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BIBLIOGRAPHY

Sébastien LAURENT holds a Ph.D. (2002) in Financial Econometrics from Maastricht University (The Netherlands). In 2002-2003, he was postdoctoral researcher at the CREST (Laboratory of Finance-Insurance) in Paris (France). He worked six years as assistant professor in Econometrics at the Faculté Notre-Dame de la Paix in Namur (Belgium) and four years as associate professor in financial econometrics at Maastricht University, School of Business and Economics. In 2008 and 2009 he has been appointed as invited professor at the London School of Economics (Finance Department). Sébastien has published about 60 articles in *Journal of Econometrics*, *Econometric Theory*, *Journal of Business and Economic Statistics*, *Journal of Applied Econometrics*, *Journal of Financial Econometrics*, *European Economic Review* and *Journal of Empirical Finance* among others and has recently co-edited a handbook on volatility models (published by Wiley). He has been associate editor of *Journal of Business and Economic Statistics*, and currently associate editor of *International Journal of Forecasting* and *Journal of Time Series Analysis* and also member of the board of directors of *Annals of Economics and Statistics*. Since 2014, he has been awarded Junior member of the Institut Universitaire de France, a French service of the Ministry of Higher Education that distinguishes each year a small number of university professors for their research excellence, as evidenced by their international recognition. Sébastien is also the developer of G@RCH, a software used by many institutions (e.g., European Central Bank, Federal Reserve of Washington, ABN AMRO) and universities for estimating and forecasting risk.

EDUCATION

- 1996 Bachelor of Arts, Economics, Université de Liège
- 1998 Master of Arts, Economics, Université de Liège and University of Maastricht
- 2002 Phd in Financial Econometrics at Maastricht University

Foreign languages (mentioned with an X)

Language	Read	Speak	Written
ENGLISH	X	X	X

ACADEMIC ACTIVITIES

- Introductory Econometrics (introductory level)
- Microeconometrics (intermediate level)
- Advanced Econometrics (advanced level)
- Time Series Econometrics (advanced level)
- Financial Econometrics (advanced and doctoral level)
- Ox: Computational Econometrics (advanced)

- 1995-1997 : Student Assistant in Econometrics and Mathematical Economics, Université de Liège.
- 10/01/1997 - 05/01/1998 : Half-time researcher (CATD), Université de Liège.
- 10/01/1998 - 11/30/1998 : Half-time researcher (CREPP), Université de Liège, Prof. P. Pestieau.
- 12/01/1998 - 08/30/2002 : Assistant in Econometrics and Mathematical Economics, Université de Liège.
- 01/01/2001 - 08/30/2002 : Visiting the Department of Quantitative Economics at Maastricht University.
- 01/10/2001 : Fellow at CORE (Louvain-la-Neuve).
- 09/01/2002 - 01/09/2003 : Post doc at the CREST (Paris).
- 01/09/2003 - 31/08/2009: Associate professor in Econometrics, Facultés Universitaires Notre-Dame de la Paix (FUNDP).
- 15/01/2008 – 30/06/2008: Visiting professor at LSE, Finance Department (London).
- 15/01/2009 – 30/06/2009: Visiting professor at LSE, Finance Department (London).
- 01/09/2009 – 31/08/2013: Associate professor in Econometrics, Maastricht University, The Netherlands.
- 01/09/2013 – Professor of Financial Econometrics, Aix Marseille GSM - IAE (France).
- 01/09/2013 – Fellow at GREQAM (Aix-Marseille, France).
- 01/01/2013 : Associate editor of Journal of Time Series Analysis (Wiley).
- 01/10/2014 – 30/09/2019 : Awarded Junior member of the Institut Universitaire de France (IUF).
- 01/01/2015 : Member of the board of Directors of Annals of Economics and Statistics.
- 01/01/2015 : Associate editor of International Journal of Forecasting (Elsevier).
- 01/01/2017-30/8/2018: Associate Editor of Journal of Business & Economic Statistics.

RESEARCH AND PUBLICATIONS

Prizes and Research Grants

1. 2014: Awarded member of the IUF (Institut Universitaire de France) in the category Junior for the period 2014-2019.
2. 2014: PACA grant (60.000€).
3. 2008: Convention with Electrabel on the modeling of electricity prices. 160.000€.
4. 2008: The article Multivariate GARCH models: a survey (with Luc Bauwens and Jeroen V. K. Rombouts), published in Journal of Applied Econometrics (Volume 21, Issue 1, January/February 2006) was the most downloaded JAE paper in Wiley InterScience during 2007.
5. 2008: one year post-doctoral grant (programme institutionnel de bourses FUNDP-CERUNA).
6. 2007: FUNDP promotor of the 'Interuniversity Attraction Pole' project Economic Policy And Finance In The Global Economy financed by the Belgian Science Policy. Budget allocated to FUNDP: 600,000 € (2007-2011).
7. 2007: National Bank of Belgium research grant for the project 'Application of advanced numerical optimisation techniques for the estimation of multivariate GARCH models'.
8. 2006: Two years doctoral grant from the 'Fonds Spécial de Recherche' (FUNDP).
9. 2005: National Bank of Belgium research grant for the project 'Identification and estimation of jumps in financial time series'.

