

CURRICULUM VITAE
LIUDAS GIRAITIS

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Contact details:

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Present appointment:

Professor of Econometrics, Queen Mary, University of London, 2006 -

Past appointments:

2002 - 2006: Research Fellow/Lecturer, University of York
1996 - 2002: Research officer, London School of Economics
1995- 1996: Research Fellow, Boston University, USA.
1994 - 1995: Research Fellow, Heidelberg University, Germany.
1993 - 1994: Humboldt Research Fellow, Heidelberg University.
1985 - 1992: Scientific Researcher, Lithuanian Academy of Sciences.

Education:

PhD in Probability Theory and Mathematical Statistics
Institute of Mathematics and Informatics of the Lithuanian Academy of
Sciences (1984)
Vilnius University, Applied Mathematics - Diploma with distinction (1980).

Academic Awards:

1992: Alexander von Humboldt Research Prize
2005: Lithuanian National Prize for Science
2015: Multa Scripsit, Econometric Theory.

Research interests: Econometrics, Time Series Analysis, Statistics, Probability.

Professional service:

Associate Editor: Econometric Theory
Associate Editor: Journal of Time Series Analysis
Editorial Board: Lithuanian Mathematical Journal

Referee Services: Annals of Probability, Annals of Statistics, Biometrika, JASA, Journal of Time Series Analysis, Journal of Multivariate Analysis, Econometrica, Econometric Theory, Journal of Econometrics, Stochastic Processes and their Applications, Probability Theory and Related Fields and others.

Teaching experience:

Graduate Further Topics in Econometrics (*Long memory time series*, LSE)
Graduate Time Series Analysis (Queen Mary U),
Graduate Topics in Financial Econometrics (Queen Mary U),
Undergraduate Statistical Methods in Economics (Queen Mary U),
Undergraduate Statistical Theory and Multivariate Analysis (York U).

Short term visiting positions 2008–:

Michigan State University, January-May, 2014
Waseda University, Japan, July 2012.
Cowles Foundation, Yale University, September 2010.
Michigan State University, January-March, July-September, 2010
Michigan State University, March-April, August-September, 2009
Michigan State University, May 2008

Grants: KM Abadir, W Distaso, L Giraitis. RES-062-23-0790 Award/Grant Title: *Extraction of trend, cycle, and memory from economic and financial series*, (2008-2010)

Publications**Books:**

1. Giraitis, L., Koul, H. and Surgailis, D. (2012). *Large Sample Inference for Long memory Processes*, pp. 587, Imperial College Press.

Journal publications:

1. Giraitis, L., Marotta, F., Phillips, PCB. (2024). Cyclical time series: an empirical analysis of temperatures in central England over three centuries, *preprint*.
2. Giraitis, L., Kapetanios, G., Li, Y. (2024). Regression modelling under general heterogeneity, *submitted*.
3. Giraitis, L., Dalla, V., Phillips, PCB. (2024). Testing mean stability of heteroskedastic time series, *submitted to Journal of Time Series Analysis*.
4. Giraitis, L., Abadir, K., Bailey, N., Distaso, D. (2024). Estimation of random cycles in persistent time series, *submitted*.
5. Giraitis, L., Li, Y., Phillips, P.C.B. (2024). Robust Inference on Correlation under General Heterogeneity. *Journal Econometrics*, 240.

