

# Ricardo Masini

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## Academic Positions

### Princeton University

- 2021–present Researcher and Lecturer, *Center for Statistics and Machine Learning (CSML)*
- 2020–2021 Visiting Lecturer, *Operations Research and Financial Engineering (ORFE)*
- 2019–2020 Visiting Fellow, *Operations Research and Financial Engineering (ORFE)*

### Getulio Vargas Foundation (FGV)

- 2021–2021 Affiliate Professor, *Sao Paulo School of Economics (EESP)*, Sao Paulo-SP, Brazil
- 2016–2020 Assistant Professor, *Sao Paulo School of Economics (EESP)*, Sao Paulo-SP, Brazil

## Education

- 2012–2016 **PhD in Economics (with honors)**, *Pontifical Catholic University of Rio de Janeiro (PUC-Rio)*, Rio de Janeiro-RJ, Brasil
- 2010–2011 **MSc in Economics**, *London School of Economics (LSE)*, London, UK
- 2007–2008 **MBA (Finance Major)**, *INSEAD*, Fontainebleau, France / Singapore
- 1998–2002 **BSc in Aeronautical Engineering**, *University of São Paulo (USP)*, São Carlos-SP, Brasil

## Main Publications

- "Do We Exploit all Information for Counterfactual Analysis? Benefits of Factor Models and Idiosyncratic Correction" with Jianqing Fan and Marcelo Medeiros.  
*Journal of the American Statistical Association*, 117, 574-590, January 2022.
- "Counterfactual Analysis With Artificial Controls: Inference, High Dimensions and Nonstationarity", with Marcelo Medeiros.  
*Journal of the American Statistical Association*, 116, 1773-1788, November 2021.
- "Regularized Estimation of High-Dimensional Vector AutoRegressions with Weakly Dependent Innovations" with Marcelo Medeiros and Eduardo Mendes.  
*Journal of Time Series Analysis*, 43,532-557, October 2021.
- "Machine Learning Advances for Time Series Forecasting", with Marcelo Medeiros and Eduardo Mendes.  
*Journal of Economic Surveys*, 1-36, July 2021.
- "Counterfactual Analysis and Inference with Nonstationary Data" with Marcelo Medeiros  
*Journal of Business & Economic Statistics*, 40,1,227-239, September 2020.

6. "ArCo: An Artificial Counterfactual Approach for High-Dimensional Panel Time-Series Data", with Marcelo Medeiros and Carlos Carvalho.  
*Journal of Econometrics* 207(2):352-380, December 2018.

## ■■■■ Papers under Revision

1. "Distributional Counterfactual Analysis in High-Dimensional Setup".  
*Journal of Econometrics*, Revise and Resubmit.
2. "Bridging Factor and Sparse Models" with Jianqing Fan and Marcelo Medeiros.  
*Annals of Statistics*, Revise and Resubmit.

## ■■■■ Working Papers

1. "Yurinskii's Coupling for Martingales" with Matias Cattaneo and William Underwood.
2. "Higher-order Refinements of Small Bandwidth Asymptotics for Density-Weighted Average Derivative Estimators" with Matias Cattaneo, Max Farrell and Michael Jansson.
3. "High-Dimensional Exogeneity Test in the presence of Nuisance Parameter" with Victor Orestes.
4. "Fixed-Point Numeric Solution via Approximation and Estimation" with Victor Orestes.

## ■■■■ Statistical Software Articles

1. "ArCo: An R package to Estimate Artificial Counterfactuals" with Yuri Fonseca, Marcelo Medeiros and Gabriel Vasconcelos.  
*The R Journal* 10(1):91-108, December 2018.

## ■■■■ Refereeing Experience

*Annals of Applied Statistics, Econometric Reviews, Econometric Theory, International Journal of Forecasting, Journal of the American Statistical Association, Journal of Applied Econometrics, Journal of Business & Economic Statistics, Journal of Econometrics, Operations Research.*

## ■■■■ Invited Talks & Conferences

### 2022

- Econometrics and Statistics Seminar, Booth School of Business, The University of Chicago.
- Seminar of the Department of Statistics, Operations and Data Science, Fox Business School, Temple University.
- Econometrics Seminar, University of Pennsylvania, Department of Economics.
- Econometrics Seminar, University of California Riverside, Department of Economics.

