and Statistics** 123-124, 225–246.

[19] FRANCQ, C. AND J.M. ZAKOÏAN (2016): "Looking for efficient QML estimation of conditional VaRs at multiple risk levels." **Annals of Economics and Statistics** 123-124, 9–28.

[20] FRANCQ, C., HORVATH L. AND J.M. ZAKOÏAN (2016): "Variance targeting estimation of multivariate GARCH models", **Journal of Financial Econometrics** 14, 353–382.

[21] GOURIÉROUX, C. AND J.M. ZAKOÏAN (2015): "On uniqueness of moving average representations of heavy-tailed stationary processes." **Journal of Time Series Analysis** 36, 876–887

[22] FRANCQ, C. AND J.M. ZAKOÏAN (2015): "Risk-parameter estimation in volatility models." **Journal of Econometrics** 184, 158–173.

[23] LI, D., LING, S. AND J.M. ZAKOÏAN (2015): "Asymptotic inference in multiple-threshold double autoregressive models". **Journal of Econometrics** 189 , 415–427.

[24] FRANCQ, C. ET J.M. ZAKOÏAN (2014): "Comment on "Quasi-Maximum Likelihood Estimation of GARCH Models with Heavy Tailed Likelihoods" by J. Fan, L. Qi et D. Xiu." **Journal of Business & Economic Statistics** 32, 198–201.

[25] FRANCQ, C. AND J.M. ZAKOÏAN (2013): "Inference in non stationary asymmetric GARCH models." **Annals of Statistics** 41, 1970–1998.

[26] FRANCQ, C., WINTENBERGER, O. AND J.M. ZAKOÏAN (2013) : "GARCH models without positivity constraints: Exponential or Log GARCH?" **Journal of Econometrics** 177, 34–46.

[27] FRANCQ, C. AND J.M. ZAKOÏAN (2013): "Estimating the Marginal Law of a Time Series with Applications to Heavy Tailed Distributions." **Journal of Business & Economic Statistics** 31, 412–425.

[28] GOURIÉROUX, C. AND J.M. ZAKOÏAN (2013) : "Estimation adjusted VaR." **Econometric Theory** 29, 735–770.

[29] FRANCQ, C. AND J.M. ZAKOÏAN (2013) : "Optimal predictions of powers of conditionally heteroskedastic processes." **Journal of the Royal Statistical Society - Series B**, 75, 345–367.

[30] FRANCQ, C. AND J.M. ZAKOÏAN (2012) : "Strict stationarity testing and estimation of explosive and stationary GARCH models", **Econometrica**, 80, 821–861.

[31] FRANCQ, C. AND J.M. ZAKOÏAN (2012) : "QML estimation of a class of multivariate asymmetric GARCH models", **Econometric Theory**, 28, 179–206.

[32] FRANCQ, C., LEPAGE G. AND J.M. ZAKOÏAN (2011) : " Two-stage non Gaussian QML estimation of GARCH Models and testing the efficiency of the Gaussian QMLE", **Journal of Econometrics**, 165, 246–257.

[33] FRANCQ, C., HORVATH L. AND J.M. ZAKOÏAN (2011) : "Merits and Drawbacks of Variance Targeting in GARCH Models", **Journal of Financial Econometrics**, 9, 619–656.

[34] REGNARD, N. AND J.M. ZAKOÏAN (2011) : "A conditionally heteroskedastic model with time-varying coefficients for daily gas spot prices", **Energy Economics**, 33, 1240–1251.

[35] HAMADEH, T., AND J.M. ZAKOÏAN (2011): "Asymptotic properties of LS and QML estimators for a class of nonlinear GARCH Processes", **Journal of Statistical Planning and Inference**, 141, 488–507.

[36] DABO-NIANG, S., C. FRANCQ AND J.M. ZAKOÏAN (2010) : "Combining nonparametric and optimal linear time series predictions", **Journal of the American Statistical Association**, 105, 1554–1565.

[37] FRANCQ, C. AND J.M. ZAKOÏAN (2010) : "Inconsistency of the MLE and inference based on weighted LS for LARCH models", **Journal of Econometrics** 159, 151–165.

[38] REGNARD, N. AND J.M. ZAKOÏAN (2010) : "Structure and estimation of a class of nonstationary yet nonexplosive GARCH models", **Journal of Time Series Analysis** 31, 348–364.

[39]   FRANCQ, C., L. HORVATH AND J.M. ZAKOÏAN (2010) : "Sup-tests for linearity in a general nonlinear AR(1) model", **Econometric Theory** 26, 965–993.

[40]   FRANCQ, C. AND J.M. ZAKOÏAN (2009) : "Testing the nullity of GARCH coefficients : correction of the standard tests and relative efficiency comparisons", **Journal of the American Statistical Association**, 104, 313–324.

[41]   FRANCQ, C. AND J.M. ZAKOÏAN (2009) : "Bartlett's formula for a general class of non linear processes", **Journal of Time Series Analysis**, 30, 449–465.

[42]   FRANCQ, C. AND J.M. ZAKOÏAN (2008) : "Estimating ARCH Models When the Coefficients are Allowed to be Equal to Zero", **Austrian Journal of Statistics,** 37, 31–40.

[43]   FRANCQ, C. AND J.M. ZAKOÏAN (2008) : "Deriving the autocovariances of powers of Markov-switching GARCH models, with applications to statistical inference", **Computational Statistics and Data Analysis**, 52, 3027–3046.

[44]   FRANCQ, C., S. MAKAROVA AND J.M. ZAKOÏAN (2007) : "A class of stochastic unit-root bilinear processes. Mixing properties and unit-root test", **Journal of Econometrics**, 142, 312-326.

[45]   FRANCQ C. AND J.M. ZAKOÏAN (2007) : "Quasi-Maximum Likelihood Estimation in GARCH Processes when some coefficients are equal to zero", **Stochastic Processes and their Applications**, 117, 1265-1284.

[46]   FRANCQ, C. AND J.M. ZAKOÏAN (2007) : "HAC estimation and strong linearity testing in weak ARMA models", **Journal of Multivariate Analysis**, 98, 114-144.

[47]   SAÏDI, Y., AND J.M. ZAKOÏAN (2006) : "Stationarity and geometric ergodicity of a class of non-linear ARCH models", **Annals of Applied Probability**, 16, 2256-2271.

[48]   FRANCQ, C., AND J.M. ZAKOÏAN (2006) : "Linear-representation based estimation of stochastic volatility models", **Scandinavian Journal of Statistics**, 33, 785-806.

[49]   FRANCQ, C., AND J.M. ZAKOÏAN (2006) : "Mixing properties of a general class of GARCH(1,1) models without moment assumptions on the observed process", **Econometric Theory**, 22, 815-834.

