

# Curriculum vitae

This version: January 2018

## Personal Information

Surname:	<b>LAURENT</b>
First name:	<b>Sébastien</b>
Citizenship:	Belgium
Birth:	June 4th 1974
Marital status:	Married (with Christelle Lecourt), two children (Valentin and Mathis)
Private address:	5285 rue Jean Giono 13640 La Roque d'Anthéron (France)
Professional address:	IAE Aix-en-provence, Chemin de la Quille Puyricard - CS 30063 13089 Aix en Provence Cedex 2 France and GREQAM Château La Farge Route des Milles 13290 Les Milles
Professional Ph.:	+33 7 88 10 12 58
Fax.:	+33 4 42 93 09 68
E-mail:	sebastien.laurent@univ-amu.fr
Url:	<a href="http://www.slaurent.net">http://www.slaurent.net</a>

## Education

Bachelor of Arts, Economics, Université de Liège, 1996 (Licence en Sciences Economiques).

Master of Arts, Economics, Université de Liège and University of Maastricht, 1998. (DEA en Sciences Economiques).

20/06/2002: Phd in Financial Econometrics at Maastricht University.

Title: Asymmetry and Fat-Tails in Financial Time Series

Supervisor: Prof. dr. F.C. PALM (Professor of Econometrics at Maastricht University, Netherlands)

Co-supervisor: Prof. dr. J.-P. URBAIN (Professor of Time Series Econometrics at Maastricht University, Netherlands).

Members Degree Committee: Prof. dr. L. Bauwens (Université catholique de Louvain), Dr. S. Schim van der Loeff (Maastricht University) and Prof. dr. A. Corhay (Université de Liège and Maastricht University).

Other members of the Committee: Prof. dr. C.J.M. Kool (Maastricht University), Dr. R. Tschernig (Maastricht University), Prof. dr. C.C.P. Wolff (Maastricht University) and Prof. dr. J.-M. Zakoian (Université de Lille 3).

## Research Interest

Financial Econometrics, Microeconometrics and Computational Econometrics.

## Academic Appointments

- 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, IAE Aix en Provence (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 : Junior member of the Institut Universitaire de France (IUF).

## Research and Publications

### Prizes and Research Grants

- 2014: Awarded member of the IUF (Institut Universitaire de France) in the category Junior for the period 2014-2019.
- 2008: Convention with Electrabel on the modeling of electricity prices. 160.000€.
- 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.

- 2008: one year post-doctoral grant (programme institutionnel de bourses FUNDP-CERUNA).
- 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).
- 2007: National Bank of Belgium research grant for the project 'Application of advanced numerical optimisation techniques for the estimation of multivariate GARCH models'.
- 2006: Two years doctoral grant from the 'Fonds Spécial de Recherche' (FUNDP).
- 2005: National Bank of Belgium research grant for the project 'Identification and estimation of jumps in financial time series'.

### **Editorial Activities**

1. Associate Editor of *Journal of Time Series Analysis*, 2013-.
2. Associate Editor of *International Journal of Forecasting*, 2015-.
3. Associate Editor of *Journal of Business & Economic Statistics*, 2017-.
4. Member of the Board of *Annals of Economics and Statistics*, 2015-.
5. Guest editor of the special issue "Recent developments in Financial Econometrics" (with Serge Darolles and Christian Gouriéroux). 2016 - vol 123-124. *Annals of Economics and Statistics*. 354 pages.

## Articles and Contributions to Edited Volumes

### French

#### *Articles in Referred Journals*

1. 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).
2. 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.
3. L'Absentéisme dans une Institution Hospitalière : les Facteurs Déterminants (with Barbara Lipszyc), 2000, *Cahiers Economiques de Bruxelles*, 166, 131-170.
4. 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.

#### *Chapters in Books and articles in non-refereed Journals*

1. Les Salaires Wallons Sont-ils Trop Elevés ? in *Tendances Economiques*, 1998, 7, 52-64 (with Frédéric Docquier).
2. 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.
3. 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.