### 2021

- CFE-CMStatistics, King's College, London, UK.
- Econometrics Student Seminar, Princeton University, Department of Economics.
- Econometrics Seminar, Rutgers University, Department of Economics.

- Statistics Seminar, Columbia University, Department of Statistics.
- Econometrics Workshop, North Carolina State University, Department of Economics.
- S. S. Wilks Memorial Seminar in Statistics, Princeton University, ORFE.
- StatLab Seminar Series, Princeton University, ORFE.

#### **2020 and prior:**

- Annual Meeting of the Brazilian Econometric Society (SBE), Sao Paulo School of Economics (FGV-EESP), Brazil, 2019.
- Annual Conference of the International Association for Applied Econometrics (IAAE), Université du Québec à Montréal (UQAM) and Université de Montréal (UdeM), Canada, 2018.
- Annual Conference of the International Association for Applied Econometrics (IAAE), Sapporo, Japan, 2017.
- Annual Conference of the Brazilian Society of Econometrics (SBE), Natal, Brazil, 2017.
- Annual Congress of the European Economic Association (EEA), Mannheim University, Germany, 2015.
- World Congress of the Econometric Society (ESWC), Montreal, Canada, 2015.
- Annual Conference of the International Association for Applied Econometrics (IAAE) Thessaloniki, Greece, 2015.
- NBER-NSF Time Series Conference, Federal Reserve Bank of St. Louis, 2014.
- Annual Conference of the Brazilian Society of Econometrics (SBE), Natal, Brazil, 2014.

### ██████████ Grants and Research Awards

- National Science Foundation (NSF), co-Principal Investigator, Grant [DMS-2210561](#) , \$350,000, 2022-2025

### ██████████ Awards & Honors

- *2017 Haralambos Simeonidis* prize for the best PhD thesis in Economics in Brazil, "Contributions to the Econometrics of Counterfactual".

### ██████████ Teaching Experience

#### **Princeton University:**

- Spring 2021 SML201: Introduction to Data Science, Undergraduate, CSML
- Fall 2020 ORF405: Regression and Applied Time Series, Undergraduate, ORFE
- Fall 2020 ORF245: Fundamentals of Statistics, Undergraduate, ORFE
- 2019-2020 ORF350: Analysis of Big Data, Undergraduate, ORFE

#### **Getulio Vargas Foundation (FGV-EESP):**

- 2017-2019 Time Series Analysis, *Undergraduate*
- 2017-2019 Probability, *Undergraduate*
- 2017-2019 Statistics, *Graduate*
- 2017-2019 Bayesian Econometrics, *Graduate*

## Professional Experience

- 2021 **Statistical Software Development**, *University of Chicago (Booth)*, US
- 2008-2009 **Associate Consultant**, *McKinsey & Company*, São Paulo-SP, Brazil
- 2005-2007 **Lead System Engineer**, *Airbus*, Bristol, United Kingdom
- 2003-2005 **System Engineer**, *Embraer*, São José dos Campos, Brazil

## Languages

Portuguese (Native); English (Fluent); Spanish (Intermediate); French (Basic).

## Personal Information

Born May 1980 in Foz do Iguaçu, Brazil. Brazilian and Italian citizenship. US Permanent Resident (Green card holder).

Married to Vanessa Figaro. Two daughters: Gabriela (born 2014) and Julia (born 2016).

## Academic References

- o Prof. Matias D. Cattaneo, Princeton University ([cattaneo@princeton.edu](mailto:cattaneo@princeton.edu))
- o Prof. Jianqing Fan, Princeton University ([jqfan@princeton.edu](mailto:jqfan@princeton.edu))
- o Prof. Marcelo C. Medeiros. PUC/University of Illinois ([mcm@econ.puc-rio.br](mailto:mcm@econ.puc-rio.br))