Juan Carlos **Parra-Alvarez**

Helenelyst 191, 8220 Brabrand, Denmark

(+45) 24 41 51 18 | jparra@econ.au.dk | https://jcparra-alvarez.weebly.com | jparraal | JCParraAlvarez

Personal data

Date of birth 9 October, 1982
Nationality Colombia
Language Spanish (native) | English (bilingual proficiency) | Danish (basic)

Research Interests

Quantitative and Numerical Methods in Macroeconomics and Financial Economics, Continuous-Time Modeling, Asset Pricing, Portfolio Choice, Business Cycles, Housing Markets and Migration.

Academic Positions

Associate Professor — Denmark
Department of Economics and Business Economics, Aarhus University — 2023 -

Postdoctoral Researcher — Denmark
AAU Business School, Aalborg University — 2021 - 2022

Assistant Professor — Denmark
Department of Economics and Business Economics, Aarhus University — 2017 - 2021

Postdoctoral Research Fellow — Denmark
Department of Economics and Business Economics, Aarhus University — 2015 - 2017

Visiting Research Scholar — Norway
Department of Economics, BI Norwegian Business School — 2015

Ph.D. Intern — Norway
Research Unit, Norges Bank — 2013

Visiting Research Scholar — United States of America
Department of Economics, School of Arts and Sciences, University of Pennsylvania — 2013

Economist — Colombia
Department of Economic Studies, Banco de la República — 2006 - 2010

Education

Ph.D. in Economics and Management — Denmark
Department of Economics and Business Economics & CREATES, Aarhus University — 2015
Advisors: Bent Jesper Christensen and Olaf Posch
Thesis: Solution Methods and Inference in Continuous-Time Dynamic Equilibrium Economies

M.Sc. in Economics — Denmark
Department of Economics and Business Economics & CREATES, Aarhus University — 2012
Advisors: Bent Jesper Christensen and Olaf Posch
Thesis: A Comparison of Numerical Methods for the Solution of Continuous-Time DSGE Models

M.A. in Economics — Colombia
Department of Economics, Universidad de los Andes — 2010
Advisor: Andrés González Goméz
Thesis: Specification of DSGE Models: A Business Cycle Accounting Application for Colombia

B.A. in Economics Colombia
School of Economics and Finance, Universidad Eafit 2007
Advisor: Martha Misas Arango
Thesis: The Natural Rate of Interest in Colombia

Research

Peer-Reviewed Publications in Scientific Journals

Risk Sensitive Linear Approximations
Economics Letters, *forthcoming* (with Gustavo Solorzáno Andrade)

Estimation of Heterogeneous Agent Models: A Likelihood Approach
Oxford Bulletin of Economics and Statistics, 2023, Vol. 83, No. 2. pp- 304-330 (with Olaf Posch and Mu-Chun Wang)

Optimal Asset Allocation for Commodity Sovereign Wealth Funds
Quantitative Finance, 2023. Vol. 23, No. 3. pp- 471-495 (with Alfonso Irarrazabal and Lin Ma)

Peso Problems in the Estimation of the C-CAPM
Quantitative Economics, 2022, Vol. 13, No.1. pp- 259-313 (with Olaf Posch and Andreas Schrimpf)

Risk Matters: Breaking Certainty Equivalence in Linear Approximations
Journal of Economic Dynamics and Control, 2021, Vol. 133 (with Hamza Polattimur and Olaf Posch)

Optimal Control of Investment, Premium and Deductible for a Non-life Insurance Company
Insurance: Mathematics and Economics, 2021, Vol. 101, pp. 384-405 (with Bent Jesper Christensen and Rafael Serrano Perdomo)

A Comparison of Numerical Methods for the Solution of Continuous-Time DSGE Models
Macroeconomic Dynamics, 2018, Vol. 22, No. 6, pp. 1555-1583

What Determines the Sensitivity of the Real Exchange Rate in Colombia to a Terms of Trade Shock?
Macroeconomics and Finance in Emerging Markets Economies (Special Issue: Emerging Markets and Capital Flow Volatility), 2012, Vol. 5, No. 2, pp. 161-176 (with Lavan Mahadeva)

