Carlos Vladimir Rodríguez-Caballero

Contact Information

ADDRESS:	Department of Statistics. Instituto Tecnológico Autónomo de México. (ITAM)
	Río Hondo No.1, Col. Progreso Tizapán, Álvaro Obregón, CDMX. 01080. Mexico
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WEBPAGE:	Personal webpage

Research interests

1. Time series econometrics.

2. High Dimensional Data.

3. Macroeconometrics.

4. Applied studies (mostly in finances, climate and macroeconomics).

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 appointments

Aug 2025 *Jun 2026*	Visiting Professor. DUKE UNIVERSITY. DEPARTMENT OF ECONOMICS. North Carolina, USA.
From *Aug 2023*	Associate Professor (Granted Tenure). INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO (ITAM). DEPARTMENT OF STATISTICS. Mexico City, Mexico.
Aug 2018 *July 2023*	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 *August 2017*	Postdoctoral Researcher. UNIVERSIDAD CARLOS III DE MADRID. DEPARTMENT OF STATISTICS. Madrid, Spain.
Sep 2016 *Nov 2016*	Research Assistant. AARHUS UNIVERSITY. CENTER FOR RESEARCH IN ECONOMETRIC ANALYSIS OF TIME SERIES. Aarhus, Denmark.
Aug 2016 *Sept 2013*	PhD Employee. CENTER FOR RESEARCH IN ECONOMETRIC ANALYSIS OF TIME SERIES. AARHUS UNIVERSITY and *Danish National Research Foundation.*
From 2011-2012	Lecturer (Not eligible for tenure. No research obligations). FACULTAD DE CIENCIAS, UNAM. MÉXICO
2013 (3 months)	Teaching Assistant. CIDE. MÉXICO
From 2009-2010	Teaching Assistant. DEPARTAMENTO DE ECONOMÍA, UNIVERSIDAD DE GUANAJUATO. MÉXICO
From 2004-2009 (intermittently)	Lecturer (Not eligible for tenure. No research obligations). FACULTAD DE CIENCIAS, UNAM. MÉXICO

Affiliations

Nov 16 *Dec 22*	Research Fellow. AARHUS UNIVERSITY. CENTER FOR RESEARCH IN ECONOMETRIC ANALYSIS OF TIME SERIES. Aarhus, Denmark.

Professional Experience (Non-academic)

Apr 2012 *Mar 2013*	Subdirector. Santander Private Banking, Mexico City. *Statistical Models and Methodology. Marketing Inteligence.*
Sep 2011 *Feb 2012*	Credit Risk Manager. Microfinanciera Creciendo, Mexico City. *Risk.*
Jan 2009 *Mar 2007*	Credit Risk Manager. Banco Fácil, Mexico City. *Risk Management.*
Feb 2007 *Feb 2006*	Credit Risk Analyst. HSBC Holding, Mexico City. *Risk Management.*
Feb 2006 *Sep 2005*	Analyst. Marketing group, Mexico City. *Analytics.*

External Research Collaborations (Consulting)

2025	Interamerican Development Bank. Pollution and education.
2021-2022	Interamerican Development Bank. Evaluación de la Fundación Camino a casa.
2020	Interamerican Development Bank. Gender equality on female labor participation.
2019	Interamerican Development Bank. On remittances payments through central banks.

Articles Quartiles at [JCR, Scimago, Scopus]

(21) Garrón, I., Rodríguez-Caballero, C. V., & Ruiz, E. (2025).
International factors and inflation risks.
International Journal of Forecasting. [Forthcoming]

(20) de Juan, A. & Poncela, P. & Rodríguez-Caballero, V. & Ruiz, E. (2025).
Economic activity and climate change.
International Review of Environmental and Resource Economics: Vol. 19: No. 2, pp 159-226.
(Link)

(19) Gonzalez-Rivera, G. & Rodriguez-Caballero C.V. & and Ruiz, E. (2024).
Expecting the unexpected: Stressed scenarios for economic growth.
Journal of Applied Econometrics. [Forthcoming] [Q1,Q1,Q1] (Link)

(18) Caporin, M., & Rodríguez-Caballero, C. V., & Ruiz, E. (2024). **The Factor Structure of Exchange Rates Volatility: Global and Intermittent Factors.** Empirical Economics. [Q2,Q2,Q1] (Link)

(17) López-Marmolejo, A. & Rodríguez-Caballero, C.V. (2023). **Assessing the effect of gender-related legal reforms on female labour participation and GDP per capita in the Central American region.** Regional Statistics. Vol. 13. No. 3. [,Q2,Q1]
(Link)