Articles in Referred Journals

10. Capital Humain, Emploi et Revenus du Travail - Belgique 1992 , Cahiers Economiques de Bruxelles. N°161 du premier trimestre 1999, 77-102 (with Frédéric Docquier and Sergio Perelman).
11. La Persistance des Chocs de Volatilité sur le Marché des Changes s'est-

- elle Modifiée Depuis le Début des Années Quatre-vingts ? (with Michel Beine), 2000, *La Revue Economique*, n° 3, 703-711. (ISSN : 0035-2764)
12. L'Absentéisme dans une Institution Hospitalière : les Facteurs Déterminants (with Barbara Lipszyc), 2000, *Cahiers Economiques de Bruxelles*, 166, 131-170.
13. L'impact des Signaux de Politique Monétaire sur la Volatilité Intrajournalière du Taux de Change Deutschemark-Dollar (with Aurélie Boubel and Christelle Lecourt), 2001, *La Revue Economique*, 2, 353-370.
14. Accounting for Conditional Leptokurtosis and Closing Days Effects in FIGARCH Models of Daily Exchange Rates (with Michel Beine and Christelle Lecourt), 2002, *Applied Financial Economics*, 12, 589-600. [CNRS 4]
15. Life Cycle Behaviour of US Households: an Estimation by GMM using Pseudo-Panel Data (with Michel Beine and Frédéric Docquier), 2001, *Journal of Policy Modelling*, 23, 713-729. [CNRS 4]
16. G@RCH 2.0: An Ox Package for Estimating and Forecasting Various ARCH Models (with Jean-Philippe Peters), 2002, *Journal of Economic Surveys*, 16, 447-485. [CNRS 2]
17. Quantifying Market Risk for Long and Short Traders (with Pierre Giot). *European Investment Review*, 2002, 1, 31-39.
18. Central Bank Intervention and Exchange Rate Volatility: Evidence from a Switching Regime Analysis (with Michel Beine and Christelle Lecourt), 2003, *European Economic Review*, 47, 891-911. [CNRS 1]
19. Value-at-Risk for Long and Short Trading Positions (with Pierre Giot), 2003, *Journal of Applied Econometrics*, 18, 641-663. [CNRS 1]
20. Central Bank Interventions and Jumps in Double Long Memory Models of Daily Exchange Rates (with Michel Beine), 2003, *Journal of Empirical Finance*, 10, 641-660. [CNRS 2]
21. Market Risk in Commodity Markets: a VaR Approach (with Pierre Giot), 2003, *Energy Economics*, 25, 435-457.
22. Modelling Daily Value-at-Risk Using Realized Volatility and ARCH type Models (with Pierre Giot), 2004, *Journal of Empirical Finance*, 11, 379-398. [CNRS 3]
23. Analytical derivatives of the APARCH model, 2004, *Computational Economics*, 24, 51-57. [CNRS 3]
24. Have Sequential Interventions of Central Banks in Foreign Exchange been Effective? (with Michel Beine and Franz Palm), 2004, *de Economist*, 152(2), 297-308. [CNRS 3]
25. Bridging the Gap between Gauss and Ox using OXGAUSS (with Jean-Pierre Urbain), 2005, *Journal of Applied Econometrics*, 1, 131-139. [CNRS 1]
26. A New Class of Multivariate Skew Densities, with Application to GARCH Models (with Luc Bauwens), 2005, *Journal of Business and Economic Statistics*, 23(3), 346-354. [CNRS 1]
27. Multivariate GARCH models: a survey (with Luc Bauwens and Jeroen Rombouts), 2006, *Journal of Applied Econometrics*, 21(1), 79-109. [CNRS 1]
28. The information content of implied volatility in light of the jump/continuous decomposition of realized volatility (with Pierre Giot), 2007, *Journal of Futures Markets*, volume 27, 337-359. [CNRS 3]
29. The Impact of Central Bank FX Interventions on Currency Components (with Michel Beine and Charles S. Bos), 2007, *Journal of Financial Econometrics*, 5/1, 153-183. [CNRS 2]
30. Central Bank Intervention and Exchange Rate Volatility, Its Continuous and Jump Components (with M. Beine, J. Lahaye, C.J. Neely and F. Palm), 2007, *International Journal of Finance and Economics*, 12/2, 201-223. [CNRS 3]
31. Does transparency in central bank intervention policy bring noise to the FX market? The case of the Bank of Japan (with C. Lecourt and J.-Y. Gnabo), 2009, *Journal of International Financial Markets, Institutions & Money* 19/1, 94-111. [CNRS 3]
32. Central Bank Forex Interventions Assessed Using Realized Moments (with