[50]   FRANCQ, C., AND J.M. ZAKOÏAN (2005) : "The L^2-Structures of Standard and Switching-regime GARCH models", **Stochastic Processes and their Applications**, 115, 1557-1582.

[51]   FRANCQ, C., AND J.M. ZAKOÏAN (2005) : "A central limit theorem for mixing triangular arrays of variables whose dependence is allowed to grow with the sample size", **Econometric Theory**, 21, 1165-1171.

[52]   FRANCQ, C., R. ROY AND J.M. ZAKOÏAN (2005) : "Diagnostic checking in ARMA models with uncorrelated errors", **Journal of the American Statistical Association**, 13, 532-544.

[53]   FRANCQ, C., AND J.M. ZAKOÏAN (2004) : "Maximum Likelihood Estimation of Pure GARCH and ARMA-GARCH Processes", **Bernoulli**, 10, 605-637.

[54]   FRANCQ, C., AND J.M. ZAKOÏAN (2002) : "Autocovariance structure of powers of switching-regime ARMA Processes", **ESAIM: Probability & Statistics**, 6, 259-270.

[55]   FRANCQ, C., AND J.M. ZAKOÏAN (2002) : "Comments on the paper by Minxian Yang: 'Some properties of vector Autoregressive processes with Markov-Switching coefficients'", **Econometric Theory**, 18, 815-818.

[56]   L. BROZE, C. FRANCQ AND J.M. ZAKOÏAN (2002) : "Efficient Use of High Order Autocorrelations for Estimating Autoregressive Processes", **Journal of Time Series Analysis**, 23, 287-312.

[57]   FRANCQ, C., AND J.M. ZAKOÏAN (2001) : "Stationarity of Multivariate Markov-switching ARMA Models", **Journal of Econometrics**, 102, 339-364.

[58] L. BROZE, C. FRANCQ AND J.M. ZAKOÏAN (2001) : "Non redundancy of high order moment conditions for efficient GMM estimation of weak AR processes", **Economics Letters**, 71, 317-322.

[59] EL BABSIRI, M., AND J.M. ZAKOÏAN (2001) : "Contemporaneous Asymmetry in GARCH Processes," **Journal of Econometrics**, 101, 257-294.

[60] FRANCQ, C., ROUSSIGNOL, M. AND ZAKOÏAN, J.M. (2001) : "Conditional Heteroskedasticity driven by Hidden Markov Chains," **Journal of Time Series Analysis**, 22, 197-220.

[61] FRANCQ, C. AND J.M. ZAKOÏAN (2000) : "Stationnarité des modèles ARMA à changement de régime markovien," **C.R.A.S**, t.330, 1031-1034.

[62] FRANCQ, C., ROUSSIGNOL, M. AND ZAKOÏAN, J.M. (2000) : "Modèles ARCH avec changement de régime markovien," **C.R.A.S**, t.330, 921-924.

[63] FRANCQ, C., AND J.M. ZAKOÏAN (2000) : "Estimating Weak GARCH Representations," **Econometric Theory**, 16, 692-728.

[64] FRANCQ, C., AND J.M. ZAKOÏAN (2000) : "Covariance Matrix Estimation for Estimators of Mixing Weak ARMA Models," **Journal of Statistical Planning and Inference**, 83, 369-394.

[65] FRANCQ, C., AND J.M. ZAKOÏAN (2000) : "Multivariate ARMA Models with Generalized Autoregressive Linear Innovation," **Stochastic Analysis and Applications**, Vol. 18 n° 2, 231-260.

[66] FRANCQ, C., AND J.M. ZAKOÏAN (1998) : "Estimation de représentations GARCH faibles", **C.R.A.S.**, t.326, 495-498.

[67] FRANCQ, C., AND J.M. ZAKOÏAN (1998) : "Estimation de la précision asymptotique dans l'estimation de modèles ARMA faibles", **C.R.A.S.**, t.326, 377-380.

[68] FRANCQ, C., AND J.M. ZAKOÏAN (1998) : "Estimating Linear Representations of Nonlinear Processes," **Journal of Statistical Planning and Inference**, 68, 145–165.

[69] BROZE L., O. SCAILLET AND J.M. ZAKOÏAN (1997) : "Quasi Indirect Inference for Diffusion Processes", **Econometric Theory**, 14, 161–186.

[70] BROZE L., O. SCAILLET AND J.M. ZAKOÏAN (1996) : "Estimation de la structure par terme des taux d'intérêt", **Revue Economique**, 47, 511–519.

[71] FRANCQ, C., AND J.M. ZAKOÏAN (1996) : "Estimation de représentations ARMA faibles sous hypothèses de mélange", **C.R.A.S.**, t. 323, Série 1, 297–300.

[72] BROZE L., O. SCAILLET AND J.M. ZAKOÏAN (1995) : "Testing for Continuous-Time Models of the Short Term Interest Rate", **Journal of Empirical Finance**, 2, 199–223.

[73] ZAKOÏAN J.M. (1994) : "Modèles autorégressifs à seuils multiples", **Annales d'économie and de statistique**, 36, 23–56.

[74] ZAKOÏAN J.M. (1994) : "Threshold Heteroskedastic Models", **Journal of Economic Dynamics and Control**, 18, 931–955.

[75] BROZE L., O. SCAILLET AND J.M. ZAKOÏAN (1994) : "Estimation d'équations de diffusion à partir d'observations discrètes et de métho- des fondées sur des simulations", **Cahiers du Centre d'Etude de Recherche Opérationnelle**, 36, 43–55.

[76] ZAKOÏAN J.M. (1994) : "Modèles autorégressifs à seuil", **Publications de l'Institut de Statistique de l'Université de Paris**, 85–114.

[77] RABEMANANJARA R. AND J.M. ZAKOÏAN (1993) : "Threshold ARCH Models and Asymmetries in Volatility", **Journal of Applied Econometrics**, 8, 31–49.

[78] ZAKOÏAN J.M. (1992) : "Les Modèles ARCH: une revue de la littérature", **Journal de la Société Statistique de Paris**, 40–57.

Papers in Edited Volumes

[79] FRANCQ, C., VERDEBOUT, T. AND J.M. ZAKOÏAN (2023) : "Portmanteau tests for semiparametric nonlinear conditionally heteroscedastic time series models", in *Essays in honor of Masanobu Taniguchi.* Edts: Y. Liu, J. Hirukawa and Y. Kakizawa, Springer.

[80] FRANCQ, C. AND J.M. ZAKOÏAN (2014) : "Multi-level conditional VaR estimation in dynamic models", in *Modeling Dependence in Econometrics. Advances in Intelligent Systems and Computing Volume 251.* Edts: V-N. Huynh et al., Springer.

