

Rodrigo Herrera

CONTACT INFORMATION	Rodrigo Herrera Faculty of Business and Economics Universidad de Talca Av. Lircay Km 1 s/n, Talca	☎: +56 71 2200308 🐦: @RodHerreraL ✉: rodrigo.herrera@utalca.cl 🌐: https://www.r-herrera.com/
PERSONAL DETAILS	Born April 6, 1978 in Talca, Chile Native Spanish speaker, fluent in English and German	
RESEARCH INTERESTS	Quantitative Methods in Economics, Applied Econometrics, Extreme Value Theory	
APPOINTMENTS	Dean of the Faculty Universidad de Talca, Faculty of Business and Economics, 2018 – present. Director of Center for Applied Economic Research Universidad de Talca, Faculty of Business and Economics, 2015 – 2018. Director of the Master Program in Economics Universidad de Talca, Faculty of Business and Economics, 2015– 2018. Associate Professor, Universidad de Talca, 2015. Assistant Professor, Universidad de Talca, 2011 – 2015. Instructor Professor, Universidad de Talca, 2010 – 2011.	
EDUCATION	Post-Doc, Dresden University of Technology, Germany. 2010. PhD in Economics with emphasis on Econometrics, Dresden University of Technology, Germany. 2009. Civil Industrial Engineering, Universidad de Talca, Chile. 2002. Bachelor in engineering (Joint Hons.), First Class, Universidad de Talca, Chile. 2002.	
AWARDS AND FELLOWSHIPS	Post-doctoral Scholarships. Fritz Thyssen Foundation: “ <i>Multivariate models of extreme value theory with Applications in Risk Management</i> ”. Germany. 2009 –2010. Post-doctoral Scholarship of the “ <i>Association of Friends and Sponsors of TU Dresden e.V.</i> ”. Germany. 2009 DAAD-Ass. Scholarship within the PhD. Research Program, Dresden, Germany. Grant-holder ALFA Program of the European Commission, SISTING project. Contract No: AML/B7-311/97/0666/II321-FA. Saarbrücken, Germany. 2007. Funding for young scientists of the German Statistical Society, Kiel, Germany. 2007. President of the Republic Scholarship for Doctoral Studies in Germany, Chile. Mideplan. 2003. <i>Best student award 2002</i> , in Industrial Engineering, Universidad de Talca, Chile. 2002. Scholarship within of the academic exchange between Universidad de Talca and Dresden University of Technology to finish part of the Thesis of Engineering. Dresden, Germany. 2002. Scholarship of the Chilean Association of Banks and Financial Institutions. 2002. DAAD Scholarship, Academic exchange at the Dresden University of Technology. Dresden, Germany. 1999.	

COMPETITIVE
RESEARCH
GRANTS

- Research Project FONDECYT Regular N° 1180672 “*Modeling high-dimensional and high-frequency extreme events in financial markets: Incorporating trading activity, liquidity measures and news flow*”. 2018–2020.
- Research Project FONDECYT Regular N° 1150349 “*Extreme Financial Risk: A Multivariate Conditional Framework of Extreme Events*”. 2015–2017.
- International Research Project *Iberoamerican Network of Agro-Bigdata and Decision Support Systems (CYTED)*. 2015–2019.
- Research Project FONDECYT Initiation N° 11110247 “*Advanced extremal models for Risk Modeling under Basel II*”. 2011–2013.
- International Research Project for Scientists (DAAD-CRUCH). Project: “*Extreme value theory with Applications in Risk Management and Crisis Contagion*”. 2011.

