

# Curriculum Vitae

**Marco Tarsia**

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## 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 Mastrogiacomio.

## 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 Mastrogiacomio.

## 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 Mastrogiacomio.

**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. Mastrogiacomio, 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. Mastrogiacomio, E., & Tarsia, M. (2026). *Stochastic orderings for set-valued risk measures*. Insurance: Mathematics and Economics, 126, 103180. DOI: 10.1016/j.insmatheco.2025.103180

3. Hitaj, A., Mastrogiacono, 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. Mastrogiacono, 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., Mastrogiacono, 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. Mastrogiacono, 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.

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**Last updated** December 2025