

# Sergio Pastorello

## *Curriculum Vitae*

### Contacts

Department of Economics  
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### Employment

**Since Apr. 2011:** Professor of Econometrics, School of Economics and Management, University of Bologna

### Education

- 1992**      **PhD** in Economics, University of Bologna, "Labor Market Transitions: an Econometric Analysis using Discrete Time Observations"  
**1990**      **DEA (M.Sc.)** in Mathematical Economics and Econometrics, Université des Sciences Sociales, Toulouse, France  
**1987**      **Laurea (B.A.)** in Statistics, University of Padova, Italy

### Research Interests

Econometrics, Machine Learning, Artificial Intelligence, Financial Econometrics, Asset Pricing, Option Pricing, Portfolio Choice.

### Publications

#### *International journals*

“Autonomous algorithmic collusion: Economic research and policy implications”, with S. Assad, E. Calvano, G. Calzolari, R. Clark, V. Denicolò, D. Ershov, J. Johnson, A. Rhodes, L. Xu, M. Wildenbeest, forthcoming *Oxford Review of Economic Policy*, 2020

“Algorithmic collusion with imperfect monitoring”, with E. Calvano, G. Calzolari and V Denicolò, *International Journal of Industrial Organization*, Feb. 2021.

“Protecting consumers from collusive prices due to AI”, with E. Calvano, G. Calzolari, V. Denicolò and J. Harrington. *Science*, Nov 27, 2020.

“Artificial Intelligence, Algorithmic Pricing and Collusion”, with E. Calvano, G. Calzolari and V. Denicolò, *American Economic Review*, Oct. 2020.

“European Spreads at the Interest Rate Lower Bound”, with L. Coroneo, *Journal of Economic Dynamics & Control*, 2020.

“Algorithmic Pricing: What Implications for Competition Policy?”, with E. Calvano, G. Calzolari and V. Denicolò, *Review of Industrial Organization*, 2019.

“Income inequality and banking crises: Testing the level hypothesis directly”, with G. Bellettini, F. Delbono and P. Karltröm, *Journal of Macroeconomics*, vol. 62, 2019.

“Return Expectations and Risk Aversion Heterogeneity in Household Portfolios”, with A. Buccioli and R. Miniaci, *Journal of Empirical Finance*, 2017.

“Maximization by Parts in Extremum Estimation”, with Y. Fan and E. Renault, *Econometrics Journal*, 2015.

“Estimating and Testing Non-Affine Option Pricing Models with a Large Unbalanced Panel of Options”, *Econometrics Journal*, with F. Ferriani, vol. 15, pp. 171-203, 2012.

"Estimation of Objective and Risk-Neutral Distributions Based on Moments of Integrated Volatility", with R. Garcia, M.-A. Lewis and E. Renault, *Journal of Econometrics*, vol. 160, n. 1, pp. 22-32, 2011.

“Efficient Importance Sampling Maximum Likelihood Estimation of Stochastic Differential Equations”, with E. Rossi, *Computational Statistics & Data Analysis*, vol. 54, n. 11, pp. 2753-2762, 2010.

“Mean-Variance Econometric Analysis of Household Portfolios”, with R. Miniaci, *Journal of Applied Econometrics*, vol. 25, pp. 481-504, 2010.

"Iterative and Recursive Estimation in Structural Nonadaptive Models", with V. Patilea and E. Renault, *Journal of Business and Economic Statistics*, vol. 21, n. 4, pp. 449-509, 2003.

"Modeling the demand for M3 in the Euro area", with R. Golinelli, *European Journal of Finance*, vol. 8, n. 2, 2002.

"Statistical Inference for Random Variance Option Pricing", with E. Renault and N. Touzi, *Journal of Business and Economics Statistics*, vol. 18, n. 3; pp. 358-67, 2000.

"Diffusion Coefficient Estimation and Asset Pricing When Risk Premia and Sensitivities Are Time Varying: A Comment", *Mathematical Finance*, Vol. 6, N. 2, pp. 111-117, 1996.

#### *Book contributions*

"Modèles à facteurs en finance", in *Modélisation ARCH: Théorie Statistique et applications dans le domaine de la finance*, J.-J. Dreesbeke, B. Fichet and P. Tassi eds., chap. 7, pp. 133-169, 1994 (with E. Renault).

#### *Italian journals*

"Inferenza Statistica per il modello CIR multifattoriale: un'analisi del mercato delle Eurolire", *Statistica*, LX, n. 1, pp. 133 - 158. 2000.

"La domanda di moneta nell'area dell'Euro", *Atti del convegno SADIBA – Banca d'Italia*, Perugia, 1999 (with Roberto Golinelli).

"Entry-Exit Timing and Profit Sharing", *Rivista Internazionale di Scienze Sociali*, pp. 67 – 88, 1998 (with M. Moretto).

"La composizione del portafoglio delle famiglie italiane: un modello a fattori per variabili qualitative". *Atti del convegno SADIBA – Banca d'Italia*, Perugia, 1999 (with Renzo Orsi).

"Estimating Random Variance Option Pricing Models: An Empirical Analysis", *Statistica*, anno LIV, n. 2, 1994.

"La mobilità nel mercato del lavoro: un'analisi econometrica con osservazioni in tempo discreto", *Statistica*, anno LIII, n. 2, p. 185-206, 1993.

#### *Italian books*

*Rischio e rendimento: Teoria finanziaria e applicazioni econometriche*, Il Mulino, Bologna, 2001.

### **Refereeing activity**

Annals of Operations Research, Applied Mathematical Finance, Computational Statistics & Data Analysis, Decisions in Economics and Finance, Econometrics Journal, European Journal of Finance, Journal of Business & Economic Statistics, Journal of Econometrics, Journal of Financial Econometrics

### **Teaching Experience**

**Undergraduate:** Principles of Econometrics

**Graduate:** Machine Learning, Financial Econometrics, Quantitative Marketing, Time Series Econometrics, Mathematical Finance, Asset Pricing