[81] FRANCQ, C. AND J.M. ZAKOÏAN (2009) : "A tour in the asymptotic theory of GARCH estimation". in "Handbook of Financial Time Series", Edts: T. G. Andersen, R.A. Davis, J-P. Kreiss, T. Mikosch. Springer Statistics.

[82] FRANCQ, C., AND J.M. ZAKOÏAN (2006) : "On Efficient Inference in GARCH Processes", p. 305–327 in *Dependence in Probability and Statistics,* Springer, edited by P. Bertail, P. Doukhan and P. Soulier.

[83] FRANCQ, C., AND J.M. ZAKOÏAN (2005) : "Recent Results for Linear Time Series Models with Non Independent Innovations", p. 241–266 in *Statistical Modeling and Analysis for Complex Data Problems*, P. Duchesne and B. Rémillard Editors, Kluwer.

[84] RABEMANANJARA R. AND J.M. ZAKOÏAN (1993) : "Threshold ARCH Models and Asymmetries in Volatility", p. 179-198 in *Nonlinear dynamics, chaos and econometrics*, M.H. Pesaran and S.M. Potter Editors, John Wiley, New-York, 1993.

Other field

[85] CERVELLO, S., FRANCQ, C., ZAKOÏAN, J-M., FRANCK N. ET AL. (2021) Cognitive remediation and professional insertion of people with schizophrenia: RemedRehab, a randomized controlled trial. **European Psychatry**, 64. https://doi.org/10.1192/j.eurpsy.2021.25

Proceedings

[86] FRANCQ, C. AND ZAKOÏAN, J-M. (2010) Optimal predictions of powers of conditionally heteroskedastic processes. *Proceedings of the ninth international conference Computer Data Analysis and Modeling*, Minsk.

[87] FRANCQ, C. AND J-M. ZAKOÏAN (2008) Autocovariance Structure of Markov- Switching ARMA and GARCH Processes. In : *Mathematisches Forschungsinstitut Oberwolfach Report No. 12/2008: Mini-Workshop on "Time Series with Sudden Structural Changes",* 577–579, Oberwolfach, Germany.

[88] FRANCQ, C. AND J-M. ZAKOÏAN (2007) : "Testing that some GARCH coefficients are equal to zero," *Proceedings of the eighth international conference Computer Data Analysis and Modeling*, Minsk, 1, 54–59.

[89] FRANCQ, C., AND J.M. ZAKOÏAN (1999) : "Linear Representations based Estimation of Switching Regime GARCH Models," *NBER Time Series Conference Proceedings.*

[90] FRANCQ, C., AND J.M. ZAKOÏAN (1998) : "Estimating the Order of Weak ARMA Models," *Prague Stochastics'98 Proceedings,* Editors: M. Huskova, P. Lachout & J.A. Visek, 165–168.

Non-scientific papers, vulgarization, prefaces

[91] J. V. K. ROMBOUTS, O. SCAILLET, D. VEREDAS, AND J-M. ZAKOÏAN "Nonlinear Financial Econometrics" JoE Special Issue, Introduction *Journal of Econometrics* 217, 203–206, 2020.

[92] GOURIÉROUX, C. AND J-M. ZAKOÏAN (2010) : "L'organisation de la recherche en finance et assurance," *Variances*, 38, 20–25.

[93] GOURIÉROUX, C. AND J-M. ZAKOÏAN (2010) : "De la recherche au développement en finance," *Variances*, 38, 26–29.

[94] Auray, S., Francq, C. et J.M. Zakoïan (2012) : "Nobel 2011 d'économie – Quelques remarques sur les prix Nobel 2011 d'économie et la modélisation des séries économiques," *Images des Mathématiques*, CNRS.

Unpublished manuscripts

[95] Francq, C. and J.M. Zakoïan (2022): "Testing the existence of moments and estimating the tail index of Augmented GARCH processes."

[96] Cantin, L., Francq, C. and J.M. Zakoïan (2022): Estimating dynamic systemic risk measure. CREST DP No 2022-11.

[97] Couperier, O., Francq, and J.M. Zakoïan (2022): "Daily volatility forecasting using intraday returns and functional covariates". Submitted.

[98] Gouriéroux, C., Monfort, A. and J.M. Zakoïan (2017): "Pseudo-maximum likelihood and Lie groups of linear transformations."
MPRA paper: https://mpra.ub.uni-muenchen.de/id/eprint/79623.

[99] Francq, C. and J.M. Zakoïan (2016): "Expected-Shortfall estimation in volatility models".

[100] Francq, C. and J.M. Zakoïan (2008): "Can one really estimate nonstationary GARCH models?" CREST DP 2008-06.

[101] Francq, C., and J.M. Zakoïan (1999): "Linear-representation based estimation of Markov-switching GARCH Models", CREST DP No. 9957.

[102] El Babsiri, M., and J.M. Zakoïan (1990): "Approximation en temps continu d'un modèle GARCH à seuil," *DP Nº 9011*, CREST.

Talks

NB : This list refers to my own presentations, since 1998, excluding those of co-autors.

1. May 2024, Barcelona (Spain), Workshop in Financial Econometrics: *Detection of breaks in weak location time series models with quasi-Fisher scores.*

2. February 2024, Lisboa (Portugal), Economics Seminar, Banco de Portugal: *Inference on conditional systemic risk measures.*

3. December 2023, Berlin (Germany) Computational and Financial Econometrics (CFE 2023): *Finite Moment Testing in a General Class of Nonlinear Time Series Models.*

4. September 2023, Copenhagen (Denmark). Conference on Robust Econometric Methods in Financial Econometrics: *Finite Moment Testing in a General Class of Nonlinear Time Series Models.*

5. June 2023, Marseille (France), Quant. Finance and Financial Econometrics (QFFE): *Inference on multiple component GARCH Models without any Small-Order Moment.*

6. June 2023, Nanterre (France), Workshop "Non-stationarity, cyclostationarity and applications": *Inference on multiple component GARCH Models without any Small-Order Moment.*

7. May 2023, Cagliari (Italy), 10th Italian Congress of Econometrics and Empirical Economics (ICEEE): *Inference on multiple component GARCH Models without any Small-Order Moment.*

8. April 2023, Rabat (Moroco), the 10th days for Econometrics and Finance: *Inference on conditional systemic risk measures.*

9. March 2023, Zaragoza (Spain), XIIIth workshop in Time Series Econometrics: *Inference on conditional systemic risk measures.*

10. March 2023, Geneva (Switzerland), seminar of the Research Center for Statistics, University of Geneva: *Estimating conditional systemic risk measures in semi-parametric volatility models.*