6. Abadir, K, Distaso, W, Giraitis, L. (2024). L. Partially one-sided semiparametric inference for trending persistent and antipersistent processes. *Econometrics and Statistics*, 30, 1–14.
7. Giraitis, L., Marotta, M. (2023). Estimation of unevenly spaced time series, *Journal of Time Series Analysis*, 44, 556–577.
8. Giraitis, L., Kapetanios, G., Chronopoulos, I.C. (2022). Choosing between persistent and stationary volatility, *Annals of Statistics*, 50, 3466–3483.
9. Giraitis, L., Dalla, V., Taqqu, M.S. (2022). Parameter estimation of standard AR(1) and MA(1) models driven by a non-i.i.d. noise. In : Research Papers in Statistical Inference for Time Series and Related Models, pp. 152–172, Springer
10. Dalla, V, Giraitis, L, Phillips, PCB. (2022). Robust tests for white noise and cross-correlation, *Econometric Theory*, 38, 913–941.
11. Giraitis, L., Kapetanios, G., Marcellino. M. (2021). Time-Varying Instrumental Variable Estimation, *Journal of Econometrics*, 224, 394–415.
12. Dendramis, Y., Giraitis, L., Kapetanios, G. (2021). Estimation of time varying stochastic covariance matrices for large datasets, *Econometric Theory*, 37, 1100–1134.
13. Dalla, V., Giraitis, L., Robinson, PM. (2020). Inference on time series with changing mean and variance, *Journal of Econometrics*, 219, 281–313.
14. Giraitis, L., Taniguchi, M. and Taqqu, M.S. (2018). Estimation pitfalls when the noise is not i.i.d. *Japanese Journal of Statistics and Data Science*, 1, 59–80.
15. Giraitis, L., Kapetanios, G. and T. Yates (2018). Inference on multivariate heteroscedastic time varying random coefficient models, *Journal of Time Series Analysis*, 39, 129–149
16. Giraitis, L., Surgailis, D., Skarnulis, A. (2017). Stationary integrated ARCH(∞) and AR(∞) processes with finite variance, *Econometric Theory*, 34, 1159–1179.
17. Giraitis, L., Galvao, A, Kapetanios, G, Petrova, K. (2016). A time-varying DSGE model with financial frictions, *Journal of Empirical Finance*, 36, 690–716.
18. Giraitis, L., Kapetanios, G., Wetherilt, A. and F. Žikeš (2016) Estimating the dynamics and persistence of financial networks, with application to UK money market, *Journal of Applied Econometrics*, 31, 5884.
19. Giraitis, L., Bailey, N. (2016). Spectral Approach to Parameter-Free Unit Root Testing, *Computational Statistics & Data Analysis*, 100, 4–16.

20. Giraitis, L., Taniguchi, M., Taqqu, MS. (2016). Asymptotic normality of quadratic forms of martingale differences, *Stat. Inference Stoch. Processes*, online publication.
21. Giraitis, L., Kapetanios, G., Mansur M. and S. Price (2015). Forecasting under structural change. In: J, Beran et al. (Eds.) *Empirical Economics and Financial Research*, Springer, pp. 401-419.
22. Giraitis, L., Kapetanios, G. and Yates, T. (2014). Inference on stochastic time-evolving coefficient models. *Journal of Econometrics*, **179**, 46-65.
23. Giraitis, L. Dalla, V. and Koul, H. (2014). Studentization weighted sums of linear processes. *Journal of Time Series Analysis*, **35**, 151-172
24. Giraitis, L., Abadir, K., Distaso, W., and Koul H. (2014) Asymptotic normality for weighted sums of linear processes. *Econometric Theory*, **30**, 252-284.
25. Giraitis, L., Kapetanios, G. and Price, S. (2013). Adaptive forecasting in the presence of recent and ongoing structural change, *Journal of Econometrics*, **177**, 153-170.
26. Giraitis, L. and Bailey, N. (2013). Weak convergence in the near unit root setting. *Statistics and Probability Letters, Statistics and Probability Letters*, **83**, 1411-1415
27. Giraitis, L. and Koul, H. (2013) On asymptotic distributions of weighted sums of periodograms, *Bernoulli*, 19(5B), 2389–2413.
28. Giraitis, L. and Phillips, P.C.B. (2012). Mean and autocovariance function estimation near the boundary of stationarity. *Journal of Econometrics*, **169**, 166-178.
29. Giraitis, L., Abadir, K. and Distaso, W. (2011). An I(d) model with trend and cycles. *Journal of Econometrics*, 163, 186-199.
30. Giraitis, L., Leipus, R. and Surgailis, D. (2010). Aggregation of random coefficient GLARCH(1,1) process, *Econometric Theory*, **26**, 406 - 425.
31. Phillips, P.C.B., Magdalinos T. and Giraitis, L. (2010). Smoothing Local-to-Moderate Unit Root Theory, *Journal of Econometrics*, **158**, 274-279.
32. Abadir, K., Distaso, W. and Giraitis, L. (2009) Two estimators of the long-run variance: Beyond short memory, *Journal of Econometrics*, **50**, 56-70.
33. Giraitis, L., Leipus, R. and Surgailis, D. ARCH(∞) models and long memory properties. In: *Handbook of Financial Time Series*, pp 71-84. Springer, Berlin, 2009.