The Natural Rate of Interest in Colombia
Ensayos sobre Política Económica, 2007, Vol. 25, No. 54, pp. 44-89 (with Juan José Echavarría, Martha Misas, Enrique López, and Juana Tellez)

Book Chapters

Price Formation in Colombian Firms: Evidence from a Direct Survey
In: Inflationary Dynamics, Persistence, and Prices and Wages Formation, Centro de Estudios Monetarios Latinoamericanos, CEMLA, 2013 (with Martha Misas and Enrique López)

Price Setting Heterogeneity in Colombia: Analysis of its Determinants using Count Data Models
In: Formación de Precios y Salarios en Colombia, Banco de la República, 2011 (with Martha Misas and Enrique López)

CPI Sensitivity to the Exchange Rate in Colombia
In: Mecanismos de Transmisión de la Políca Monetaria en Colombia, Banco de la República and Universidad Externado de Colombia, 2011

Working Papers

Estimation of Continuous-Time Linear DSGE Models from Discrete-Time Measurements
with Bent Jesper Christensen and Luca Neri (*R&R at the Journal of Econometrics*)

Work in Progress

Taylor Projection Approximation under Jump-Diffusion Uncertainty
with Oskar Arnt Juul

Time Varying Disaster Risk Model: An Empirical Investigation
with Alfonso Irarrazabal and Lin Ma

Medium-term Impact of Immigration on House Prices
with Anna Piil Damm, Anil Kumar, and Ahmad Hassani

Equilibrium Premium Strategies for Multi-Firm Competition in a Non-Life Insurance Market
with Bent Jesper Christensen and Rafael Serrano

Affiliations

Research Fellow — Denmark
Center for Research in Energy (CORE) — 2024-

Research Fellow — Denmark
Danish Finance Institute (DFI) — 2017-

Research Fellow — Denmark
Center for Research in Econometric Analysis of TimE Series (CREATES) — 2010-2022

Awards & Grants

Nominated to Den Gyldne Pegepind (Teacher of the year) — Denmark
Department of Economics and Business Economics, Aarhus University — 2018, 2019, 2021

DTMC Research Fund — Denmark
Dale T. Mortensen Center, Aarhus University. — 2018
Project title: Stochastic optimal control methods applied to search and matching frictions in the labor market.
Amount awarded: DKK 45,800

Research Grant from Finansmarkedsfondet (Co-investigator) — Norway
The Research Council of Norway — 2017
Project title: Time-varying disaster risk, asset pricing and international business cycles.
Amount awarded: NOK 579,000

Postdoctoral Grant — Denmark
Danish Council for Independent Research — 2015
Project title: Explaining the macroeconomic foundation behind long-term nominal interest rates and their effects on the real economy.
Project leader and grantee: Martin M. Andreasen.

Outstanding Academic Performance, Undergraduate Grant — Colombia
School of Economics and Finance, Universidad Eafit — 2005

Teaching Experience

Derivatives — Denmark
Department of Economics and Business Economics, Aarhus University — Fall 2016, Spring 2023, 2024

Advanced Macrofinance — Denmark
Department of Economics and Business Economics, Aarhus University — Fall 2024

Real Estate Markets and Investments — Denmark
AAU Business School, Aalborg University — Fall 2023

Advanced Finance: Fixed Income and their Derivatives — Denmark
AAU Business School, Aalborg University — Spring 2022, 2023, 2024

Applied Business Mathematics — Denmark
AAU Business School, Aalborg University — Fall 2022

Macro 1 — Denmark
Department of Economics and Business Economics, Aarhus University — Fall 2017, 2018, 2019, 2020

Topics in Macroeconomic Modeling — Colombia
Escuela Internacional de Ciencias Económicas y Administrativas, Universidad de la Sabana — Summer 2019

Housing Markets and the Macroeconomy — Denmark
Department of Economics and Business Economics, Aarhus University — Spring 2019, 2021

Real Estate Economics — Denmark
Department of Economics and Business Economics, Aarhus University — Fall 2015, 2016

Dynamic Optimization: DSGE Models in Continuous-Time — Colombia
Departamento de Economía, Pontificia Universidad Javeriana — Summer 2013

Financial Markets and the Real Economy — Denmark
Department of Economics and Business Economics, Aarhus University — Fall 2012