Michel Beine and Franz Palm), 2009, Journal of International Financial

- Markets, Institutions & Money, 19/1, 112-127. [CNRS 3]
33. Jumps, Cojumps and Macro Announcements (with Jerome Lahaye and Chris Neely), 2011, *Journal of Applied Econometrics*, 26, 893-921. [CNRS 1]
 34. Trading Activity, Realized Volatility and Jumps (with Pierre Giot and Mikael Petitjean), 2010, *Journal of Empirical Finance*, 17, 168–175. [CNRS 3]
 35. Robust estimation of intraweek periodicity in volatility and jump detection (with Kris Boudt and Christophe Croux), 2011, *Journal of Empirical Finance*, 18, 353-367. [CNRS 3]
 36. On the Forecasting Accuracy of Multivariate GARCH Models (with Jeroen Rombouts and Francesco Violante), 2012, *Journal of Applied Econometrics*, 12/6, 934-955. [CNRS 1]
 37. Outlyingness weighted quadratic covariation (with Kris Boudt and Christophe Croux), 2011, *Journal of Financial Econometrics*, 9, 657-684. [CNRS 2]
 38. Volatility forecasts evaluation and comparison (with Francesco Violante), 2011, *Wiley Interdisciplinary Reviews: Computational Statistics*, 4, 1-12.
 39. Testing Conditional Dynamics in Asymmetry: A Residual-Based Approach (with Philippe Lambert and David Veredas), 2012, *Journal of Economics Dynamics and Control*, 36/8, 1129-1247. [CNRS 1]
 40. Common intraday periodicity (with Alain Hecq and Franz Palm), 2012, *Journal of Financial Econometrics*, 10, 325-353. [CNRS 2]
 41. Do Jumps mislead the FX market? (with Jean-Yves Gnabo, Jérôme Lahaye and Christelle Lecourt), 2012, *Quantitative Finance*, 12/10, 1521-1532. [CNRS 3]
 42. Consistent ranking of multivariate volatility models (with Jeroen Rombouts and Francesco Violante), 2013, *Journal of Econometrics*, 173, 1-10. [CNRS 1]
 43. Robust estimation of dynamic conditional correlation GARCH models (with Kris Boudt and Jon Danielsson), 2013, *International Journal of Forecasting*, 29, 244-257. [CNRS 3]
 44. Which Continuous-time Model is Realistic for Exchange rates? (with Deniz Erdemlioglu and Chris Neely), *Journal of Banking and Finance*, 2015, 61, Supplement 2, S256-S268. [CNRS 2]
 45. Testing for jumps in conditionally Gaussian ARMA-GARCH models, a robust approach (with Christelle Lecourt and Franz Palm), 2016, *Computational Statistics and Data Analysis*, 100, 383-400.
 46. On the Univariate Representation of Multivariate Volatility (with Alain Hecq and Franz Palm), *Journal of Time Series Econometrics*, 2016, 8 (2) 91-113. [CNRS 3].
 47. Introduction to the special issue on recent developments in Financial Econometrics (with Serge Darolles and Christian Gouriéroux), *Annals of Economics and Statistics*, 2016, vol 123-124, p. 7-8. [CNRS 2].
 48. Do We Need High-frequency Data to Forecast Variances? (with Denisa Banulescu, Bertrand Candelon and Christophe Hurlin), *Annals of Economics and Statistics*, 2016, vol 123-124, p. 135-174. [CNRS 2]
 49. Weak Diffusion Limits of Dynamic Conditional Correlation Models (with Christian Hafner and Francesco Violante), *Econometric Theory*, 2017, 33, 1-26. [CNRS 1].
 50. Risk Measure Inference (with Christophe Hurlin, Rogier Quaadvlieg and Stephan Smeekes), *Journal of Business and Economic Statistics*, 2017, 35, 4, 499-512. [CNRS 1].
 51. Positive Semidefinite Integrated Covariance Estimation, Factorizations and Asynchronicity (with Kris Boudt, Asger Lunde and Rogier Quaadvlieg), *Journal of Econometrics*, 2017, 196, 347-367. [CNRS 1].
 52. Generating Univariate Fractional Integration within a Large VAR(1) (with Alain Hecq and Guillaume Chevillon), *Journal of Econometrics* 2018, 204, 54-65. [CNRS 1].
 53. Asymptotics of Cholesky GARCH Models and Time-Varying Conditional

Betas (with Serge Darolles and Christian Francq), *Journal of Econometrics*, 2018, 204, 223-247. [CNRS 1].