11. December 2022, London (UK) Computational and Financial Econometrics (CFE 2022): *Estimation of Systemic Risk in Semi-Parametric Dynamic Models based on the Empirical Distribution of Residuals.*

12. November 2022, Paris (France) 21ème journée d'économétrie, Univ. Paris-Nanterre. **Keynote speaker**: *Inference on multiplicative component GARCH models without any Small-Order Moment.*

13. October 2022, Bologna (Italy) Bologna-Waseda Time Series Workshop: *Inference on GARCH-MIDAS Models without any Small-Order Moment.*

14. October 2022, Rome (Italy) Rome-Waseda Time Series Symposium: *Estimating Conditional Systemic Risk Measures in Semi-Parametric Volatility Models.*

15. September 2022, Boston (USA) NBER-NSF Time Series Conference: *Estimating Dynamic Systemic Risk Measures.*

16. September 2022, Erevan and Dilijan (Armenia) International Conference on Econometrics and Business Analytics (ICEBA). **Keynote speaker**: *Testing the existence of moments and estimating the tail index of augmented GARCH processes.*

17. August 2022, Bologna (Italy), COMPSTAT 2022. **Keynote speaker**: *Testing the existence of moments and estimating the tail index of augmented GARCH processes.*

18. June 2022, Marseille (France), Quant. Finance and Financial Econometrics (QFFE). *Estimating conditional systemic risk measures in semi-parametric volatility models.*

19. June 2022, Paphos (Cyprus) International Symposium on Nonparametric Statistics (ISNPS 2022): *Testing hypotheses on the innovations distribution in semi-parametric conditional volatility models.*

20. June 2022, Copenhagen (Denmark), VieCo 2022-The Vienna-Copenhagen Conference on Financial Econometrics: *Estimating conditional systemic risk measures in semi-parametric volatility models.*

21. May 2022, Mahdia (Tunisia), Colloque International Statistique et Econométrie: *Testing hypotheses on the innovations distribution in semi-parametric conditional volatility models.*

22. March 2022, Nottingham (UK), Granger Centre Seminar: *Testing hypotheses on the innovations distribution in GARCH-type models.*

23. March 2022, Tokyo (online, Japan), Waseda International Symposium (in the honour of M. Taniguchi): *Testing hypotheses on the innovations distribution in semi-parametric conditional volatility models.*

24. January 2022, Rimini (Italy), 3rd IWEEE "High-dimensional and Multivariate Econometrics: Theory and Practice": *Estimating conditional systemic risk measures in semi-parametric volatility models.*

25. December 2021, London (UK), Computational and Financial Econometrics (CFE'21): *Testing hypotheses on the innovations distribution in GARCH-type models.*

26. November 2021, Econometrics Seminar, University Pompeu Fabra, Barcelona (Spain) *Testing the existence of moments and estimating the tail index of augmented GARCH processes.*

27. December 2020, MAD-Stat seminar, Toulouse School of Economics: *Adaptiveness of the Empirical Distribution of Residuals in Semi-Parametric Conditional Location Scale Models.*

28. September 2020, CIRM Luminy (France), Workshop "New Results on Time Series and their Statistical Applications": *Testing the existence of moments for GARCH-type processes.*

29. August 2020, Econometric Society World Conference (online): *Testing the existence of moments for GARCH processes.*

30. January 2020, Venice (Italy), Workshop "Time Series Models: Theory and Applications": *Testing the existence of moments for GARCH processes.*

31. July 2019, Paris (France), Matinales Institut Europlace de Finance - Fondation Banque de France: *Estimating the Conditional Value-at-Risk and Expected Shortfall.*

32. May 2019, Besançon (France), Workshop on Time Series and Extremes: *Mixed Causal-Noncausal AR process and the modeling of bubbles.*

33. April 2019, Aarhus (Denmark), Econometrics and Business Statistics Seminar: *Mixed Causal-Noncausal AR process and the modeling of bubbles.*

34. March 2019, Cambridge (UK), Workshop on Score-driven Time Series Models. **Keynote speaker**: *Estimating portfolios conditional risks in semiparametric observation-driven models.*

35. January 2019, Lecce (Italy), 8th Italian Congress of Econometrics and Empirical Economics (ICEEE): *Virtual Historical Simulation for estimating the conditional VaR of large portfolios.*

36. January 2019, Santiago (Chile), Econometrics, Finance and Statistics Workshop: *Virtual Historical Simulation for estimating the conditional VaR of large portfolios.*

37. December 2018, Pisa (Italy), Computational and Financial Econometrics (CFE'18): *Virtual Historical Simulation for estimating the conditional VaR of large portfolios.*

38. October 2018, Nagoya (Japan), Various studies of statistical analysis for asymptotic theory, circular or time series: *Estimation risk for the VaR of portfolios driven by semi-parametric multivariate models.*

39. October 2018, Tokyo (Japan), Waseda International Symposium: *Noncausal heavy-tailed autoregressive process and the modeling of bubbles.*

40. September 2018, Paris, workshop "Econometric Theory and Time Series Analysis": *Noncausal heavy-tailed autoregressive process and the modeling of bubbles.*

41. June 2018, Lugano (Switzerland) SoFiE Conference, 11th Annual Meeting. **Keynote speaker**: *Noncausal heavy-tailed autoregressive process and the modeling of bubbles.*

42. June 2018, Salerno (Italy), Conference of the Int. Society for Nonparametric Statistics (ISNPS): *Virtual Historical Simulation of the conditional VaR of a portfolio.*

43. May 2018, Marseille (France), Quant. Finance and Financial Econometrics (QFFE). Invited speaker: *Virtual Historical Simulation for estimating the conditional VaR of large portfolios.*

44. April 2018, Madrid (Spain), Mathematical and Statistical Methods for Actuarial Sciences and Finance: *Estimation risk for the VaR of portfolios driven by semi-parametric multivariate models.*

45. March 2018, Paris (France), 11th Financial Risks International Forum: *Estimation risk for the VaR of portfolios driven by semi-parametric multivariate models.*

46. March 2018, London (UK), Seminar at the School of Economics and Finance, Queen Mary University: *Noncausal heavy-tailed autoregressive process and the modeling of bubbles.*

47. January 2018, Dresden (Germany), Seminar at the Institute of Transport and Economics: *Noncausal heavy-tailed autoregressive process and the modeling of bubbles.*

48. January 2018, Vienna (Austria), Statistics seminar at the University of Vienna: *Estimation risk for the VaR of portfolios driven by semi-parametric multivariate models.*

49. December 2017, London (UK), Computational and Financial Econometrics (CFE'17): *Consistent Pseudo-Maximum Likelihood Estimators and Groups of Transformations.*

50. October 2017, Brussels (Belgium), Recent Advances in Econometrics: International Conference in Honor of Luc Bauwens. **Keynote speaker**: *Estimation risk for the VaR of portfolios driven by semi-parametric multivariate models.*

