Carlos Vladimir Rodríguez-Caballero

Contact Information

Address: Department of Statistics. Instituto Tecnológico Autónomo de México. (ITAM)
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Research interests

1. Statistical inference on time series econometrics.
2. Modelling of persistence (Long memory models).
3. Panel data models and Dynamic Factor models.
4. Applied studies (mostly in finances and cliometrics).

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.*

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

Aug 2018 | Assistant Professor (on Tenure track).
Instituto Tecnológico Autónomo de México (ITAM).
Department of Statistics. Mexico City, Mexico.

Sep 2017
July 2018 | Assistant Professor of Econometrics (on Tenure track).
Universidad Carlos III de Madrid. Department of Statistics.
Madrid, Spain.

Jan 2017 | Postdoctoral Researcher. (Profesor visitante).
August 2017 | Universidad Carlos III de Madrid. Department of Statistics.
Madrid, Spain.

Sep 2016 | Research Assistant. Aarhus University.
Oct 2016 | Center for Research in Econometric Analysis of Time Series.
Aarhus, Denmark.

Aug 2016 | PhD Fellow. Aarhus University.
Sept 2013 | Center for Research in Econometric Analysis of Time Series.
Aarhus, Denmark.

Affiliations

From Nov 16 | Junior Research Fellow. Aarhus University.
Center for Research in Econometric Analysis of Time Series.
Aarhus, Denmark.

Professional Experience

Mar 2013 | Subdirector. Santander Private Banking, Mexico City.
Apr 2012 | *Statistical Models and Methodology. Marketing Inteligence.*

Sep 2011 | Credit Risk Manager. Microfinanciera Creciendo, Mexico City.

Jan 2009 | Credit Risk Manager. Banco Fácil, Mexico City.
Mar 2007 | *Risk Management.*

Feb 2007 | Credit Risk Analyst. HSBC Holding, Mexico City.
Feb 2006 | *Risk Management.*

Feb 2006 | Analyst. Marketing group, Mexico City.

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

2017 **Member of the Mexican *National System of Researchers* (SNI).**
Level I [2018-2020].

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

Instituto Tecnológico Autónomo de México [2018-]
Econometrics I. (Bachelor in Economics) (in Spanish).
Financial Econometrics (Bachelor in Actuarial Sciences) (in Spanish).

Universidad Carlos III de Madrid [2017-2018]
Statistical methods for social sciences. (Bachelor course for social sciences) (in English)
Causal inference (Master course) (in English).

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

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

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

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

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

Dissertations' supervision

1) A. Jørgensen and M. Sproegel. Long memory and financial crashes. 2015. [Aarhus Universitet]
2) Gustavo Santa Rosa García. Modelos cuantílicos y VaR. 2016. [FC UNAM]
3) Mar Cañizares. Universal expansion of Early Childhood Education. 2018 [MSc.Social Science - UC3M]
4) Helga Frech. xxxxx. 2018 [MSc.Social Science - UC3M]

Research stays

Spring 2016 PhD stay abroad	Visiting PhD Research Scholar. ACRI Young Investigator Training Program. **Department of Statistical Sciences, University of Padova**, Italy. Visiting *Massimiliano Caporin.*
Spring 2016 PhD stay abroad	Visiting PhD Research Scholar. **Department of Economics, Universidad Carlos III de Madrid**, Spain. Visiting *Carlos Velasco.*
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. (After 2010)

"Energy price modelling". *Long Memory conference. Jun 2018. Aalborg, Denmark.*

"Risk drivers of CDS returns: a multilevel factor approach".
$VIII_t$ *Workshop in Time Series Econometrics. Apr 2018. Zaragoza, Spain.*

"Panel data with cross-sectional dependence characterized by a multilevel factor structure".
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.
Economic department seminar. Univ Pub Navarra. Dec 2017. Pamplona, Spain.
Department seminar. Banco de México. Mar 2018. Mexico city, Mexico.
Seminario Aleatorio. ITAM. Mar 2018. Mexico city, Mexico.

"Factor Modelling of Electricity Markets Accounting for Long-Range Dependence".
Department 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.

Other courses

2005-2006 Diploma in Econometrics. **Facultad de Economía. UNAM**

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.
3. Member of the Society for Nonlinear Dynamics and Econometrics.

Refereeing

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

References

References Available Upon Request.