54. Jumps et modèles de type GARCH (with Christelle Lecourt). Dans *Méthodes de Prévisions en Finance*, Charles A., Darné O. et Ferrara L. (eds), Editions Economica Collection « Corpus Economie », chapitre 3, 2020, p. 59-76.
55. Modeling time-varying conditional betas. A comparison of methods with application for REITs (with M. Aloy, F. Laly and C. Lecourt) 2021, in *Recent Econometric Techniques for Macroeconomics and Finance*, Gilles Dufrénot and Takashi Matsuki (eds), Springer (book series Dynamic Modeling and Econometrics in Economics and Finance).
56. Volatility Estimation and Jump Detection for Drift-diffusion Processes (with Shuping Shi), *Journal of Econometrics*, 2020, 217, Issue 2, 259-290. [CNRS 1]
57. Does the Random Walk Assumption Hold in High Frequency Prices? (with Shuping Shi). *Econometrics Theory*, 38(1), 113-171. [CNRS 1].
58. Quasi score-driven models (with Francisco Blasques and Christian Francq). Forthcoming in *Journal of Econometrics*. [CNRS 1].

Chapters in Books and articles in non-refereed Journals

59. Les Salaires Wallons Sont-ils Trop Elevés ? in *Tendances Economiques*, 1998, 7, 52-64 (with Frédéric Docquier).
60. L'Apport des Modèles Périodiques à Longue Mémoire pour la Modélisation de l'Effet Jour sur la Volatilité des Séries Financières, (with Jean-Pierre Urbain), 2000, in *Finances publiques. Finances Privées*, B. Jurion and P. Pestieau, Les Editions de L'Université de Liège. (ISBN : 2930322012)
61. Capital Humain, Emploi et Salaire en Belgique et ses Régions, 2001, In *Reflets et Perspectives de la vie économique*, n°1-2, p. 25-36. Reprinted In de la Croix, D., Docquier, F., Mainguet, C., Perelman, S. and Wasmer, E., *Capital humain et dualisme sur le marché du travail*, chapitre 7, De Boeck Université, Bruxelles. (ISBN : 2804136647)

Books

62. *GARCH 6, Estimating and Forecasting ARCH Models*, London: Timberlake Consultants Press. (ISBN 978-0-9557076-0-5).
63. *Handbook on Volatility Models and their Applications* (with Luc Bauwens and Christian Hafner). John Wiley & Sons, Inc. May 2012. ISBN: 978-0-470-87251-2. 568 pages.

Chapters in Books

64. Long-run Volatility Dependencies in Intraday Data and Mixture of Normal Distributions (with Aurélie Boubel), 2001, in *Developments in Forecast Combination and Portfolio Choice*, Dunis, C., Timmermann, A., Moody, J., ed. John Wiley (within the *Financial Economics and Quantitative Analysis* series), chapter 6, 145-157.
65. Structural Change and Long Memory in Volatility: New Evidence from Daily Exchange Rates (with Michel Beine), 2001, in *Developments in Forecast Combination and Portfolio Choice*, Dunis, C., Timmermann, A., Moody, J., ed. John Wiley (within the *Financial Economics and Quantitative Analysis* series), chapter 7, 159-177.
66. Nonparametric tests for intraday jumps: Impact of periodicity and microstructure noise, with Kris Boudt, Jonathan Cornelissen and Christophe Croux. In Bauwens, Hafner and Laurent (2012), *Handbook on Volatility Models and their Applications*. John Wiley & Sons, Inc. ISBN: 978-0-470-87251-2.
67. Volatility Forecasts Evaluation and Comparison : A Survey, with Francesco Violante. In Bauwens, Hafner and Laurent (2012), *Handbook on Volatility Models and their Applications*. John Wiley & Sons, Inc. ISBN: 978-0-470-87251-2.

68. Econometric Modelling of Exchange Rate Volatility and Jumps (with Deniz Erdemlioglu and Chris Neely). In Bell, Brooks and Prokopczuk (2013), Handbook of Research Methods and Applications and Empirical Finance. Edward Elgar Publishing. ISBN: 978-0-857-93609-7.

Works submitted for publication and work in progress

69. We modeled long memory with just one lag! (with Luc Bauwens and Guillaume Chevillon). Second round at *Journal of Econometrics*.
70. Autoregressive conditional betas (with Francisco Blasques and Christian Francq). Second round at *Journal of Econometrics*.
71. Cojumps Delays (with Nabil Bouamara, Kris Boudt and Chris Neely). Work in Progress.
72. GAM(L)A: An econometric model for interpretable Machine Learning (with Emmanuel Flachaire, Gilles Hacheme and Sullivan Hué). *Submitted*.
73. Sequential Cauchy Combination Test for Multiple Testing Problems with Financial Applications (with Nabil Bouamara and Shuping Shi). *Submitted*
74. Realized Drift (with Roberto Renò and Shuping Shi). *Submitted*.