34. Bhansali, R.J., Giraitis, L. and Kokoszka, P. (2007). Decomposition and asymptotic properties of quadratic forms in linear variables. *Stochastic Processes and their Applications*, **117**, 71-95.
35. Bhansali, R.J., Giraitis, L. and Kokoszka, P. (2007). Convergence of quadratic forms with nonvanishing diagonal. *Statistics & Probability Letters*, **77**, 726-734
36. Novak, S. Y., Dalla, V. and Giraitis, L. (2007) Evaluating currency risk in emerging markets. *Acta Appl. Math.*, *Acta Appl. Math.*, **97**, 163-175
37. Giraitis, L., Leipus, R. and Surgailis, D. (2007). In: G Teyssiere and A. Kirman (Eds.) *Long Memory in Economics*, Springer, pp.3-38, 2007.
38. Abadir, K., Distaso, W. and Giraitis, L. (2007). Nonstationarity-extended local Whittle estimation, *Journal of Econometrics*, **141** , 1353-1384.
39. Giraitis, L. and Phillips, P. C. B. (2006). Uniform Limit Theory for Stationary Autoregression, *Journal of Time Series Analysis*, **26**, 51-60.
40. Dalla, V., Giraitis, L. and Hidalgo, J. (2006). Consistent estimation of the memory parameter for nonlinear time series, *Journal of Time Series Analysis*, **27**, 211-251
41. Giraitis, L., Leipus, R. and Phillipe, A. (2006). The test for stationarity versus trends and unit roots for a wide class of dependent errors, *Econometric Theory*, **22**, 989-1029
42. Bhansali, R.J., Giraitis, L. and Kokoszka, P. (2006). Estimation of the long memory parameter by fitting fractionally differenced autoregressive models, *Journal of Multivariate analysis*, **97**, 2101-2130.
43. Giraitis, L., Leipus, R., Robinson, P.M. and Surgailis, D. (2004). LARCH, Leverage and Long Memory. *Journal of Financial Econometrics* **2**, 177-210.
44. Giraitis, L. and Robinson, P.M. Parametric Estimation under Long Range Dependence. In: P. Doukhan, G. Oppenheim and M.S. Taqqu (Eds.) *Long-Range Dependence: Theory and Applications*, Birkhäuser, Boston, 2003.
45. Giraitis, L., Kokoszka, P., Leipus, R. and Teyssiere, G. (2003). Rescaled variance an related tests for long memory in volatility and levels. *Journal of Econometrics* **112**, 265-294.
46. Giraitis, L. and Robinson, P.M. (2003). Edgeworth expansions for semiparametric Whittle estimation of long memory. *Annals of Statistics* **31**, 1325–1375.
47. Giraitis, L., Kokoszka, P., Leipus, R. and Teyssiere, G. (2003). On the power of R/S-type tests fort stationarity against contiguous and semi long memory alternatives, *Acta Applicandae Mathematicae* **78**, 285–299.

