Curriculum Vitae
Mario Martinoli

Education

11/2017–04/2021	University of Insubria (Varese, Italy), Ph.D. in Methods and Models for Economic Decisions under the supervision of Prof. Raffaello Seri. Overall mark: Excellent Magna cum Laude. Dissertation: "Essays on Estimation, Calibration and Inference for Simulation Models". Research fields: Econometrics, Statistics, Simulated Models.
28/01–31/05/2019	SUNY at Stony Brook (Stony Brook, NY, USA), Visiting Ph.D. Student under the supervision of Prof. Samuele Centorrino. Research fields: Econometrics, Nonparametric Econometrics.
04/2015–12/2015	MIP–Politecnico di Milano School of Business (Milano, Italy), Executive Master Financial Risk Management. Core modules: credit risk, market risk, liquidity risk, interest rate risk evaluation.
10–21/08/2015	Kaplan International College (Dublin, Ireland), Certificate of achievement, English level reached: Higher Intermediate. Core modules: business English
09/2009–11/2011	University of Insubria (Varese, Italy), Master's Degree in Banking and Finance with overall mark 108/110. Core modules: Econometrics, Mathematical Methods for Economics and Finance.
09/2006–09/2009	University of Insubria (Varese, Italy), Bachelor's Degree in Economics. Core modules: Econometrics, Microeconomics e Macroeconomics.

Experience

01/2023–05/2023	Visiting Scholar, Department of Economics, University of Helsinki (Helsinki, Finland). Vector Autoregressive models, time series econometrics.
11/2020–ongoing	Postdoctoral Researcher, Institute of Economics, Sant'Anna School of Advanced Studies (Pisa, Italy). Estimation and validation of structural models. Research Fellow at EMbeDS, Sant'Anna School of Advanced Studies (Pisa, Italy).
10/2011–10/2017	Consultant, Financial Risk Manager.

Teaching

A. Y. 2022–2023 A.Y. 2023–2024	Course on calibration, validation and inference for complex simulation models. PhD in Methods and Models for Economic Decisions, University of Insubria (Varese, Italy).
15/07/2022 14/07/2023 14/07/2024	Lecture on empirical validation of agent-based models. Seasonal School "Agent-based models in Economics: theory, toolkit and policy laboratories", Sant'Anna School of Advanced Studies (Pisa, Italy).
02/2021–07/2021	Teaching Assistant in financial mathematics at University of Insubria (Varese, Italy).

12/2019–11/2020 01/2018–01/2019	Tutor in mathematics, financial mathematics, applied mathematics, statistics and econometrics at University of Insubria (Varese, Italy).

IT expertise

R, Stata, Matlab	Statistical and numerical analysis software. Advanced knowledge (R), good knowledge (Stata and Matlab).
Python, C++	Language programming. Basic knowledge.
LaTeX, LyX	Text editing software. Advanced knowledge.
Zotero, BibTeX	Reference manager. Advanced knowledge.
MS Office	Word, Excel, Powerpoint and Outlook. Advanced knowledge.

Organization of Events

27–28/09/2022	Workshop "Data-Driven Agent-based Models" organized with Marco Pangallo, Francesco Lamperti, Andrea Vandin, Daniele Giachini, Matteo Coronese and Davide Luzzati, together with EMbeDS (Economics and Management in the Era of Data Science). Scuola Superiore Sant'Anna.
25–27/09/2022	Workshop "Model evaluation and causal search: empirical and experimental approaches" organized with Alessio Moneta, Caterina Giannetti and Francesco Cordoni, within PRIN 2017 "How good is your model? Empirical evaluation and validation of quantitative models in economics". Scuola Superiore Sant'Anna.
14–17/06/2022	Special Session on "Econometrics of Climate and Energy" organized with Alessio Moneta and Simone Maxand, within the 14^{th} Conference of the European Society for Ecological Economics. Università degli Studi di Pisa.