Econometrics — Colombia
Departamento de Economía, Pontificia Universidad Javeriana — Spring 2008, 2009, 2010

PhD Supervision

Marcel Stechert (Aarhus University, 2022-)

Luca Neri (Aarhus University, 2018-2022)
First position: Post-doc, University of Bologna

Salman Huseynov (Aarhus University, 2018-2022)
First position: Assistant Professor, Corvinus University of Budapest

Professional Services

Refereeing — Finance Research Letters || Journal of Applied Econometrics || AEJ: Macroeconomics || Macroeconomic Dynamics || Studies in Nonlinear Dynamics and Econometrics || Applied Economics || Journal of Economic Studies || Revista Desarrollo y Sociedad || Revista Lecturas de Economía || Journal of Management and Economics for Iberoamerica (Estudios Gerenciales).

Academic activities Co-organizer Macro Seminar Series, Aarhus University, 2022-2023-2024 || Organizer of the Arne Ryde Workshop: Heterogenous Agent Models in Macroeconomics - Advances in Continuous Time, Lund University, June 2021.

External PhD Examiner Jan Fleischhacker, Royal Holloway University of London, UK, November 2023 || Juan Carlos Zambrano Jurado, Universidad del Rosario, Colombia, 2021.

Conference and Seminar Presentations

Long-term Impact of Immigration on House Prices

FMA European Conference. June, 2023. Aalborg, Denmark || 38th. Annual Meeting of the American Real Estate Society. April, 2022. Florida, USA.

Estimation of Continuous-Time Linear DSGE Models from Discrete Measurements

11th. Nordic Econometric Meeting. September, 2022, Sandbjerg, Denmark || XII Workshop in Time Series Econometrics. March, 2022. Zaragoza, Spain || Quantitative Economics Virtual Seminar. January, 2021. Hamburg University, Germany.

Solution of Disaster Risk Equilibrium: A Taylor-Projection Approach

28th. Annual Symposium of the Society for Nonlinear Dynamics and Econometrics. September, 2020. Online || Joint Econometrics-Finance Lunch Seminar. November, 2019. Aarhus University, Denmark.

Risk Matters: Breaking Certainty Equivalence

XXIII LACEA-LAMES. November, 2018. Quito, Ecuador || 13th. Dynare Conference. October, 2017. Tokyo, Japan || CREATES Lunch Seminar. November, 2017. Aarhus University, Denmark || 11th. International Conference on Computational and Financial Econometrics. December, 2017. London, UK || Workshop on Nonlinear Models in Macroeconomics and Finance for an Unstable World. January, 2018. Oslo, Norway.

Identification and Estimation of Heterogeneous Agent Models: A Likelihood Approach

Macroeconomics and Econometrics Seminar. April, 2018. Lund, Sweden || 10th. NHH-UiO Workshop on Economic Dynamics. June, 2015. Oslo, Norway || 9th. Nordic Summer Symposium in Macroeconomics. August, 2015, Smögen, Sweden || 30th. Annual Congress of the European Economic Association. August, 2015, Mannheim, Germany || Quantitative Economics Seminar at Hamburg University. October, 2015 || Fall Midwest Macro Conference. November, 2015. Rochester, USA || CREATES Lunch Seminar. November, 2015. Aarhus University, Denmark.

Time-Varying Disaster Risk Models: An Empirical Assessment of the Rietz-Barro Hypotesis

Annual DGPE Workshop. November, 2014. Nyborg, Denmark || CREATES Lunch Seminar. November, 2014. Aarhus, Denmark || Norges Bank Research Unit Seminar. November, 2014. Oslo, Norway || BI Norwegian Business School. February, 2015. Oslo, Norway.

A Comparison of Numerical Methods for the Solution of Continuous-Time DSGE Models

CDMA Workshop on DSGE Models. March, 2013. Center for Dynamic Macroeconomic Analysis, School of Economics and Finance, University of St. Andrews, Scotland, United Kingdom || 18th. International Conference on Computing in Economics and Finance, Society for Computational Economics and Finance. June, 2012. Prague, Czech Republic || Annual DGPE Workshop. November, 2012. Ebberup, Denmark || 6th. CSDA International Conference on Computational and Financial Econometrics. December, 2012. Oviedo, Spain.