PUBLICATIONS *WoS (ex-ISI) and Scopus Articles*

- Hautsch N. and Herrera R. (2020). “*Multivariate dynamic intensity peaks over threshold models*”. *Journal of Applied Econometrics*. Vol.35 (2), 248 - 272.
- Herrera, R., and Clements, A. (2020). “*A marked point process model for intraday financial returns: Modelling extreme risk*”. *Empirical Economics*. Vol.58, 1575-1601.
- Rodriguez, A., Pino, G. and Herrera, R. (2020). “*A non-parametric statistic for testing conditional heteroscedasticity for unobserved component models*”. *Journal of Applied Statistics*. DOI: 10.1080/02664763.2020.1732885.
- Pino, G., Herrera, R. and Rodriguez, A. (2019). “*Geographical spillovers on the relation between risk-taking and market power in the US banking sector*”. *North American Journal of Economics and Finance*. Vol.47, 351-364.
- Herrera, R., Clements, A. and Fuentes, F. (2018). “*Modeling Extreme Risks in Commodities and Commodity Currencies*”. *Pacific-Basin Finance Journal*, Vol. 51, pp. 108-120.
- Moisan, S., Herrera, R., and Clements, A. (2018). “*A Dynamic Multiple Equation Approach for PM2.5 Forecasting in Santiago, Chile*”. *International Journal of Forecasting*. Vol. 34, pp. 566-581.
- Herrera, R. and Gonzalez, S. (2018). “*Mutual excitation between OECD Stock and Oil Markets: A Conditional Intensity Extreme Value Approach*”. *North American Journal of Economics and Finance*. Vol.46, 70-88.
- Herrera, R., and Clements, A. (2018). “*Point process models for extreme returns: Harnessing implied volatility*”. *Journal of Banking and Finance*, Vol. 88, pp. 161-175.
- Herrera, R. and Fuentes, F. (2018). “*Are Crude Oil and Natural Gas extreme prices interdependent?*”. *Journal of Physics: Conference Series*. 1053 012112.
- Herrera, R., Rodriguez, A. and Pino, G. (2017). “*Modeling and Forecasting Extreme Commodity Prices: A Markov-Switching based Extreme Value Model*”. *Energy Economics*, Vol. 63, 129-143.
- Herrera, R., Clements, A. and Hurn, A. (2015). “*Modeling Interregional Links in Electricity Price Spikes*”. *Energy Economics*, Vol. 51, 383-393.
- Herrera, R., and Schipp, B (2014). “*Statistics of extreme events in Risk Management: The impact of the Subprime and Global Financial Crisis on the German stock market*”. *North American Journal of Economics and Finance*. Vol. 29, 218-238.
- Herrera, R. and N. González (2014). “*Modeling and Forecasting of Extreme Events in Electricity Spot Markets*”. *International Journal of Forecasting*, Vol. 30 (3), pp 477-490.
- Herrera, R. and A. Karmann (2014). “*New evidence of contagion in the Asian crisis*”. *Review of Development Economics*. Vol.18(2), 354-371.
- Herrera, R. (2013). “*Energy risk management through self-exciting marked point process*”. *Energy Economics*. Vol. 38, 64–76.

- Herrera, R and Schipp, B. (2013). *“Value at Risk forecasts by extreme value models in a conditional duration framework”*. Journal of Empirical Finance. Vol. 23. 33–47.
- Herrera, R. and S. Eichler (2011). *“Extreme Dependence with Asymmetric Thresholds: Evidence for the European Monetary Union”*. Journal of Banking and Finance. 35, Vol. 11, 2916-2930.

Book Chapters

- Herrera, R., Schipp, B. (2009). *“Self-exciting extreme value models on stock market crashes*. In: Statistical Inference, Econometric Analysis and Matrix Algebra”. Physica-Verlag Heidelberg, 209 - 231.
- Herrera, R., S. Nickel and J. Kalcsics (2007). *“Reliability Models for the Uncapacitated Facility Location Problem with User Preferences”*. Operations Research Proceedings 2007, 135-140.

Other Publications in Spanish

- Herrera, R., M. Aguirre and G. Bravo (2007). *“Análisis comparativo de eficiencia técnica entre la banca chilena y alemana”*. Revista de Matemática: Teoría y Aplicaciones 14(2) : 203–218. ISSN: 1409-2433.
- Herrera, R., M. Aguirre and G. Bravo (2004). *“Una frontera de Producción para la banca Chilena”* Panorama Socioeconómico, ISSN: 0718-1566. Chile.