51. September 2017, Heidelberg (Germany), Financial Econometrics Conference: *Noncausal heavy-tailed autoregressive process and the modeling of bubbles.*

52. June 2017, Lausanne (Switzerland), Stochastic Dynamical Models in Mathematical Finance, Econometrics, and Actuarial Sciences. Invited speaker (CIB-EPF Lausanne): *Noncausal heavy-tailed autoregressive process and the modeling of bubbles.*

53. May 2017, Southampton (UK), Southampton Finance and Econometrics Workshop: *Estimation risk for the VaR of portfolios driven by semi-parametric multivariate models.*

54. March 2017, Vienna (Austria), Vienna-Copenhagen Conference on Financial Econometrics: *Noncausal heavy-tailed autoregressive process and the modeling of bubbles.*

55. December 2016, Sevilla (Spain), Computational and Financial Econometrics (CFE'16): *Joint inference on market and estimation risks in dynamic portfolios.*

56. November 2016, Rabat (Morocco), 3èmes journées d'économétrie de la finance (JEF'2016). Keynote speaker: *Bubble Modelling by non-causal Processes.*

57. November 2016, Statistics and Econometrics Seminar, GREQAM (Marseille, France): *Estimation risk for the VaR of portfolios driven by semi-parametric multivariate models.*

58. October 2016, Groupe de travail dépendance (IHP): *Conditional VaR estimation for dynamic portfolios driven by multivariate GARCH models.*

59. October 2016, Conference in honor of Lajos Horváth, Graz University of Technology (Austria): *Conditional VaR estimation for dynamic portfolios driven by multivariate GARCH models.*

60. October 2016, Department of Economics seminar, University of Copenhagen (Danemark): *Local Explosion Modelling by Non-causal Process.*

61. September 2016, International Conference on Applied and Business Economics (ICABE), Université Paris Ouest-Nanterre: *Explosion Modelling by Non-causal Process.*

62. August 2016, Econometrics and Financial Statistics Workshop, Valparaíso (Chili): *Noncausal heavy-tailed autoregressive process and the modeling of speculative bubbles.*

63. June 2016, 3rd conference of the International Society for Nonparametric statistics (ISNPS), Avignon (France): *Joint Inference on Market and Estimation Risks in Dynamic Portfolios.*

64. May 2016, Financial Econometrics Conference, Toulouse (France): *Joint Inference on Market and Estimation Risks in Dynamic Portfolios.*

65. January 2016, Chiang Mai (Thailand), 9th International Conference of the Thailand Econometric Society. Invited speaker: *Explosive Bubble Modelling by non-causal Process.*

66. December 2015, Londres (UK), Computational and Financial Econometrics (CFE'15): *Two step estimation of multivariate GARCH and stochastic correlation models.*

67. November 2015, Paris (France), "Advances in Time Series and Forecasting", ESSEC Business School: *Explosive Bubble Modelling by non-causal Process.*

68. September 2015, Seminar at BI Norwegian Business School, Economics Department, Oslo (Norway): *Estimating multivariate GARCH and Stochastic Correlation models equation by equation.*

69. August 2015, Montreal (Canada), Econometric Society World Conference: *Estimating multivariate GARCH and Stochastic Correlation models equation by equation.*

70. June 2015, Rutgers University (USA), IMS Finance, Insurance, Probability and Statistics workshop: *Estimating multivariate GARCH and Stochastic Correlation models equation by equation.*

71. June 2015, Beijing (China), Workshop "Risk Measure and Optimization in Finance and Insurance". Mini-course on *Dynamic risk measures: models and statistical inference.*

72. May 2015, Marseille (France), Workshop "Nouveaux développements dans la modélisation et la prévision des risques extrêmes en finance": *Explosive Bubble Modelling by non-causal Process.*

73. April 2015, Seminar at CREATES, Aarhus University (Denmark): *Estimating multivariate GARCH and Stochastic Correlation models equation by equation.*

74. February 2015, Coimbra (Portugal), Workshop on Statistics and Inference. Invited speaker: *Explosive Bubble Modelling by non-causal Process.*

75. January 2015, Chiang Mai (Thailand), 8th International Conference of the Thailand Econometric Society. Invited speaker: *Estimating the conditional VaR of a portfolio of multivariate GARCH returns.*

76. December 2014, Pisa (Italy), Computational and Financial Econometrics (CFE'14): *Explosive Bubble Modelling by non-causal Process.*

77. June 2014, Cambridge University (UK), Econometrics Seminar: *Estimating MGARCH models equation-by-equation.*

78. May 2014, London (UK), 10th BMRC-DEMS Conference at Brunel University: *Risk-parameter estimation in volatility models.*

79. April 2014, Séminaire de l'ISFA, Université Lyon I: *Risk-parameter estimation in volatility models.*

80. March 13–14 2014, Djerba (Tunisia), 5th Meeting on Statistics and Data Mining (MSDM 2014): *Explosive Bubble Modelling by Noncausal Processes.*

81. February 2014, Maastricht (Netherlands), GSBE - Econometrics seminar: *Risk-parameter estimation in volatility models.*

82. January 2014, Chiang Mai (Thailand), 7th International Conference of the Thailand Econometric Society. Keynote speaker: *Multi-level conditional VaR estimation in dynamic models.*

83. December 2013, London, Computational and Financial Econometrics (CFE'13): *Multi-level conditional VaR estimation in dynamic models.*

84. September 2013, Namur (Belgium), "Methods in International Finance Network" Workshop: *Explosive Bubble Modelling by non-causal Process.*

85. September 2013, Montreal (Canada), Montreal Econometrics Seminar: *Risk-parameter estimation in volatility models.*

86. March 2013, Berlin (Germany), 3rd Humboldt-Copenhagen Conference on Financial Econometrics: *Risk-parameter estimation in volatility models.*

87. December 2012, Oviedo (Spain), Computational and Financial Econometrics (CFE'12): *GARCH models without positivity constraints: Exponential or Log GARCH ?*

88. November 2012, ENSAI Rennes, 4th French Econometrics Conference: *Risk-parameter estimation in volatility models.*

89. August 2012, Malaga (Spain), Econometric Society European Meeting (ESEM 12): *Risk-parameter estimation in volatility models.*

90. July 2012, Tsukuba (Japan), 2nd IMS - Asia Pacific Rim Meeting. Invited speaker: *Risk-parameter estimation in volatility models.*

91. June 2012, Hong-Kong (China), Seminar of the Department of Statistics and Actuarial Science, Honk-Kong University: *Risk-parameter estimation in volatility models.*