4. Jumps et modèles de type GARCH (with Christelle Lecourt), 2017, in *Prévisions en finance*, A. Charles, O. Darné and L. Ferrara, Economica

### English

#### *Books/Special Issues*

1. *G@RCH 6, Estimating and Forecasting ARCH Models*, London: Timberlake Consultants Press. (ISBN 978-0-9557076-0-5).
2. *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.
3. Special issue of *Annals of Economics and Statistics* on recent developments in Financial Econometrics (with Serge Darolles and Christian Gouriéroux). 2016, vol 123-124. 354 pages.

#### *Articles in Referred Journals*

1. 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.
2. 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.
3. 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.
4. Quantifying Market Risk for Long and Short Traders (with Pierre Giot). *European Investment Review*, 2002, 1, 31-39.

5. 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.
6. Value-at-Risk for Long and Short Trading Positions (with Pierre Giot), 2003, *Journal of Applied Econometrics*, 18, 641-663.
7. 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.
8. Market Risk in Commodity Markets: a VaR Approach (with Pierre Giot), 2003, *Energy Economics*, 25, 435-457.
9. Modelling Daily Value-at-Risk Using Realized Volatility and ARCH type Models (with Pierre Giot), 2004, *Journal of Empirical Finance*, 11, 379-398.
10. Analytical derivatives of the APARCH model, 2004, *Computational Economics*, 24, 51-57.
11. Have Sequential Interventions of Central Banks in Foreign Exchange been Effective? (with Michel Beine and Franz Palm), 2004, *de Economist*, 152(2), 297-308.
12. Bridging the Gap between Gauss and Ox using OXGAUSS (with Jean-Pierre Urbain), 2005, *Journal of Applied Econometrics*, 1, 131-139.
13. 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.
14. Multivariate GARCH models: a survey (with Luc Bauwens and Jeroen Rombouts), 2006, *Journal of Applied Econometrics*, 21(1), 79-109.
15. 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

16. 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.
17. 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.
18. 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.
19. 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.
20. Jumps, Cojumps and Macro Announcements (with Jerome Lahaye and Chris Neely), 2011, *Journal of Applied Econometrics*, 26, 893-921
21. Trading Activity, Realized Volatility and Jumps (with Pierre Giot and Mikael Petitjean), 2010, *Journal of Empirical Finance*, 17, 168–175.
22. Robust estimation of intraweek periodicity in volatility and jump detection (with Kris Boudt and Christophe Croux), 2011, *Journal of Empirical Finance*, 18, 353-367.
23. On the Forecasting Accuracy of Multivariate GARCH Models (with Jeroen Rombouts and Francesco Violante), 2012, *Journal of Applied Econometrics*, 12/6, 934-955.
24. Outlyingness weighted quadratic covariation (with Kris Boudt and Christophe Croux), 2011, *Journal of Financial Econometrics*, 9, 657-684.



25. Volatility forecasts evaluation and comparison (with Francesco Violante), 2011, *Wiley Interdisciplinary Reviews: Computational Statistics*, 4, 1-12.
26. 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.
27. Common intraday periodicity (with Alain Hecq and Franz Palm), 2012, *Journal of Financial Econometrics*, 10, 325-353.
28. Do Jumps mislead the FX market? (with Jean-Yves Gnabo, Jérôme Lahaye and Christelle Lecourt), 2012, *Quantitative Finance*, 12/10, 1521-1532.
29. Consistent ranking of multivariate volatility models (with Jeroen Rombouts and Francesco Violante), 2013, *Journal of Econometrics*, 173, 1-10.
30. Robust estimation of dynamic conditional correlation GARCH models (with Kris Boudt and Jon Danielsson), 2013, *International Journal of Forecasting*, 29, 244-257.
31. 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.
32. 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.
33. On the Univariate Representation of Multivariate Volatility (with Alain Hecq and Franz Palm), *Journal of Time Series Econometrics*, 2016, 8 (2) 91-113.