(16) Ergemen, Y.E & Rodríguez-Caballero, C.V. (2023). **Estimation of a Dynamic Multi-Level Factor Model with Possible Long-Range Dependence**.
International Journal of Forecasting, Volume 39, Issue 1, Pages 405-430. [Q1,Q1,Q1]
(Link)

(15) Prados de la Escosura, L & Rodríguez-Caballero, C.V. (2022). **War, pandemics, and modern economic growth in Europe**. Explorations in Economic History. Volume 86, 101467. [Q1,Q1,Q1]
(Link)

(14) Rodríguez-Caballero, C.V. & Villanueva-Domínguez, M. (2022). **Predicting Cryptocurrency Crash Dates**. Empirical Economics, 63, 2855–2873. [Q2,Q2,Q1]
(Link)

(13) Rodríguez-Caballero, C.V. & Vera-Valdés, E. (2021) **Air pollution and mobility, what carries COVID19?** Econometrics, 9, 37. [Q2,Q2,Q2]
(Link)

(12) López-Marmolejo, A. , Rodríguez-Caballero, C.V. & Ventosa-Santaulària, D. (2021) **Remittances at record highs in Latin America: Time to revisit the Dutch disease** Economics Bulletin, Vol. 41 No. 3 pp. 2133-2146 [,Q3,Q3]
(Link)

(11) Vera-Valdés, E. & Rodríguez-Caballero, C.V. (2021) **Air Pollution and Mobility in the Mexico City Metropolitan Area in Times of COVID-19.** Atmósfera, 36(2), 343-354. [Q4,Q3,Q3] (Link)

(10) Cataño, D.H. & Rodríguez-Caballero, C. V. & Chiann, C & Peña, D (2021). **Wavelet Estimation for Factor Models with Time-Varying Loadings.** International Journal of Wavelets, Multiresolution and Information Processing, 20-01-2150033. [Q3,Q3,Q3] (Link)

(9) Rodríguez-Caballero, C. V. (2021). **Energy consumption and GDP: a panel data analysis with multi-level cross-sectional dependence.** Econometrics and Statistics, Vol.23, Pp. 128-146. [Q2,Q2,Q2] (Link)

(8) Rodríguez-Caballero, C. V., & Vera-Valdés, J. E. (2020). **Long-lasting economic effects of pandemics: Evidence on growth and unemployment.** Econometrics, 8(3), 37. [Q2,Q2,Q2] (Link)

(7) Rodríguez-Caballero, C. V., & Caporin, M. (2019). **A multilevel factor approach for the analysis of CDS commonality and risk contribution.** Journal of International Financial Markets, Institutions and Money, 63, 101144. [Q1,Q1,Q1] (Link)

(6) Rodríguez-Caballero, C. V., & Ventosa-Santaulària, D. (2017). **Energy-growth long-term relationship under structural breaks. Evidence from Canada, 17 Latin American economies and the USA.** Energy Economics, 61, 121-134. [Q1,Q1,Q1]
(Link)

(5) Ergemen, Y. E., Haldrup, N., & Rodríguez-Caballero, C. V. (2016). **Common long-range dependence in a panel of hourly Nord Pool electricity prices and loads.** Energy Economics, 60, 79-96. [Q1,Q1,Q1]
(Link)

(4) Rodríguez-Caballero, C. V., & Knapik, O. (2014). **Bayesian log-periodic model for financial crashes.** The European Physical Journal B, 87(10), 1-14. [Q2,Q3,Q3]
(Link)

(3) Rodríguez-Caballero, C. V., & Ventosa-Santaulària, D. (2014). **Granger causality and unit roots.** Journal of Statistical and Econometric Methods, 3(1), 97-114. [, ,]
(Link)

(2) Ventosa-Santaularia, D., & Rodríguez-Caballero, C. V. (2013). **Polynomial regressions and nonsense inference.** Econometrics, 1(3), 236-248. [, ,]
(Link)

(1) Espin-García, O., & Rodríguez-Caballero, C. V. (2013). **Metodología para un scoring de clientes sin referencias crediticias.** Cuadernos de economía, 32(59), 137-162. [Q3,Q4,Q3]
(Link)

Book and articles in books

(1) **Efectos del Modelo de Atención de la Fundación Camino a Casa.**
Modelo de atención para recuperar y empoderar vidas:quince años uniendo esfuerzos
IADB: Inter-American Development Bank (2023).
With Arnoldo López Marmolejo and Emmanuel Mendez Rolón (Book)

(2) **Approximation of Hate Detection Processes in Spanish and
Other Non-Anglo-Saxon Languages**. News Media and Hate Speech
Promotion in Mediterranean Countries. IGI Global (2023) 65-80. (Book)

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

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

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

Technical Reports

(1) **Assessing the Effect of Gender Equality before the Law on Female Labor Participation
and GDP per capita in Central America, Panama, and the Dominican Republic**
With Arnoldo López.*Interamerican Development Bank Technical notes. IDB-TN-2128. 2020*
(Link)