48. Giraitis, L. and Surgailis, D. Reduction principle for long memory sequences. In: E. H.G. Dehling, T. Mikosch and M. Sørensen (Eds.) *Empirical Process Techniques for Dependent Data*, Birkhäuser, Boston, 241–255, 2002.
49. Giraitis, L. and Surgailis, D. (2002) ARCH-type bilinear models with double long memory. *Stochastic Processes and Their Applications* **100**, 275–300.
50. Giraitis, L. and Robinson, P.M. (2001). Whittle estimation of ARCH models. *Econometric Theory* **17**, 608–631.
51. Giraitis, L. and Taqqu, M.S. (2001). Functional non-central and central limit theorems for bivariate Appell polynomials. *Journal of Theoretical Probability* **14**, 393–426.
52. Giraitis, L., Hidalgo, J. and Robinson, P.M. (2001). Gaussian estimation of parametric spectral density with unknown pole. *Annals of Statistics* **29**, 987–1023.
53. Giraitis, L., Kokoszka, P. and Leipus, R. (2001). Testing for long memory in the presence of a general trend. *Journal of Applied Probability* **38**, No 4.
54. Giraitis, L., Robinson, P.M. and Surgailis, D. (2000). A model for long memory conditional heteroscedasticity. *Annals of Applied Probability* **10**, 1002–1024.
55. Giraitis, L., Kokoszka, P. and Leipus, R. (2000). Stationary ARCH models: dependence structure and Central Limit Theorem. *Econometric Theory* **16**, 3–22.
56. Giraitis, L., Robinson, P.M. and Samarov, A. (2000). Adaptive rate-optimal semiparametric estimation of the long memory parameter. *Journal of Multivariate analysis* **72**, 183–207.
57. Giraitis, L., Kokoszka, P., Leipus, R. and Teyssiere, G. (2000). Semiparametric estimation of the intensity of long memory in conditional heteroskedasticity. *Statistical Inference for Stochastic Processes* **3**, 113–128.
58. Giraitis, L. and Surgailis, D. (1999). Central Limit Theorem for the Empirical Process. *Journal of Statistical Planning and Inference* **80**, 81–93.
59. Giraitis, L. and Taqqu, M.S. (1999). Convergence of normalized quadratic forms. *Journal of Statistical Planning and Inference* **80**, 15–35.
60. Giraitis, L. and Taqqu, M.S. (1999). Whittle estimator for non-Gaussian long-memory time series. *Annals of Statistics* **27**, 178–203.
61. Giraitis, L., Robinson, P.M. and Surgailis, D. (1999). Variance-type Estimation of Long Memory. *Stochastic Processes and their Applications* **80**, 1–24.

62. Dahlhaus, R. and Giraitis, L. (1998). On the optimal segment length for parameter estimates for locally stationary time-series. *Journal of Time Series Analysis* **19**, 629 – 655.
63. Giraitis, L., Taqqu, M.S. and Terrin, N. (1998). Limit theorems for bivariate Appell polynomials. Part: II. Non-Central Limit Theorems. *Probability Theory and Related Fields* **110**, 333–367.
64. Giraitis, L. and Taqqu, M.S. (1998). Central limit theorem for quadratic forms with time domain conditions. *The Annals of Probability* **26**, 377–398.
65. Giraitis, L., Samarov, A. and Robinson, P.M. (1997). Rate optimal semiparametric estimation of the memory parameter of the Gaussian time series with long range dependence. *Journal of Time Series Analysis* **18**, 49–60.
66. Giraitis, L. and Koul, H. (1997). Estimation of the dependence parameter in linear regression. *Stochastic Processes and their Applications* **71**, 207–224.
67. Giraitis, L. and Taqqu, M.S. (1997). Limit theorems for bivariate Appell polynomials. Part: I. Central Limit Theorems. *Probability Theory and Related Fields* **107**, 359–381.
68. Giraitis, L., Leipus, R., and Surgailis, D. (1996). The change-point problem for dependent observations. *Journal of Statistical Planning and Inference* **53**, 297–310
69. Giraitis, L., Koul, H. and Surgailis, D. (1996). Asymptotic normality of regression estimators with long memory errors. *Statist. Probab. Letters* **29**, 317–335.
70. Giraitis, L. and Leipus, R. (1995). A generalized fractionally differencing approach in long-memory modelling. *Lithuanian Mathematical Journal* **35**, 65–81.
71. Giraitis, L. and D. Surgailis (1994). Asymptotics of the empirical process of a long memory linear sequence. *Beiträge für Statistik, Universität Heidelberg* **24**, 1.
72. Giraitis, L. and Surgailis, D. (1992). Long-memory shot noise and limit theorems with applications to Burgers' equation . In: *New directions in time series analysis*. Part II (ed D. Brillinger et al.), IMA Volumes in Mathematics and its Applications, Volume 46, Springer-Verlag, Berlin, 153–176.
73. Giraitis, L. and Leipus, R. (1992). Testing and estimating in the change-point problem for the spectral function. *Lithuanian Mathematical Journal* **32**, 2–38.
74. Giraitis, L. and Surgailis, D. (1990). CLT for quadratic forms in strongly dependent variables and application to asymptotical normality of Whittle's estimate. *Probability Theory and Related Fields* **86**, 87–104.