92. June 2012, Séminaire Parisien de Statistique: *Estimation du paramètre de risque dans les modèles conditionnellement hétéroscédastiques.*

93. May 2012, Graz (Austria), "Statistical Models for Financial Data III". Invited speaker: *Risk-parameter estimation in volatility models.*

94. March 2012, Paris, seminar of the Chaire "Finance and Sustainable Development" and FIME: *Risk-parameter estimation in volatility models.*

95. February 2012, Paris, "Prediction of Time Series and Non Stationary Time Series" workshop: *Testing strict stationarity in GARCH Models.*

96. December 2011, London (UK), Computational and Financial Econometrics (CFE'11). Invited session: *Testing strict stationarity in GARCH Models.*

97. Octobre 2011, Orléans (France), ANR Econom&Risk Workshop: *Strict stationarity testing and estimation of explosive and stationary GARCH models.*

98. August 2011, Oslo (Norway), Econometric Society European Meeting (ESEM 11): *Testing strict stationarity in GARCH Models.*

99. May 2011, Tunis (Tunisia), SFdS (French Statistical Society) congress: *Strict stationarity testing and estimation of explosive GARCH models.*

100. March 2011, Joint Economics and Econometrics Statistics seminar, GREQAM, Marseille: *Reparameterizations in GARCH models with applications to optimal prediction and estimation.*

101. March 2011, One-Day Conf. on Latest Developments in Fin. Econometrics, Brussels. Invited talk: *Reparameterizing GARCH models with applications to predictions and Value-at-Risk.*

102. December 2010, Computational and Financial Econometrics (CFE'10), London: *Prediction in GARCH models under heavy-tailed errors.*

103. August 2010, Prague Stochastics. Invited talk: *Reparameterizations in GARCH models with applications to optimal prediction and more efficient QML estimation.*

104. August 2010, Econometric Society World Conference, Shanghai: *Strict stationarity testing and estimation of explosive ARCH models*

105. June 2010, Jouy-en-Josas, Conference of FIME: *A class of nonstationary GARCH models with application to gas prices.*

106. April 2010, Statistics Seminar at Brussels Free University (Belgium): *Optimal Predictions of Powers of Conditionally Heteroskedastic Processes.*

107. March 2010, Paris, Conference on Large Portfolio, Concentration and Granularity: *Estimation Adjusted VaR.*

108. October 2009, Limassol (Chypre), Conference on Computational and Financial Econometrics (CFE'09): *A class of nonstationary yet nonexplosive GARCH models with application to energy prices.*

109. October 2009, seminar of the statistics department, University Carlos III, Madrid (Espagne): *Optimal Predictions of Powers of Conditionally Heteroskedastic Processes.*

110. August 2009, Barcelone (Spain), Econometric Society European Meeting (ESEM 09): *Optimal Predictions of Powers of Conditionally Heteroskedastic Processes.*

111. June 2009, Journées de Statistique du Sud, Porquerolles. Invited speaker: *Recent results on the estimation and prediction of conditionally heteroskedastic models.*

112. June 2009, Time series and financial statistics (4th Brussels-Waseda seminar), Ensai (Rennes): *QML estimation and prediction in GARCH models.*

113. May 2009, Seminar of the Finance Institute, Lugano (Suisse): *Merits and drawbacks of variance targeting in GARCH models.*

114. August 2008, Milan (Italie), Econometric Society European Meeting (ESEM 08): *Inconsistency of the QMLE and asymptotic normality of the weighted LSE for a class of conditionally heteroscedastic models.*

115. June 2008, Neuchâtel (Suisse) Computational and Financial Econometrics workshop: *Testing the nullity of GARCH coefficients : correction of the standard tests and relative efficiency comparisons.*

116. May 2008, Ottawa (Canada), Congrès conjoint SSC-SFdS. Invited speaker: *Relative efficiencies of tests on GARCH coefficients.*

117. March 2008, Journée Chaire CREST-Dauphine-EDF-Calyon, Finance et Développement Durable: *Modélisation GARCH des prix spots de l'électricité.*

118. August 2007, Budapest (Hungary), Econometric Society European Meeting (ESEM 07): *Deriving the autocovariances of powers of MS GARCH, with applications to statistical inference.*

119. May 2007, Graz (Austria), Statistical Models for Financial Data II. Invited speaker: *A class of stochastic unit-root bilinear processes.*

120. December 2006, Séminaire Parisien de Statistique: *Propriétés asymptotiques de l'estimateur du quasi-maximum de vraisemblance dans les modèles GARCH et application aux tests d'hypothèses.*

121. December 2006, Time Series Conference, Cireq, Montréal (Canada). Invited speaker: *Estimating and Testing GARCH Processes when the Parameter is on a Boundary.*

122. November 2006, INTAS meeting, Varsaw (Poland): *A class of stochastic unit-root bilinear processes: estimation and unit-root test.*

123. August 2006, Vienna (Austria) Econometric Society European Meeting (ESEM 06): *Quasi-likelihood inference in GARCH processes when some coefficients are equal to zero.*

124. June 2006, Limassol (Cyprus), International Conference on Computing in Economics and Finance: *Quasi-likelihood inference in GARCH processes when some coefficients are equal to zero.*

125. April 2006, Xiamen (China), International Symposium on Econometric Theory and Application: *Estimating and testing GARCH Processes when the parameter is on a boundary.*

126. April 2006, Joint statistical seminar, HKUST (Hong-Kong): *Estimating and testing GARCH Processes when the parameter is on a boundary.*

127. February 2006, Séminaire à l'Institut de Statistique, UC Louvain (Belgium): *Estimating and testing GARCH Processes when the parameter is on a boundary*

128. January 2006, Journées mathématiques pour l'économie, Lille 1. Invited speaker: *Modèles GARCH et à volatilité stochastique : propriétés probabilistes.*

129. Octobre 2005, Limassol (Cyprus), Computational Statistics & Data Analysis. Invited speaker: *QML Estimation of GARCH Processes when the parameter is on a boundary of the parameter space.*

130. September 2005, Angers, Colloque Statistique des processus, applications au traitement du signal et de l'image (SSIA 2005). Conférencier invité: *Estimation et tests de modèles GARCH avec paramètres sur le bord.*

131. August 2005, London (UK) World Congress of the Econometric Society (WCES 05): *Mixing properties of a general class of GARCH(1,1) models without moment assumptions.*

132. March 2005, GREQAM Marseile, séminaire d'économétrie et statistique: *QML estimation of GARCH processes when the parameter is on a boundary of the parameter space,*

133. March 2005, Paris 6, séminaire de statistique non-paramétrique et semi-paramétrique: *Estimation et tests dans les modèles GARCH avec problèmes de bord.*