(2) **Remittances Payments through Central Banks: An Application to the Central
American Countries Exchange Rates.** With Arnoldo López and Daniel Ventosa.
Interamerican Development Bank Technical notes. IDB-TN-1864. 2019
(Link)

Software Development

FARS: Factor-Augmented Regression Scenarios (2025). R package for modelling and forecasting economic
scenarios based on multi-level dynamic factor model.
[https://cran.r-project.org/web/packages/FARS/index.html]

Papers under revision or working papers

(1) **Temperatures in the Iberian Peninsula: Trend, seasonality, and heterogeneity.**
[With Esther Ruiz] (R&R AoAS). (Link)

(2) **FARS: Factor Augmented Regression Scenarios in R**
[With Gian Pietro Belloca, Ignacio Garrón and Esther Ruiz] (Submitted).

(3) **Monopoly Unveiled: Telecom Breakups in the US and Mexico**
[With Daniel Ventosa & Fausto Hernández] (submitted).

(4) **Book: Time series econometrics**
[With Daniel Ventosa] (TBS soon).

(5) **The Impact of Air Pollution on Academic Performance in Mexico**
[With José Pérez Castellano & Arnoldo López Marmolejo] (TBS soon).

Awards and Grants

2024	**Member of the Mexican *National System of Researchers* (SNI).** Level II [From 2024].
2017	**Member of the Mexican *National System of Researchers* (SNI).** Level I [2018-2023].
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

▸ **ITAM**

BSc Courses: Econometrics I, Regression analysis, Time Series Econometrics, Introduction to statistics.
MSc Courses: Financial Econometrics (Volatility), Time Series Econometrics, Advanced Econometrics (Asymptotic theory), and Climate econometrics.

▸ **Universidad Carlos III de Madrid**

BSc: Statistical methods for social sciences (Applied time series),
MSc & PhD: Causal inference.

▸ **Aarhus University** (Teaching assistant)

Quantitative and limited dependent variables, Mathematical Economics II.

▸ **Centro de Investigaciones y Docencia Económicas** [2013]

MSc in Economics: Introduction to Multiple Time series analysis.

Supervised students (BSc and MSc)

BSc	A. Jørgensen and M. Sproegel, 2015. Gustavo Santa Rosa García, 2016. Manuel Cortés 2019 x2. Mauricio Villanueva 2020 x2. Paulina Peralta 2022. Pablo Gracia 2023. Leonardo Palacios 2024. Aranzazu Natividad 2024 Raymundo Gómez 2023. Pablo Galeana 2023. Leonardo Palacios 2024. Ximena Iñiguez 2024. Ana Laura García 2025. Fernando Pérez 2025 (TBS). Gustavo Salazar 2025 (TBS).
MSc	Mar Cañizares 2018. Helga Frech 2018. Manuel Cortés 2022, Raúl Garduño 2023. Sarah López 2025 (TBS).

Research stays

Summer 2024	Universidad Carlos III de Madrid. **Department of Statistics**.
Summer 2022	Universidad Carlos III de Madrid. **Department of Statistics**.
Summer 2019	Universidad Carlos III de Madrid. **Department of Social Sciences**.
Spring 2016 PhD stay abroad	Visiting PhD Scholar. ACRI Young Investigator Training Program. **Department of Statistical Sciences, University of Padova**. Host: *Massimiliano Caporin.*
Spring 2016 PhD stay abroad	Visiting PhD Scholar. **Department of Economics, Universidad Carlos III de Madrid**. Host: *Carlos Velasco.*
May-June 2013	Centro de Investigaciones y Docencia Económicas (CIDE), Mexico City.
Jan-July 2011	Institute of Mathematics. Cracow University of Technology, Cracow.
June 2011	Université Paris I (Pantheon-Sorbonne). SAMM Laboratoire,

Seminars and conferences (Only participations after 2015)

2025 ▸ *Banco de Uruguay. March, 2025.* ▸ *Bank of England. April, 2025.* ▸ *Duke University. October, 2025.* ▸ *CIMAT Aniversario. November, 2025.*

2024 ▸ *44th International Symposium On Forecasting, Dijon, France. July, 2024.* ▸ *34th annual Midwest Econometrics Group Conference, Lexington KY, USA. November, 2024.*

2023 ▸ *Coloquio Mexicano de Economía matemática y Econometría. Guanajuato, México. September, 2023.* ▸ *6th International Conference on Econometrics and Statistics. Tokyo, Japan. August, 2023.* ▸ *Seminario ITAM.,* ▸ *Seminario CIDE.,* ▸ *Coloquio AME.,* ▸ *Seminario CIMAT.*

