Carlos Vladimir Rodríguez-Caballero

Contact Information

Address: Department of Statistics. Universidad Carlos III de Madrid.
C/ Madrid, 126, 28903 Getafe, Madrid (Spain). Office, 10.0.11
Phone 1: +34916249890 (Spain)
email: carlosvladimir.rodriguez@uc3m.es
vrodriguez@creates.au.dk
webpage: Personal webpage

Personal Data

Place of Birth: Mexico City. Mexico.
Nationality: Mexican.
Marital status: Married.

Research interests

1. Statistical inference on time series econometrics (Unit roots and Long memory).
2. Modelling of persistence (Long memory models).
3. Panel data models and Dynamic Factor models.

Education

2013-2016 PhD in Economics and Business Economics,
School of Business and Social Science. Aarhus University
Center for Research in Econometric Analysis of Time Series (CREATES)
PhD Dissertation: *On factor analysis with long-range dependence.* (File)
Advisor: *Niels Haldrup.*

Spring 2016 Visiting Research Scholar as part of the ACRI Young Investigator Training Program.
Department of Statistical Sciences, University of Padova, Italy.
Visiting *Massimiliano Caporin.*

Spring 2016 Visiting Research Scholar
Department of Economics, Universidad Carlos III de Madrid, Spain.
Visiting *Carlos Velasco.*

2009-2011 M.Sc. in Economics (Econometrics)
Grade awarded with honors 'Summa Cum Laude'.
Universidad de Guanajuato
Dissertation: *Ensayos sobre la Granger Causalidad.* (File)
Advisor: *Daniel Ventosa Santaulària.*

2001-2005 B.Sc. in Actuarial Science
Facultad de Ciencias
Universidad Nacional Autónoma de México
Dissertation: *Inferencia Bayesiana para la volatilidad en el modelo Black & Scholes.* (File)
Advisors: *Alejandro Villagrán Hernández and Ramsés Humberto Mena Chávez.*

Academic Experience

From Sep 2017	Assistant Professor of Econometrics (on Tenure track). Universidad Carlos III de Madrid. Department of Statistics. Madrid, Spain.
Jan 2017 *August 2017*	Postdoctoral Researcher. (Profesor visitante). Universidad Carlos III de Madrid. Department of Statistics. Madrid, Spain.
Nov 2016 *Present*	Junior Research Fellow. Aarhus University, Aarhus, Denmark. Center for Research in Econometric Analysis of Time Series.
Sep 2016 *Oct 2016*	Research Assistant. Aarhus University, Aarhus, Denmark. Center for Research in Econometric Analysis of Time Series.
Aug 2016 *Sept 2013*	PhD Fellow. Aarhus University, Aarhus, Denmark. Center for Research in Econometric Analysis of Time Series.

Professional Experience

Mar 2013
Apr 2012

Subdirector. Santander Private Banking, Mexico City.
Statistical Models and Methodology. Marketing Inteligence.

- Propensity scoring modeling.
- Responsible of the correct implementation of the customer income model.
- General customer behavior analysis.
- Model selection strategy for customer attrition risk prediction.

Sep 2011
Feb 2012

Credit Risk Manager. Microfinanciera Creciendo, Mexico City.
Proposal of a specific credit scoring. Portfolio analysis and metrics. Probability of default modeling. Responsible of the credit risk committee.

Jan 2009
Mar 2007

Credit Risk Manager at Banco Fácil, Mexico City.
Risk Management.

- Credit scoring modeling. (Customer with and without credit information, and subprime borrowers)
- Portfolio analysis and metrics.
- Statistical credit strategies.
- Loss given default (LGD), expected loss (EL) and VaR modeling. (Supporting to Risk Officer).
- Profitability scoring and Bayesian customer qualification. (Research)

Feb 2007
Feb 2006

Credit Risk Analyst. HSBC Holding, Mexico City.
Risk Management.
Adaptative Control System (ACS) modeling and Customer Relationship Management analysis.

Feb 2006

Analyst. Marketing group, Mexico City.
Multivariate analysis for Marketing: Factor analysis, principal components, cluster analysis, and regression analysis.