134. August 2004, Madrid (Espagne), 59th European Meeting of the Econometric Society (ESEM 04): *Goodness-of-fit tests for ARMA models with uncorrelated errors.*

135. June 2004, Montpellier, 36èmes journées de statistique de la SFDS: *Estimation par maximum de vraisemblance de processus GARCH purs et ARMA GARCH*

136. August 2002, Prague, Joint session of the 24th European Meeting of Statisticians - 14th Conference on Information Theory, Statistical Decision Functions and Random Processes: *L^2 Structures of Switching-Regime GARCH Models.*

137. May 2002, Bruxelles (Belgique), 34èmes journées de statistique de la SFDS: *Structures L^2 des processus GARCH à changement de régime markovien et applications statistiques.*

138. August 2001, Atlanta (USA), Joint Statistical Meetings (ASA, IMS): *Testing Strong Linearity in Weak ARMA Models.*

139. April 2001, CIRM, Marseille, Colloque "Nouvelles directions en séries temporelles", Invited talk: *Linear Representations based Estimation of Switching Regime GARCH Models.*

140. October 2000, Lille 3, séminaire du GREMARS: *Stationnarité des modèles ARMA à changement de régime markovien.*

141. June 2000, CORE Louvain-La-Neuve (Belgique), econometrics seminar: *Linear Representations based Estimation of Switching Regime GARCH Models.*

142. May 2000, Fès (Maroc), 32èmes journées de statistique de la SFDS: *Estimation de modèles à volatilité stochastique.*

143. April 2000, University of Tilburg (Pays-Bas), econometrics seminar: *Linear Representations based Estimation of Switching Regime GARCH Models,*

144. September 1999, Columbia University, New-York (USA), econometrics and statistics seminar: *Linear Representations based Estimation of Switching Regime GARCH Models.*

145. September 1999, Université de Montréal (Canada), econometrics seminar: *Linear Representations based Estimation of Switching Regime GARCH Models.*

146. September 1999, Université de Montréal (Canada), statistics seminar: *Least-squares and Autocorrelations based Estimators of Weak ARMA Models.*

147. August 1999, Taipeh (Taiwan), National Bureau of Economic Research (NBER) Time Series Seminar: *Linear Representations based Estimation of Switching Regime GARCH Models.*

148. August 1999, St-Jacques de Compostelle (Spain), Econometric Society European Meeting (ESEM 99): *Linear Representations based Estimation of Switching Regime GARCH Models.*

149. May 1999, Grenoble, 31èmes journées de statistique de la SFDS: *Estimation de processus ARMA par des méthodes de moments généralisées.*

150. September 1998, Chicago, NBER/NSF Time Series Seminar, Graduate School of Business, University of Chicago:

151. August 1995, Tokyo (Japan), World Congress of the Econometric Society (WCES 95): *Asymmetric GARCH with Asymmetric Volatilities.*

━━━━ Ph. D supervision

Completed

B.M. Kandji (joint with C. Francq). *Stochastic recurrent equation: structure, statistical inference, and financial applications.* Thèse de l'Institut Polytechnique de Paris, June 27, 2023.

J. Royer (joint with C. Francq). *Processus ARCH d'ordre infini, Bêtas dynamiques et applications financières.* Thèse de l'Institut Polytechnique de Paris, December 9, 2022.

O. Couperier (joint with C. Francq and C. Hurlin): *Three Essays in Financial Econometrics.* Thèse de l'Institut Polytechnique de Paris, December 2, 2022.

S. Fries: *Anticipative α-stable linear processes for time series analysis: conditional dynamics and estimation.* Univ. Paris-Saclay, December 4, 2018. Assistant Professor of Econometrics and Data Science, VU Amsterdam.

A. Ahmad (joint with C. Francq): *Contributions to the econometrics of integer-valued time series.* Univ. Lille 3, December 5, 2016.

G. Lepage (joint with C. Francq): *Statistical inference of conditionally heteroskedastic models with stable innovations, non Gaussian contrast and misspecified volatility.* Univ. Lille 3, December 13, 2012.

N. Regnard: *GARCH models with coefficients functions of an exogenous process.* Univ. Lille 3, September 15, 2011. Post-doc at Montréal (2012).

T. Hamadeh (joint with C. Francq): *Statistical inference in non linear GARCH models.* Univ. Lille 3, June 11, 2010.

Y.B. Mainassara (joint with C. Francq): *Estimation, validation and identification of weak vector ARMA models.* Univ. Lille 3, November 28, 2009. Maître de conférences, HDR à l'Université de Franche-Comté.

A. Elghini (joint with C. Francq): *Specification tests based on inverse autocorrelations. Asymptotic properties of inverse empirical autocorrelations.* Univ. Lille 3, December 6, 2008. Qualified to the functions of Assistant professor, 26th section. Professor at Mohammed V University in Rabat (Morocco).

H. Raissi (joint with C. Francq): *Contributions to the statistical inference of vector autoregressive and error-correction models.* Univ. Lille 3, November 29, 2007. Assistant professor at INSA, Rennes (2008-) and Professor at Instituto de Estadística, Valparaiso (Chile).

A. Gautier (joint with C. Francq): *Time-dependent coefficients time series models.* Univ. Lille 3, December 7, 2004. Maître de conférences at Rouen (2005-2007) and Lille 3 (2007-.)

Y. Saidi (joint with L. Broze): *Probabilist and statistical study of non linear conditionally heteroscedastic models.* Univ. Lille 3, December 12, 2003. Professor at Univ. Rabat (Maroc).

Current PhD Advisees
R. Alami Chentoufi (joint with C. Francq), 2023- , Institut Polytechnique de Paris.

▬▬▬ Other scientific activities

Sabbatical
Hong-Kong University, Visiting Professor, Spring 2006.

Short visits
Université de Coimbra, Department of Mathematics, February 2015.
Cambridge University, Department of Economics, UK, June 2014.
Newton Institute, Cambridge University, UK, January 2014.
University McGill, Montreal (Canada), CIREQ, September 2013.
Honk-Kong University, Department of Statistics and Actuarial Science, May 2012.
Université de Montréal (Canada), département de mathématiques, March 2007.
University of Science and Technology (Hong-Kong), March-April 2006.
CentER, University of Tilburg (Pays-Bas), May 2000.
Columbia University, New-York (USA), September 1999.
Université de Montréal, département d'économie, September 1999.
Uniersité Ca'Foscari, dép. d'économie, Venise (Italie), May 2000, 2001.
CORE, Louvain-la-Neuve (Belgique), 1990, 1991, 1995, 1996.

Université de Coimbra, département de mathématiques, December 1992.