2022 ▸ *Annual conference of the International Association for Applied Econometrics. London.,* ▸ *Arkansas State University-CQ.,* ▸ *Regional Cooperation and Green Economy for a Post-Pandemic World Conference. Liaoning University, China.*

2021 ▸ *Department seminar, Orebro University, Sweden.,* ▸ *The 14th Workshop on Nonstationary Systems and their applications, Grodek, Poland.,* ▸ *26th International Panel Data Conference,* ▸ *XXXIV Foro Nacional de Estadística,* ▸ *CLATSE 2021* ▸ *Universidad Veracruzana*

2020 ▸ *International Symposium on Forecasting*

2019 ▸ *Latin American Meeting of the Econometric Society. Puebla, Mexico.,* ▸ *Annual conference of the International Association for Applied Econometrics. Cyprus.,* ▸ *International Panel Data Conference. Vilnus, Lithuania*

2018 ▸ $VIII_t$ *Workshop in Time Series Econometrics. Zaragoza, Spain.,* ▸ *Workshop on economet-*

rics and data science. Monterrey, Mexico., ▸ *Long Memory conference. Aalborg, Denmark.,* ▸ *Semana de matemáticas. ITAM, México.,* ▸ *Department seminar. Banco de México. Mexico city, Mexico.,* ▸ *Seminario Aleatorio. ITAM. Mar 2018. Mexico city, Mexico.*

2017 ▸ *Department of Statistics. UC3M. Feb 2017. Madrid, Spain.,* ▸ *25th Annual Symposium of The Society for Nonlinear Dynamics and Econometrics. Paris, France.,* ▸ *40th International Panel Data Conference. Thessaloniki, Greece.,* ▸ *70TH European Meeting of the Econometric Society. Lisbon, Portugal.,* ▸ *Economic department seminar. Univ Pub Navarra. Pamplona, Spain.*

2016 ▸ *Department Seminar. Laboratorio Nacional de Políticas Públicas. CIDE. Mexico City, Mexico.,* ▸ *Seminar. Department of Statistical Sciences. University of Padua. Padua, Italy.,* ▸ *CREATES Anniversary Meeting. Sandbjerg, Denmark.,* ▸ *Annual conference. International Association for Applied Econometrics. Milan, Italy.,* ▸ *Workshop in Time Series Econometrics. April 2016. Zaragoza, Spain.,* ▸ *PhD Workshop. April 2016. Madrid, Spain.*

2015 ▸ *CREATES Lunch Seminar. November 2015 & February 2016. Aarhus, Denmark.,* ▸ *Annual DGPE Workshop, November 2015. Sandbjerg, Denmark.*

Participation in Research Projects

1. Incertidumbre en modelos de factores dinámicos: Un índice de riesgo climático, Ministerio de Economía y Competitividad, PID2022-139614NB-C22, 2023-2027 (Fecha de inicio 1/9/2023).
2. Climate change and economic challenges for the Spanish society, La Caixa Foundation, 2020-2021
3. Indicadores económicos: Predicción con incertidumbre e inestabilidad, Ministerio de Economía y Competitividad, Spanish Government, ECO2015-70331-C2-2-R.

Referee and Editorial activities

Associate Editor of Latin American Economic Review (LAER) From October 2023.

Referee for: Trimestre económico, Lecturas de Economía, Revista de Métodos Cuantitativos para la Economía y la Empresa, International Journal of Forecasting, The American Statistician, Latin American Economic Review, Journal of the Operational Research Society, Energy Economics, Empirical Economics, Journal of Nonparametric Statistics, Springer,Resources Policy, Energy journal, Nature, Quantitative finance, Journal of Econometrics Regional Statistics, International Journal of Environmental Research and Public Health, Energies, Applied Economics Letters, Environment and Development Economics, Journal of Economic Structures, Atmosphere, Finance Research Letters, Communications in Statistics, Econometrics and Statistics, Financial Innovation, Communications in Statistics - Simulation and Computation, Revista de Matemática Teoría y Aplicaciones, and Computational Statistics and Data Analysis.

Organization of academic events

▸ Department seminar at ITAM. Principal organizer.
▸ Coloquio virtual AME, 2020. Principal organizer.
▸ Mathematical and Statistical Methods for Actuarial Sciences and Finance (MAF conference) Madrid 2018, Member of the scientific committee.

Service in selection committees and academic societies

▸ Premio Francisco Aranda Ordaz de la AME, 2020-2021. Principal organizer.
▸ Academic evaluation for several CONAHCYT's calls (PhD studies, posdoctoral stays, scientific projects).
▸ Member of many selection committees in the Fullbright-García Robles program
of Comisión México-Estados Unidos para el Intercambio Educativo y Cultural (COMEXUS).

References

References Available Upon Request.