34. 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.
35. 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.
36. Weak Diffusion Limits of Dynamic Conditional Correlation Models (with Christian Hafner and Francesco Violante), *Econometric Theory*, 2017, 33, 1-26.
37. Risk Measure Inference (with Christophe Hurlin, Rogier Quaedvlieg and Stephan Smeekes), *Journal of Business and Economic Statistics*, 2017, 35, 4, 499-512.
38. Positive Semidefinite Integrated Covariance Estimation, Factorizations and Asynchronicity (with Kris Boudt, Asger Lunde and Rogier Quaedvlieg), *Journal of Econometrics*, 2017, 196, 347-367.
39. Generating Univariate Fractional Integration within a Large VAR(1) (with Alain Hecq and Guillaume Chevillon). Forthcoming in *Journal of Econometrics*.

#### *Chapters in Books*

1. 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.
2. 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.
3. 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.
  4. 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.
  5. 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**

- Testing for Jumps in Near Non-Stationary Diffusion Processes (with Shuping Shi).
- Asymptotics of Cholesky GARCH Models and Time-Varying Conditional Betas (with Serge Darolles and Christian Francq) .

#### **Communications at seminars and conferences**

- Journées de la Microéconométrie, Mons, March 1997.
- Théorie et Méthodes Macroéconomiques, Marseille, May 1998.
- Sixth Workshop on Financial Modelling and Econometrics, Université de Lille III. January 1999.
- Workshop on Time Series Modelling, Arrabida, Portugal, July 1999.
- Helenau Workshop, Humboldt University, Berlin, July 1999.

- Colloque de l'Association Française de Science Economique (AFSE), Paris, September 1999.
- Economic Seminar in Lille 3, February 2000.
- Forecasting Financial Markets: Advances for Exchange RATES, Interest Rates and Asset Management London, 31 May and 1-2 June 2000.
- World Congress of the Econometric Society, Seattle, August 2000.
- Forecasting Financial Markets: Advances for Exchange RATES, Interest Rates and Asset Management London, 31 May and 1-2 June 2000 (Poster session).
- Quatorzième Congrès des Economistes Belges de Langue Française, 2000, Liège, Commission Capital Humain (Director: David de la Croix. Discussant: Frédéric Docquier).
- Colloque Formation des salaires, Mons, May 9-10 2001.
- CORE Econometrics seminar, December 2000.
- Maastricht Econometrics Seminar, April 2001.
- Forecasting Financial Markets. London, May 30-31 and June 1 2001.
- 7<sup>th</sup> International Conference of the Society of Computational Economics, Yale University, New-Haven, Connecticut, June 28-29 2001.
- 56<sup>th</sup> European Meeting of the Econometric Society (ESEM 2001), Lausanne, Switzerland, 25-29 August 2001.
- European Investment Review, Paris, September 2001.
- Journée d'Econométrie – Développements récents de l'économétrie appliquée à la finance, Nanterre, Paris 11 avril 2002.
- Forecasting Financial Markets. London, May 29-31 2002.
- 7<sup>ème</sup> Colloque des Jeunes Economètres 2002, Mont Sainte Odile, 2-4 mai 2002.
- 8<sup>th</sup> International Conference of the Society of Computational Economics, Aix-en-Provence, June 27-29, 2002.
- Invited at the Winter Meeting of the Econometric Society, Budapest, November 7-10, 2002.