WORKING PAPERS

- Fuentes, F., Herrera, R. and Clements, A. (2020). *“Analyzing Extreme Financial Risks: A Score-driven Approach?”*. Revised and Resubmitted in “International Journal of Forecasting”.
- Clements, A., Herrera, R. and Hurn, A. (2020). *“A network analysis of the PM2.5 pollution in Santiago: Which locations have the biggest impact on pollution levels?”*. Submitted in “Air Quality, Atmosphere and Health”.
- Fuentes, F. and Herrera, R. (2020). *“Dynamics of Connectedness in Clean Energy Stock Markets”*. Submitted in “Energies”.
- Fuentes, F., Herrera, R. and Clements, A. (2020). *“Dynamic Multi-Parameter Modeling of Financial Extreme Events”*. Working Paper.
- Gaete M. and Herrera, R. (2020). *“Diversification benefits of commodities in portfolio allocation: A dynamic factor copula approach”*. Working Paper.
- Piña M. and Herrera, R. (2020). *“Risk modelling with option-implied correlations and score-driven dynamics”*. Working Paper.

TEACHING

- Postgraduate: Financial Econometrics, Advanced Econometric, Time Series, Quantitative Finance, Quantitative Risk Management, Research methodology, Introduction to Statistical and Econometric Analysis, MBA Introduction to Statistics.
- Undergraduate: Econometric, Stochastic Modelling, Stochastic Frontiers, Productivity Analysis, Optimization, Operations and Logistic, Supply Chain Management.

SELECTED PROFESSIONAL ACTIVITIES

- Board member of the Chilean Economic Society (2016-2019)
- Reviewer for: Energy Economics, Journal of Empirical Finance, International Review of Economics and Finance, Applied Economics, International Journal of Forecasting, Journal of Futures Markets, North American Journal of Economics and Finance, Energy Economics, Applied Economics Letters, Expert Systems With Applications.
- Referee Fondecyt Regular grants, Referee “Becas Chile” for Doctoral and Master Programs (Chilean NSF).

SUPERVISING AND MENTORING

Ph.D

C. Candia (2019- Expected 2022) *Dynamic Applications of Extreme value models in Systemic Risk*

F. Fuentes (2015- Expected 2020) *Multivariate time Varying Extreme value models in Finance.*

Master in Economics

M. Piña (2020) *Risk modelling with option-implied correlations and score-driven dynamics*

M. Gaete (2019) *Diversification benefits of commodities in portfolio allocation: A dynamic factor copula approach*

T. Pérez (2017) *Predicting future Spot prices with Dynamic Conditional Beta models*

S. Moissan (2017) *A Dynamic Multiple Equation Approach for PM2.5 Forecasting in Santiago, Chile.*

E. Muñoz (2017) *Causal effect of oil prices on airline losses: A Conditional Intensity Approach.*

Master in Operation Management

S. González (2015) *Comovements between OECD Stock and Oil Markets: A Conditional Intensity Extreme Value Approach.*

F. Fuentes (2015) *Quantifying the Impact of Extreme Events on Commodity Currencies*

F. Urrutia (2014) *Production planning with hierarchical models and supplier-related uncertainty*

N. González (2013) *Time Varying Autoregressive Conditional Duration Peaks Over Threshold Models in Finance*

W. Lagos (2013) *Modeling of Value at Risk through the Extreme Values Theory and Shot Noise Point Processes*

MEMBERSHIPS

Financial Econometric Society, Econometric Society, Chilean Statistical Society (Soche), Chilean Economic Society (Sechi).

REFERENCES

Bernard Schipp

Professor in Econometrics
Faculty of Business and Economics
Dresden University of Technology
bernhard.schipp@tu-dresden.de

Adam Clements

Professor in Finance
QUT Business School
Queensland University of Technology
a.clements@qut.edu.au

Last update: June 5, 2020.