Manuscript Refereeing

Annales d'économie et de statistique (7 papers), Annales de l'ISUP, Annals of Statistics (5 papers), Annals of the Institute of Statistical Mathematics, Applied Economics Letters, Applied Mathematical Modelling, Applied Probability Journals, Bernoulli (5 papers), Comptes Rendus de l'Académie des Sciences de Paris (CRAS) (5 papers), Computational Statistics, Computational Statistics & Data Analysis (9 papers), Econometrica (4 papers), Econometric Reviews (4 papers), Econometrics and Statistics (5 papers), Econometric Theory (34 papers), Economic Modelling, Economics Letters (4 papers), Economie et prévisions, Electronic Journal of Probability (2 papers), Electronic Journal of Statistics (2 papers), ESAIM : Probability & Statistics (3 papers), European Journal of Finance, International Economic Review, International Journal of forecasting (3 papers), Journal of the American Statistical Association (3 papers), Journal of Applied Econometrics (4 papers), Journal of Applied Mathematics, Journal of Business and Economic Statistics (14 papers), Journal of Econometrics (26 papers), Journal of Economic Dynamics and Control (2 papers), Journal of Economics and Business, Journal of Empirical Finance, Journal of Financial Econometrics (14 papers), Journal of Forecasting, Journal of Money, Credit and Banking, Journal of Nonparametric Statistics (2 papers), Journal of Multivariate Analysis (4 papers), Journal of the Royal Statistical Society-B (2 papers), Journal of Statistical Planning and Inference (6 papers), Journal of Statistics and Applications, Journal of Time Series Analysis (20 papers), Management Science, Mathematical Finance, Metrika (3 papers), Oxford Bulletin of Economics and Statistics, Quantitative Finance (2 papers), Revue Maghrébine de mathématiques, Recherches économiques de Louvain, Review of Economics and Statistics, Review of Economic Studies, Revstat (2 papers), Scandinavian Journal of Statistics (3 papers), Statistica Neerlandica, Statistical Inference for Stochastic Processes (4 papers), Statistica Sinica, Statistics and Probability Letters (10 papers), Statistics & Risk Modeling, Statistics (2 papers), Statistics and Computing, Stochastic Processes and their Applications (3 papers), Stochastics, Test (3 papers), The Econometrics Journal (4 papers), The Journal of Futures Market, The Journal of Risk, The Manchester School.

Participation to PhD/HDR committees

Michel Beine, 1998 Université Libre de Bruxelles, Belgique; Ali Alami, 1999 Université Paris 9; Christelle Lecourt, 2000 Université Lille 2; Alain Hecq, 2000 Université de Maastricht, Pays-Bas; Ivana Komunjer, 2002 HEC; Abdelouahab Bibi, 2002 Université de Constantine, Algérie; Sébastien Laurent, 2002 Université de Maastricht, Pays-Bas; Massimiliano Caporin, 2003 Université Cà Foscari, Venise; Amor Keziou, 2003 Université Paris 6; Mathieu Brezovski, 2005 Université de Strasbourg; Olivier Wintenberger, 2007 Université Paris 1; Rim Khemiri, 2008 Université Aix-Marseille; Sessi Tokpavi, 2008 Université d'Orléans; Lionel Truquet, 2008 Université Paris 1; Sophie Dabo-Niang (HDR), 2009 Université Lille 3; Benjamin Hamidi, 2010 Université Paris 1; Francesco Violante, 2010 Namur University; Guillaume Coqueret, 2012 Université Lille 1; Hui Jun Zhang, 2013 McGill University, Montreal; Hassan Malongo Elouai, 2014 Université Paris-Dauphine; Abdelhakim Aknouche (HDR), 2014 Université Lille 3; Lorenza Campagnolo, Maddalena Cavicchioli, Ayokunle Osuntuyi, Martin Siyaranamual, 2014 Université Ca'Foscari, Venise; Olivier Lopez (HDR), 2014 Université Paris 6; Hamdi Raïssi (HDR), 2014 INSA Rennes; Fedya Telmoudi, 2014 Université Lille 3; Jean-Cyprien Héam, 2015 Université Paris-Dauphine; Tepmony Sim, 2016 Télécom ParisTech; Thomas Chuffart, 2016 Université d'Aix-Marseille; Benjamin Poignard, 2017 Université Paris-Dauphine; Sean Telg, 2017 Maastricht University; Clément Cerovecki, 2018 Université de Lille et ULB; Othman Kadmiri, 2018 Université de Franche-Comté; Mark Nientker, 2019 VU Amsterdam; Jeremy Leymarie, 2019 Maastricht University; Elena Dumitrescu (HDR), 2021 Paris-Nanterre University; Elisa Voisin, 2022 Maastricht University; Pierluigi Vallarino, 2023 Aarhus University.

Grant refereeing

ANR (evaluation of 2 proposals); Research Grants Council, Hong Kong (evaluation of 5 proposals); Netherlands Organisation for Scientific Research (NWO)(evaluation of 1 proposal); ERC Advanced Grant 6th Call - 2013 (evaluation of 1 proposal).

Teaching

At **ENSAE** I teach 3rd year courses (also for the **Master in Statistics, Finance and Actuarial Science**) on "Financial Econometrics" and "Dynamic Models with Latent Variables". In the past, I taught "GARCH and Stochastic Volatility Models" and "Risk Measures". I also gave advanced 3rd year courses (Formation par la recherche) on "Multivariate GARCH and Stochastic Correlation models" (2016), "Non causal autoregressive processes and speculative bubbles modelling" (2015), and "Estimation risk and conditional risk measures" (2014).

In the **Master in Economics of IPP (Institut Polytechnique de Paris)**, I teach "Introduction to Time Series Econometrics" (M1 course).

I gave **Spring School** lectures (PhD level) at the
- QFFE Spring School at Marseille University (AMSE) - June 3-5, 2019. "Estimating the Conditional Risk of Financial Portfolios" (with C. Francq).
- SoFiE Financial Econometrics Summer School 2016 at Brussels (July 11-15, 2016). "Noncausal Autoregressive Process and the Modelling of Speculative Bubbles" (with C. Gouriéroux).

I gave **courses in foreign universities** at the Master level on:
-"Advanced Risk Measures" John von Neumann Institute, Vietnam National University Ho Chi Minh City (April 2012).
-"Modèles GARCH et à Volatilité Stochastique", Université de Montréal (march 2007).
-"GARCH and Stochastic Volatility Models", Universita Ca'Foscari da Venezia (1999-2001).
-"Stochastic processes", ECARES, Université Libre de Bruxelles (2000-2002).

At **Lille University**, I taught
- at graduate level: Asymptotic statistics, Advanced econometrics, Dynamic Models, Econometrics, Time Series, Prediction methods;
- at undergraduate level: Probability, Mathematical statistics, Time series, Analysis, Measure and integration, Algebra.