Articles

(6) **Energy-growth long-term relationship under structural breaks. Evidence from Canada, 17 Latin American economies and the USA.** With D. Ventosa Santaulària. *Energy Economics, Volume 61, January 2017, Pages 121–134.* (Link)

(5) **Common Long-Range Dependence in a Panel of Hourly Nord Pool Electricity Prices and Loads.** With Y. Ergemen and N. Haldrup. *Energy Economics, Volume 60, November 2016, Pages 79–96.* (Link)

(4) **Bayesian Log-Periodic model for financial crashes.** With O. Knapik. European Physical Journal B, vol.87, no.10. (Link)

(3) **Granger Causality and Unit Roots.** With D. Ventosa Santaulària. Journal of Statistical and Econometric Methods, vol.3, no.1, 97-114. (Link)

(2) **Polynomial Regressions and Nonsense Inference.** With D. Ventosa Santaulària. Econometrics. 1 (3), 236-248. (Link)

(1) **Metodología para desarrollar un scoring para clientes sin referencias crediticias.** With O. Espin García. Cuadernos de Economía Vol-32, No. 59, pp. 137-162. (Link)

Book and articles in books

(1) **Matemáticas Financieras II.** With O. Espin García. Editorial GAFRA, Puebla, México. (2012). (Book)

(2) **La inferencia bayesiana en la administración de riesgos.** Administración de riesgos. Vol II.

(3) **Granger causalidad espuria en la relación de cartera total y vencida de créditos.** Administración de riesgos. Vol IV.

Working papers

(1) **A Dynamic Multi-Level Factor Model with Longe-Range Dependence.** [With Y. Ergemen] (Submitted)

(2) **Panel data with cross-sectional dependence characterized by a multilevel factor structure.** (Submitted)

Awards and Grants

2016 | **Young Investigator Training Program (YITP) prize.**
Awarded by the Association of Foundations of Banking Origin (ACRI) and the Italian Econometric Association..

2016 | **Travel grant on a competitive basis to attend the 3rd IAAE conference.**
International Association for Applied Econometrics.

2013 | **Full-time employment as a PhD Fellow.**
Center for Research in Econometric Analysis of Time Series (CREATES)
Institute for Økonomi at Aarhus Universitet.

2011	**Distinction to the Best Academic Record. MSc in Economics 2009-2011.** Universidad de Guanajuato.
2011	**Scholarship for a research stay abroad.** CONACYT[1]
2011	**Recognition of academic merit for academic year 2010 and 2011.** Universidad de Guanajuato.
2009	**CONACYT scholarship for graduate studies (master).** 2009-2011.
2005	**National Statistical Prize** (3rd place), Mexico. National Award Francisco Aranda Best bachelor dissertation in statistics for the academic years 2005-2006, awarded by **Mexican Statistical Association.**
2003	**Scholarship for bachelor studies by excellence academic performance.** 2003-2005. UNAM-Telmex Foundation.

Teaching

Universidad Carlos III de Madrid [2017-]
Statistical methods for social sciences.
Causal inference (Master course).

Aarhus University [2014-2015] (Teaching assistant)
Quantitative, qualitative and limited dependent variables & Mathematical Economics II.

Centro de Investigaciones y Docencia Económicas [2013] (Teaching assistant)
Time series econometrics (Master in Economics)

Facultad de Ciencias. UNAM [2011-2013]. (Lecturer)
Econometrics I & Time series econometrics.

Universidad de Guanajuato. [2009-2010]. (Teaching assistant)
Statistics I & Econometrics II

Facultad de Ciencias. UNAM. [2004-2009]. (Lecturer)
Econometrics I, Bayesian econometrics, Finances I and II, Financial mathematics, Statistics I and Probability II.

Undergraduate dissertation supervision

1) Alexander Schou-Jørgensen and Mathias Sproegel.
Long memory and financial crashes. 2015. [Aarhus Universitet]
2) Gustavo Santa Rosa García. Modelos cuantílicos y VaR. 2016. [FC UNAM]

Research stays

May-June 2013	Centro de Investigaciones y Docencia Económicas (CIDE), Mexico City. **Theoretical econometrics**: Spurious regression and Long memory. With Daniel Ventosa Santaulària
Jan-July 2011	Institute of Mathematics. Cracow University of Technology, Cracow. **Stochastics**: Quantile processes and applications to financial risk modeling. With Jacek Leskow

June 2011 Université Paris I (Pantheon-Sorbonne). Paris.
Statistique, Analyse, Modélisation Multidisciplinaire (SAMM) Laboratoire, and École Normale Supérieure. Cachan. Paris
Statistical inference: ReBEL estimation in Log-Periodic model.
and Empirical likelihood estimation with Hugo Harari Kermadec

Conferences, seminars and workshops.