75. Giraitis, L. and Surgailis, D. (1991). On shot noise processes with long-range dependence. In: *Probability theory and Mathematical Statistics*. (Proceedings of the fifth Vilnius Conference vol. II, VSP (Mokslas), Utrecht-Vilnius, 401–408.
76. Giraitis, L. and Surgailis, D. (1991). On shot noise processes attracted to fractional Levy motion. In: *Stable Processes and related topics*. Birkhauser: Boston-Basel-Berlin, 261–274.
77. Giraitis, L. and Leipus, R. (1990). Functional CLT for non-parametric estimates of the spectrum and change-point problem for a spectral function. *Lithuanian Mathematical Journal* **30**, 302–322.
78. Giraitis, L. and Surgailis, D. (1989). Limit theorem for polynomials of a linear process with long-range dependence. *Lithuanian Mathematical Journal* **29**, 128–145.
79. Giraitis, L. and Surgailis, D. (1989). Asymptotic normality of Whittle’s estimate for processes with long-range dependence. *Statistics and Control of random processes*. Moscow: Nauka, 28–31.
80. Giraitis, L. (1989). Central limit theorem for polynomial forms I. *Lithuanian Mathematical Journal* **29**, 109–128.
81. Giraitis, L. (1989). Central limit theorem for polynomial forms II. *Lithuanian Mathematical Journal* **29**, 338–350.
82. Giraitis, L. and Surgailis, D. (1986). Multivariate Appell polynomials and the central limit theorem. In: *Dependence in Probability and Statistics*. Birkhauser: Boston-Basel-Stuttgart, 21–71.
83. Giraitis, L. (1985). Central limit theorem for functionals of linear process. *Lithuanian Mathematical Journal* **25**, 25–35.
84. Giraitis, L. and Surgailis, D. (1985). CLT and other limit theorems for functionals of Gaussian processes. *Zeitschrift für Wahrscheinlichkeitstheorie und verwandte Gebiete* **70**, 191–212.
85. Giraitis, L. and Surgailis, D. (1985). A limit theorem for a triangular array of symmetric statistics. In: *Statistics and Control of Stochastic Processes (Proceedings of the Steklov Seminar)*. Optimisation Software, Inc. New York, 145–166.
86. Giraitis, L. (1984). Distribution of spectral estimates of Ito-Wiener integrals. *Lithuanian Mathematical Journal* **24**, 241–245.
87. Giraitis, L. (1983). Convergence of certain nonlinear transformations of Gaussian sequence to self similar processes. *Lithuanian Mathematical Journal (A translation of Lietuvos matematikos rinkinys)* **23**, 31–39.