

PERSONAL INFORMATION **Silvia Lorenzini**



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WORK EXPERIENCE

February 2024 – July 2024

Visiting PhD Student

University of Paris I: Panthéon-Sorbonne - Centre d'Économie de la Sorbonne

- Research activities on cooperative games under the supervision of Professor Michel Grabisch

June 2021 – January 2024

Technical Officer - Statistician

A.U.S.L. Umbria 2

- Responsible for analyzing and processing statistical data

April 2021 – May 2021

Test Analyst

Alten Italia S.p.A.

- Training activities regarding the overall management of IT projects in the world of IT consultancy

EDUCATION AND TRAINING

November 2022 – February 2026

PhD in Quantitative Methods for Economics

University of Perugia – Department of Economics

- Thesis title: "Dealing with ambiguity in game theoretic models using belief functions"

December 2018 – February 2021

Master of Science, Mathematics for Economics and Finance

University of Perugia – Department of Mathematics and Computer Science

- Thesis title: "Projected solutions for quasivariational inequalities in Banach Spaces"

October 2015 – November 2018

Bachelor of Science, Mathematics

University of Perugia – Department of Mathematics and Computer Science

- Thesis title: "La cubica sghemba di  $PG(3,q)$ "

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
French	A1	A1	A1	A1	A1

Computer and Programming skills • Microsoft Office™ tools, C++, R and Python

Driving licence • B

#### ADDITIONAL INFORMATION

- Publications
- I. Benedetti, S. Lorenzini, “Projected solutions for generalized quasivariational inequalities without compact constraint multimap”, *Communications in Nonlinear Science and Numerical Simulation*, vol. 129, <https://doi.org/10.1016/j.cnsns.2023.107687>, 2024;
  - S. Lorenzini, D. Petturiti, B. Vantaggi, “Optimal Transport in Dempster-Shafer theory and Choquet-Wasserstein Pseudo-Distances”, *Lecture notes in Networks and Systems*, [https://doi.org/10.1007/978-3-031-73997-2\\_18](https://doi.org/10.1007/978-3-031-73997-2_18), 2025;
  - M. Grabisch, S. Lorenzini, “Bel Coalitional Games”, *Lecture notes in Artificial Intelligence*, [https://doi.org/10.1007/978-3-031-76235-2\\_15](https://doi.org/10.1007/978-3-031-76235-2_15), 2025;
  - S. Lorenzini, D. Petturiti, B. Vantaggi, “Choquet-Wasserstein pseudo-distances via optimal transport under partially specified marginal probabilities”, *Fuzzy Sets and Systems*, vol. 515 <https://doi.org/10.1016/j.fss.2025.109429>, 2025;
  - M. Grabisch, S. Lorenzini, “Bel Coalitional Games with Application to Market Games”, *International Journal of Approximate Reasoning*, <https://doi.org/10.1016/j.ijar.2025.109466>, 2025;
  - A. Cinfrignini, S. Lorenzini, D. Petturiti, B. Vantaggi, “Quantile-constrained Choquet-Wasserstein p-box approximation of arbitrary belief functions”, *IEEE International Conference on Fuzzy Systems (FUZZ)*, <https://ieeexplore.ieee.org/document/11152073>, 2025;
  - A. Cinfrignini, S. Lorenzini, D. Petturiti, “A two-player newsvendor game with competition on demand under ambiguity”, *International Journal of Approximate Reasoning*, vol. 187, <https://doi.org/10.1016/j.ijar.2025.109546>, 2025;
  - S. Lorenzini, D. Petturiti, B. Vantaggi, “Stackelberg-Cournot-Nash equilibria under ambiguity and  $\alpha$ -maxmin preferences”, *Journal of Global Optimization* (submitted);
  - M. Grabisch, S. Lorenzini, “Properties of the core and other solution concepts of Bel coalitional games in the ex-ante scenario”, *Decisions in Economics and Finance*, <https://arxiv.org/abs/2602.04817>, 2026 (preprint);