"Panel data with cross-sectional dependence characterized by a multilevel factor structure".
Job Market Seminar. Department of Statistics. UC3M. Feb 2017. Madrid, Spain.
25th Annual Symposium of The Society for Nonlinear Dynamics and Econometrics. April 2017. Paris, France.
40th International Panel Data Conference. July 2017. Thessaloniki, Greece.
70TH European Meeting of the Econometric Society. July 2017. Lisbon, Portugal.

"Factor Modelling of Electricity Markets Accounting for Long-Range Dependence".
Job Market Seminar. Laboratorio Nacional de Políticas Públicas. CIDE. Dec 2016. Mexico City, Mexico.

"On factor analysis with long-range dependence".
Seminar. Department of Statistical Sciences. University of Padua. May 2016. Padua, Italy.

"Multi-level factor model with long-range dependence".
CREATES Anniversary Meeting. August 2016. Sandbjerg, Denmark.
Annual conference. International Association for Applied Econometrics. June 2016. Milan, Italy.
Workshop in Time Series Econometrics. April 2016. Zaragoza, Spain.
CREATES Lunch Seminar. November 2015 & February 2016. Aarhus, Denmark.
Annual DGPE Workshop, November 2015. Sandbjerg, Denmark.

"Common long-range dependence in Nord Pool Power Market".
PhD Workshop. April 2016. Madrid, Spain.

"A nonparametric approach in VaR models using quantile regression".
V Foro de Finanzas y Administración de Riesgos. UAM and UP. Sept 2012. DF Mexico.

"Granger-causality in presence of Unit Root."
SAMM seminar, Université Paris I. June 2011. Paris, France.

"Scoring modeling. Development and implementation."
Kyiv-Mohyla Business School. May 2011, Kiev, Ukraine.,
Management department seminar. WSB-NLU. February 2011. Nowy Sacz, Poland.

"Quantile models and applications to financial risk modeling."
Stochastics and risk modeling seminar. Institute of Mathematics
Cracow University of Technology. April and May 2011. Cracow, Poland.

"Econofísica, modelos periódicos y crisis financieras."
III Foro de Finanzas y Administración de Riesgos. UAM, September 2010, México.
"Métodos MCMC para econometría."
Coloquio Mexicano de Economía Matemática y Econometría.
Universidad de Guanajuato. September 2010. Guanajuato, México.

"La inferencia bayesiana en la administración de riesgos."
II Foro de Finanzas y Administración de Riesgos. UAM. September 2009, México.

"Inferencia bayesiana para la volatilidad en el modelo Black & Scholes."
XXI Foro Nacional de Estadística. Universidad de Guerrero. October 2006, Acapulco, México.

Other courses. (From 2010)

2005-2006 Diploma in Econometrics. **Facultad de Economía. UNAM**
La maldición de los recursos naturales. Universidad de Guanajuato. October 2010.
Statistical Pattern Recognition. CIMAT. August 2010.

Additional information

Language skills:	Spanish, English, French (Basic)
Programming:	LaTeX, FoxPro, SQL, and Oracle.
Statistical softwares:	SPSS, Statistica, E-Views, STATA, and Gretl.
Technical programming:	Matlab, SAS, and R (basic)

Professional Activities

1. Member of the Econometric Society.
2. Member of the International Association for Applied Econometrics.

Refereeing

Trimestre económico, The American Statistician, Lecturas de Economía,
Latin American Economic Review, Journal of the Operational Research Society, and
Revista de Métodos Cuantitativos para la Economía y la Empresa.

Activities

Photography. Amateur triathlete and marathon runner.

References

Niels Haldrup
Professor
CREATES
Aarhus University
nhaldrup@econ.au.dk
Phone: +4587165559

Carlos Velasco
Professor
Department of Economics.
Universidad Carlos III de Madrid
carlos.velasco@uc3m.es
Phone: +34916249646

Daniel Ventosa Santaulària
Professor
Department of Economics.
CIDE
daniel.ventosa@cide.edu
Phone: 018000212723
/ +525557279800 (2723)

Eric Hillebrand
Associate Professor
CREATES
Aarhus University
ehillebrand@econ.au.dk
Phone: +4587165503