- Conférence internationale de l'AFFI, Lyon 23-24-25 June 2003.
- Invited talk on risk measurement with long and short trading positions and skewed distributions, Istanbul, June 2003.
- 1st OxMetrics User Conference, London, September 1-2, 2003.
- Research seminar in applied economics and management organized by the Solvay Business School, DULBEA and Centre Emile Bernheim, November 27, 2003.
- Master Course in Financial Econometrics at Bilgy University, Istanbul, May 2004.
- ESEM Meeting, Madrid, August 2004.
- Master Course in Financial Econometrics at Bilgy University, Istanbul, April 2005.
- Workshop in Financial Econometrics, Maastricht, 2006.
- 4th OxMetrics Conference, CASS Business School, September 2006.
- Berlin, June 2007, Quantitative Finance Seminar, Humboldt University.
- First MIFN (Methods in International Finance Network) meeting, Maastricht. 24-25 September 2007.
- 5th OxMetrics Conference, CASS Business School, September 2007.
- Invited Speaker at the Workshop “Measuring dependence in Finance”, CASS Business School, December 2007.
- Conference on Macroeconomic Analysis and International Finance, May, 2008, Rethymno, Greece.
- Econometrics and Statistics Seminar, KULeuven, February 2008.
- 6th OxMetrics Conference, CASS Business School, September 2008.
- Invited Speaker at the “Chicago/London Conference 1”, What Went Wrong? Financial Engineering, Financial Econometrics, and the Current Stress. December 5-6 2008, CASS Business School.
- Invited speaker at the Conference on Financial Econometrics and Realized Volatility / Vast Data, June 17, 2009, London.
- 7th OxMetrics Conference, CASS Business School, September 2009.

- 8th OxMetrics Conference, George Washington University, Washington DC, March 2009.
- Computational and Financial Econometrics (CFE'09), Limassol, Cyprus, October 2009.
- Economic Seminar, Université de Nantes, Janvier 2010.
- 9th OxMetrics Conference, CASS Business School, September 2010.
- Computational and Financial Econometrics (CFE'10), London, October 2010.
- Greqam, Marseille, June 2011.
- Computational and Financial Econometrics (CFE'11), London, November 2011.
- Computational and Financial Econometrics (CFE'12), Oviedo, November 2012.
- Econometrics Seminar, CREATES, Aarhus-Denmark. October 2012.

### **Referee Activity**

Recherches Economiques de Louvain, Journal of Econometrics, Journal of Applied Econometrics, Journal of Economic Dynamics and Control, Annales d'Economie et de Statistique, Journal of Risk, Annals of Operations Research, Econometrics Journal, Journal of International Money and Finance, Computational Statistics, Quantitative Finance, Journal of Business and Economic Statistics, Journal of Financial Econometrics, Econometrics Journal, Journal of International Financial Markets, Institution & Money, Quantitative Finance, Journal of Empirical Finance, Annals of Computational and Financial Econometrics, Computational and Financial Econometrics, Statistical Inference for Stochastic Processes.

### **PhD Supervision**

- Bertrand Verheyden (04/2008): Essays on the Economics and Econometrics of Education. Co-promotor : Francois Maniquet.

- Jerome Jahaye (06/2009): On the Determinants and Identification of Jumps in Financial Time Series.
- Francesco Violante: Multivariate Volatility Models (12/2010).
- Rogier Quaedvlieg (2016). Co-promotor: Peter Schotman.

### **Participation in Thesis Committees**

- David Neto (Paris 1, 2006)
- Genaro Sucarrat (UCL, 2006)
- Julia Lendvai (FUNDP, 2007)
- Mikael Petitjean (FUNDP, 2007)
- Adja Sissoko (FUNDP, 2007)
- Amine Trifi (Paris 1, 2007)
- Sessi Tokpavi (Orléans, 2008)
- Kris Boudt (Leuven, 2008)
- Cristina Ileana (UCL, 2009)
- Yacouba Boubacar Mainassara (Lille 3, 2009)
- Jean-Philippe Peters (Liège, 2010)
- Olga Reznikova (UCL, 2010)
- Vincent Lapointe (AMU, 2014)
- Thibaut Moyart (UCL, 2014)
- Clément Marsilli (Besançon, 2014)

### **Teaching experience**

- 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 level)

## Consultancy/Trainings

- Master Food. Location: BELGIUM-NETHERLANDS.
- Training programs for the ASEAN-EU Programme For Regional Integration Support (APRIS I). Location: JAKARTA.
- European Central Bank (since 2012): Trainings on volatility models and Advanced Panel models.
- Federal reserve of New York: Training on DATA MANAGEMENT, REGRESSION & PANEL DATA ANALYSIS (2017).
- University of Nottingham: Training on advanced Panel data modelling (2016).
- CASS Business School: GARCH models, Theory and Practice