Curriculum Vitae

Marco Tarsia

Contact

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Current position

15 March 2024 – present
Postdoctoral research fellow, SECS-S/06, Department of Economics, University of Insubria, Varese (Italy). Project: *Multidimensional inequality and local optimization* (Cariplo 2022-1548).
Supervisor: Prof. Elisa Mastrogiacomo.

Past positions

1 January 2023 – 31 December 2023
Postdoctoral research fellow, SECS-S/06, Department of Economics, University of Insubria, Varese. Project: *Misure di rischio vettoriali e set-valued: ottimizzazione di portafoglio e principi di grandi deviazioni*.
Supervisor: Prof. Elisa Mastrogiacomo.

Academic degrees

A.Y. 2018/2019 – A.Y. 2021/2022
Ph.D. in Mathematics (XXXIV Cycle), Department of Science and High Technology, University of Insubria, Como. Ph.D. programme: *Computer Science and the Mathematics of Computation*. Ph.D. thesis: *Subgame-perfect equilibrium strategies in constrained recursive stochastic control problems*.
Tutor: Prof. Daniele Cassani. Advisor: Prof. Elisa Mastrogiacomo.

A.Y. 2015/2016 – A.Y. 2017/2018
M.Sc. in Mathematics (110/110 cum laude), Department of Mathematics, University of Pisa (Italy). Thesis: *Misure convesse di rischio e dinamiche delle loro funzioni di penalità. Teoria assiomatica ed applicazioni*.
Supervisor: Prof. Maurizio Pratelli. Co-supervisor: Prof. Marco Romito.

Visiting positions

28 October 2025 – 27 November 2025
Visiting Researcher, Department of Statistics, Universidad Carlos III de Madrid (UC3M), Leganés (Spain).
Host: Prof. Ignacio Cascos Fernández.

Research activity

1. Mastrogiacomo, E., Rocca, M., & Tarsia, M. (2026). *Multi-objective optimization and its connection to multivariate risk measures*. Journal of Optimization Theory and Applications (to appear)

2. Mastrogiacomo, E., & Tarsia, M. (2025). *Stochastic orderings for set-valued risk measures*. Insurance: Mathematics and Economics (to appear). DOI: 10.1016/j.insmatheco.2025.103180

3. Hitaj, A., Mastrogiacomo, E., Rocca, M., & Tarsia, M. (2025). *Robust Multivariate Quantiles in Ranking Problems*. Group Decision and Negotiation, 1–44. DOI: 10.1007/s10726-025-09954-9

4. Mastrogiacomo, E., & Tarsia, M. (2023). *Subgame-perfect equilibrium strategies for time-inconsistent recursive stochastic control problems*. Journal of Mathematical Analysis and Applications, 527(2), 127425. DOI: 10.1016/j.jmaa.2023.127425

5. Tarsia, M., Mira, A., & Cassani, D. (2021). *On the mathematical axiomatization of approximate Bayesian computation. A robust set for estimating mechanistic network models through optimal transport*. arXiv preprint, arXiv:2105.01962

6. Hitaj, A., Mastrogiacomo, E., Rocca, M., & Tarsia, M. *Multiobjective stochastic problems and their connections with set-valued risk measures*. Submitted to Mathematical Methods of Operations Research (Special Issue on Set Optimization: Theory, Methods, and Applications)

7. Mastrogiacomo, E., & Tarsia, M. *Equilibrium strategies for constrained time-inconsistent control problems*. Submitted to Journal of Differential Equations

Conference and seminar talks

2 July 2025 *Robust multivariate quantiles in ranking problems*, presented at the 16th International Conference on Multiple Objective Programming and Goal Programming (MOPGP 2025), University of Insubria, Varese.

5 June 2024 *Stochastic orderings for set-valued risk measures*, presented at the 6th International Conference on Set Optimization with Applications to Economics, Finance, Statistics and Game Theory (SOFA 2024), University of Milano-Bicocca & University of Insubria, Stresa.