Publications

Journal articles

Martinoli M., Moneta A., and Pallante G.. Calibration and Validation of Macroeconomic Simulation Models by Statistical Causal Search. *Journal of Economic Behavior and Organization*, 2024, 228C: 106786. `https://doi.org/10.1016/j.jebo.2024.106786`

Seri R., and **Martinoli M.**. Asymptotic Properties of the Plug-in Estimator of the Discrete Entropy under Dependence. *IEEE Transactions on Information Theory*, 2021, 67, 12: 7659-7683. `https://doi.org/10.1109/TIT.2021.3109307`

Seri, R., **Martinoli**, **M.**, Secchi, D., and Centorrino, S.. Model Calibration and Validation via Confidence Sets. *Econometrics and Statistics*, 2021, 62-86. `https://doi.org/10.1016/j.ecosta.2020.01.001`

Chapters in books

Seri, R., Secchi, D., and **Martinoli**, **M.** (2022). Randomness, Emergence and Causation: A Historical Perspective of Simulation in the Social Sciences. In: Albeverio, S., Mastrogiacomo, E., Rosazza Gianin, E., Ugolini, S. (eds) Complexity and Emergence. CEIM 2018. Springer Proceedings in Mathematics & Statistics, vol 383. Springer, Cham. https://doi.org/10.1007/978-3-030-95703-2_7

Collaborations

Delios, A., Clemente, E. G., Wu, T., Tan, H., Wang, Y., Gordon, M., Viganola, D., Chen, Z., Magnus Johannesson, A. D., Uhlmann, E. L., Generalizability Tests Forecasting Collaboration Team: **Mario Martinoli** et al.. Examining the generalizability of research findings from archival data. *Proceedings of the National Academy of Sciences*, 2022, 119(30), e2120377119.https://doi.org/10.1073/pnas.2120377119

Tierney, W., Hardy III, J. H., Ebersole, C. R., Leavitt, K., Viganola, D., Clemente, E. G., Gordon, M., Magnus Johannesson, A. D., Pfeiffer, T., Uhlmann, E. L., Hiring Decisions Forecasting Collaboration Team: **Mario Martinoli** et al.. Creative destruction in science. *Organizational Behavior and Human Decision Processes*, 2020, 161: 291-309. https://doi.org/10.1016/j.obhdp.2020.07.002

Working papers

Martinoli M. (2025). Nonparametric minimum-distance estimation of simulation models. (submitted)https://ideas.repec.org/p/ssa/lemwps/2025-06.html

Martinoli M., Seri R., and Corsi F. (2024). Generalized Optimization Algorithms for Complex Objective Functions. (submitted)https://ideas.repec.org/p/ssa/lemwps/2024-18.html

Fierro L. E., and **Martinoli M.** (2024). An Empirical Inquiry into the Distributional Consequences of Energy Price Shocks. (under review)https://ideas.repec.org/p/ssa/lemwps/2024-30.html

Martinoli M., and Seri R. (2023). Nonparametric Moment-based Estimation of Simulated Models via Regularized Regression.

Martinoli M., D. Di Francesco, D., Moneta A., and Seri R. (2024). Estimation of DSGE models by non-Gaussian Vector Autoregressions.

Corsi F., **Martinoli M.**, Sarti M., and Seri R. (2024). A State-Space Approach for Indirect Inference Estimation with Noisy Data.

Work in progress

Testing Relevance and Exogeneity in Structural Vector Autoregressions with External Instruments (joint with L. Fanelli and A. Moneta).

From micro to macro: towards a new notion of causality (joint with D. Di Francesco, A. Moneta, M. Pangallo and A. Vandin).

Estimation and inference for simulation models, what's next?

A model for chattering (joint with R. Seri).

Invited talks

University of Helsinki (02/2023), University of Pisa (06/2023).
Humboldt University (02/2022), University of Insubria (03/2022).

University of Pisa (01/2021), University of Insubria (01/2021), Sant'Anna School of Advanced Studies (02/2021).