- Conferences/Workshop
- I. Benedetti, S. Lorenzini, “Projected solutions for quasivariational inequalities in Banach Spaces”. AMASES – Palermo, September 22-24, 2022;
  - S. Lorenzini, D. Petturiti, B. Vantaggi, “Optimal Transport in Dempster-Shafer theory”. DySES - Almería, October 17-20, 2023 (**speaker**);
  - S. Lorenzini, D. Petturiti, B. Vantaggi, “Market Stackelberg-Cournot-Nash equilibria with Dempster-Shafer uncertainty and  $\alpha$ -maxmin preferences”. QFW - Bologna, April 11-13, 2024. (**speaker**);
  - S. Lorenzini, D. Petturiti, B. Vantaggi, “Stackelberg-Cournot-Nash equilibria with Dempster-Shafer uncertainty and  $\alpha$ -maxmin preferences”. Italian Meeting on Probability and Mathematical Statistics - Rome, June 10-14, 2024;
  - S. Lorenzini, D. Petturiti, B. Vantaggi, “Optimal Transport in Dempster-Shafer theory and Choquet-Wasserstein Pseudo-Distances”. IPMU - Lisbon, July 22-26, 2024;
  - S. Lorenzini, D. Petturiti, B. Vantaggi, “Market Stackelberg-Cournot-Nash equilibria with Dempster-Shafer uncertainty and  $\alpha$ -maxmin preferences”. AMASES - Ischia, September 5-7, 2024 (**speaker**);
  - M. Grabisch, S. Lorenzini, “Bel Coalitional Games”. SUM - Palermo, November 27-30, 2024 (**speaker**);
  - A. Cinfrignini, S. Lorenzini, D. Petturiti, B. Vantaggi, “Enforcing budget constraints in lower and upper VaR measures under partially specified probabilities”. QFW - Palermo, April 15-17, 2025 (**speaker**);
  - A. Cinfrignini, S. Lorenzini, D. Petturiti, B. Vantaggi, “Robust reinsurance retention selection based on imprecise optimal transport to match VaR constraints”. Workshop PRIN 2022 “Models for dynamic reasoning under partial knowledge to make interpretable decisions” - Perugia, May 23, 2025

	<p><b>(speaker);</b></p> <ul style="list-style-type: none"> <li>▪ M. Grabisch, S. Lorenzini, "The ex-ante core of Bel Coalitional Games". SING - Maastricht, June 16-18, 2025 <b>(speaker)</b>;</li> <li>▪ M. Grabisch, S. Lorenzini, "Bel Coalitional Games with Application to Market Games ". SAET - Ischia, June 29 – June 5, 2025 <b>(speaker)</b>;</li> <li>▪ A. Cinfrignini, S. Lorenzini, D. Petturiti, B. Vantaggi, "Quantile-constrained Choquet-Wasserstein p-box approximation of arbitrary belief functions ". FUZZ-IEEE – Reims, July 6-9, 2025;</li> <li>▪ A. Cinfrignini, S. Lorenzini, D. Petturiti, "An epsilon-contaminated two-player newsvendor game with competition on demand". AMASES - Firenze, September 11-13, 2025;</li> <li>▪ A. Cinfrignini, S. Lorenzini, D. Petturiti, B. Vantaggi, "Robust reinsurance retention selection based on imprecise optimal transport to match VaR constraints". AMASES - Firenze, September 11-13, 2025 <b>(speaker)</b>;</li> <li>▪ A. Cinfrignini, S. Lorenzini, D. Petturiti, B. Vantaggi, "Quantile-constrained Choquet-Wasserstein p-box approximation of arbitrary belief functions ". BFTA school – Granada, October 19-23, 2025 <b>(speaker)</b>.</li> </ul>
Invited seminar	<ul style="list-style-type: none"> <li>▪ "Bel Coalitional Games with Application to Market Games". Invited Seminar of "Networks and Games" reading group at Paris I – Panthéon-Sorbonne Université - Paris, July 11, 2024</li> </ul>
Research Projects	<ul style="list-style-type: none"> <li>▪ Member of the University of Perugia FRA 2022 project "Argomentazione Astratta, Text Mining e Network Analysis per il Supporto alle Decisioni (RATIONALISTS)", PI Prof. Francesco Santini;</li> </ul>
Scientific Affiliations	<ul style="list-style-type: none"> <li>▪ AMASES 2023, 2024, 2025</li> <li>▪ GNAMPA-INdAM 2024, 2025</li> <li>▪ SAET 2025</li> </ul>
Tutorship activities	<ul style="list-style-type: none"> <li>▪ a.y. 2022-2023 concerning the degree course "MATEMATICA FINANZIARIA" at University of Perugia: 40 hours (<u>teaching support activities</u>);</li> <li>▪ a.y. 2023-2024 concerning the degree course "MATEMATICA GENERALE" at University of Perugia: 45 hours (<u>classroom-based lessons</u>);</li> <li>▪ a.y. 2024-2025 concerning the degree course "MATEMATICA GENERALE" at University of Perugia: 45 hours (<u>classroom-based lessons</u>);</li> <li>▪ a.y. 2025-2026 concerning the recovery of minimum knowledge of mathematics for students of English curriculum at "La Sapienza" University of Rome: 11 months (<u>created interactive exercises on Moodle</u>);</li> <li>▪ a.y. 2025-2026 concerning the monitoring of Digital Education HUB products at "La Sapienza" University of Rome: 7 months (<u>control, updating and coordination activities</u>).</li> </ul>
Summer school	<ul style="list-style-type: none"> <li>▪ SIPTA School, Ghent, 12-16 August 2024;</li> <li>▪ DoCRA honour courses – Session 2: New challenges on long-run risks, Venice, 27 July – 9 August 2025;</li> <li>▪ BFTA School, Granada, 19-23 October 2025.</li> </ul>
Awards	<p>Winner of the best poster award at the 7th School on Belief Functions and their Applications (BFTA 2025) – Granada, 19-23 October 2025: "Quantile-constrained Choquet- Wasserstein p-box approximation of arbitrary belief functions".</p>