17 December 2023 *Equilibrium strategies in time-inconsistent stochastic control problems with constraints: necessary conditions*, presented at the 17th International Conference on Computational and Financial Econometrics (CFE 2023), HTW Berlin – University of Applied Sciences, held online.

21 September 2023 *Equilibrium strategies in time-inconsistent stochastic control problems with constraints: necessary conditions*, presented at the XLVII Annual Meeting of the Italian Association for Mathematics Applied to Social and Economic Sciences (AMASES 2023), University of Milano-Bicocca, Milan.

28 June 2023 *Subgame-perfect equilibrium strategies for time-inconsistent recursive stochastic control problems*, presented at the 11th General AMAMEF Conference, Ravensberger Spinnerei, Bielefeld (Germany).

9 July 2021 *Subgame-perfect equilibrium strategies in state-constrained recursive stochastic control problems*, presented at the 24th International Congress on Insurance: Mathematics and Economics (IME 2021), held online.

25 June 2021 *Subgame-perfect equilibrium strategies in state-constrained recursive stochastic control problems*, presented at the 10th General AMAMEF Conference, held online.

24 September 2020 *On the mathematical foundation of Approximate Bayesian Computation: a robust set for estimating mechanistic network models*, presented at the COSTNET Final Meeting 2020, held online.

Teaching experience

A.Y. 2025/2026
Instructor of *Advanced Mathematical Methods for Economic Decisions* – 10 h
Ph.D. in Economics (XLI Cycle), Department of Economics, University of Insubria, Varese.

A.Y. 2024/2025
• Teaching Assistant for *Metodi quantitativi Mod. 2 Matematica II H–Z* – 18 h
B.Sc. in Economia, Department of Economics, University of Insubria, Varese.
• Teaching Assistant for *Advanced Mathematical Methods for Economic Decisions* – 10 h
Ph.D. in Economics (XL Cycle), Department of Economics, University of Insubria, Varese.

A.Y. 2023/2024
Teaching Assistant for *Metodi quantitativi Mod. 2 Matematica II H–Z* – 15 h
B.Sc. in Economia, Department of Economics, University of Insubria, Varese.

A.Y. 2022/2023
Teaching Assistant for *Matematica per l'Economia e la Finanza H–Z* – 15 h
B.Sc. in Economia, Department of Economics, University of Insubria, Varese.

A.Y. 2020/2021
• Teaching Tutor for *Probabilità e Statistica* – 12 h
B.Sc. in Matematica, Department of Science and High Technology, University of Insubria, Como.
• Teaching Tutor for *Analisi Matematica 2* – 12 h
B.Sc. in Matematica and Fisica, Department of Science and High Technology, University of Insubria, Como.
• Teaching Tutor for *Analisi Matematica A* – 14 h
B.Sc. in Ingegneria per la Sicurezza del Lavoro e dell'Ambiente, Department of Theoretical and Applied Sciences, University of Insubria, Varese.
• Correction and evaluation of 17 final reports for the course *Metodi Matematici e Statistici per l'Ingegneria*
B.Sc. in Ingegneria Ambientale e per la Sostenibilità degli Ambienti di Lavoro, Department of Theoretical and Applied Sciences, University of Insubria, Varese.

A.Y. 2019/2020
Teaching Tutor for *Probabilità e Statistica* – 12 h
B.Sc. in Matematica, Department of Science and High Technology, University of Insubria, Como.

A.Y. 2018/2019
Teaching Tutor for *Analisi Matematica 2* – 12 h
B.Sc. in Matematica and Fisica, Department of Science and High Technology, University of Insubria, Como.

Research interests

Cone-based multivariate analysis, cone distribution functions, deviation measures, expectiles, inequality indices, mathematical finance, minimax robustness, multi-criteria decision making, multivariate and set-valued risk measures, portfolio management, recursive and time-inconsistent optimization, stochastic differential equations, stochastic multiobjective optimization, stochastic optimal control, stochastic orderings, subgame-perfect equilibria.

Last updated December 2025