Conferences

06–07/12/2024	Martinoli, M., Di Francesco, D., Moneta, A., and Seri, R.. Estimation of DSGE models by non-Gaussian Vector Autoregressions. In 35^{th} (EC)^2 Conference: University of Amsterdam (Amsterdam). (presenting author).
25–27/06/2024	Martinoli, M., Seri, R., and Corsi, F.. Generalized Optimization Algorithms for Complex Models. In *Annual Conference of the International Association for Applied Econometrics (IAAE2024)*: University of Macedonia (Thessaloniki). (presenting author).
25–27/06/2024	Martinoli, M., Di Francesco, D., Moneta, A., and Seri, R.. Estimation of DSGE models by non-Gaussian Vector Autoregressions. In *Annual Conference of the International Association for Applied Econometrics (IAAE2024)*: University of Macedonia (Thessaloniki).
20–21/05/2024	Martinoli, M., Di Francesco, D., Moneta, A., and Seri, R.. Estimation of DSGE models by non-Gaussian Vector Autoregressions. *8^{th} RCEA Time Series Econometrics Workshop*, Brunel University (London). (presenting author).
25–26/01/2024	Fierro, L., and Martinoli, M.. An empirical inquiry into the redistributive nature of energy price shocks. In *4^{th} Italian Workshop of Econometrics and Empirical Economics (IWEEE2024)*: Free University of Bozen-Bolzano. (presenting author).
16–18/12/2023	Martinoli, M., Moneta, A., and Pallante, G.. Calibration and Validation of Macroeconomic Simulation Models by Statistical Causal Search. *In 17^{th} International Conference on Computational and Financial Econometrics* (*CFE*): HTW Berlin (Berlin). (presenting author).
26–28/05/2023	Martinoli, M., Seri, R., and Corsi, F.. Generalized Optimization Algorithms for Complex Models. In *10^{th} International Congress on Industrial and Applied Mathematics (ICIAM2023)*: Waseda University (Tokyo).
03–06/07/2023	Martinoli, M., Moneta, A., and Pallante, G.. Calibration and Validation of Macroeconomic Simulation Models by Statistical Causal Search. *In 29^{th} International Conference Computing in Economics and Finance (CEF2023)*: Université Côte d'Azur (Nice).
26–28/05/2023	Martinoli, M., Di Francesco, D., Moneta, A., and Seri, R.. Data-driven identification and estimation of DSGE models by non-Gaussianity. In *Tenth Italian Congress of Econometrics and Empirical Economics (ICEE2023)*: University of Cagliari. (presenting author).
25–27/09/2022	Martinoli, M., Seri, R., and Corsi, F.. Generalized M-Estimation of Complex Simulation Models. In *workshop on "Model evaluation and causal search: empirical and experimental approaches"*: Sant'Anna School of Advanced Studies and University of Pisa. (presenting author).
21–24/06/2022	Martinoli, M., Moneta, A., and Pallante, G.. Calibration and Validation of Macroeconomic Simulation Models: a General Protocol by Causal Search. In *8^{th} Annual Conference of the International Association for Applied Econometrics (IAAE2022)*: King's College (London).
22–24/06/2022	Martinoli, M., Moneta, A., and Pallante, G.. Calibration and Validation of Macroeconomic Simulation Models: a General Protocol by Causal Search. In *25^{th} Workshop on Economics with Heterogeneous Interacting Agents*: University of Catania. (presenting author)

20–21/01/2022	Corsi, F., Martinoli, M., and Seri, R.. Circumventing Violations of Stochastic Equicontinuity in M-Estimation. In *3rd Italian Workshop of Econometrics and Empirical Economics: "High-dimensional and Mutivariate Econometrics: Theory and Practice" (IWEEE 2022)*: Rimini Campus - University of Bologna. (presenting author).
24–27/08/2021	Martinoli, M., and Seri, R.. Nonparametric Moment-based Estimation of Simulated Models via Regularized Regression. In *Econometric Society European Meeting 2021 (EEA-ESEM Virtual 2021)*: University of Copenhagen (Copenhagen). (presenting author).
19–21/12/2020	Martinoli, M., and Seri, R.. Nonparametric Moment-based Estimation of Simulated Models without Optimization. In *14th International Conference on Computational and Financial Econometrics* (*CFE*): London, UK.
14–16/12/2019	Seri, R., Martinoli, M., Centorrino, S., and Secchi, D.. Model calibration and validation via confidence sets. In *13th International Conference on Computational and Financial Econometrics* (*CFE*): London, UK.

Students supervision

Giosué Cavagna, Master thesis, 2024 (co-supervised with Alessio Moneta).

Refereeing journals

Science Advances, Computational Economics, Economic Modelling, International Journal of Computational Economics and Econometrics.

Grants and awards

11/2020–ongoing	Sant'Anna School of Advanced Studies (Pisa, Italy), Postdoctoral researcher, grant.
02/2021–07/2021	University of Insubria (Varese, Italy), Teaching Assistant Financial Mathematics, grant.
12/2019–11/2020 01/2018–01/2019	University of Insubria (Varese, Italy), Tutor Mathematics and Statistics, grant.
12/2019–11/2020 01/2018–01/2019	University of Insubria (Varese, Italy), Tutor Economics, grant.
10/2017–10/2020	University of Insubria (Varese, Italy), Ph.D. scholarship.

Languages

Italian	Mother tongue.
English	Fluent: written and spoken.
French	Intermediate knowledge; good understanding and reading.

Other

Interests