Gianmarco Andreana

Postdoctoral Researcher

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Research Interests

I am Gianmarco Andreana, a postdoctoral researcher of operations research at the Department of Economics of the University of Bergamo. His research interests are related to Transportation Economics, particularly in Aviation: they include topics related to airport pollution and noise, airline competition, mathematical optimization, analytic game-theoretical models and spatial analysis.

Education

2019 - 2023	**University of Bergamo & Pavia**, Bergamo, Italy *Ph.D. in Applied Economics and Management*
2021 - 2022	**Hebrew University of Jerusalem**, Jerusalem, Israel *Visiting Research Fellow*
2017 - 2019	**University of Bergamo**, Bergamo, Italy *M.S.E. Management Engineering*
2013 - 2017	**University of Bergamo**, Bergamo, Italy *B.S.E. Management Engineering*

Professional Experience

03/2024 - Present	**University of Bergamo** *Postdoctoral Researcher* Conducted research on game-theoretical models for airline competition. Developed optimization model for power market analysis. Taught graduate-level courses in Industrial Organization and in Deep Learning and Neural Networks.
09/2024 - Present	**Università Commerciale Luigi Bocconi** *Academic Fellow* Teaching Assistant for Undergraduate Microeconomics. Led weekly classes for 90+ students, graded assessments with prompt and constructive feedback. Held regularly office hours to clarify key concepts, and collaborated with the instructor to refine lectures and integrate real-world case studies.
01/2023 - 01/2024	**Hebrew University of Jerusalem** *Postdoctoral Researcher* Conducted research on game-theoretical models in the airlines industry with focus on emissions and airport slots. Developed frameworks able to support cost-benefit analysis by including competitive aspects. Taught MBA level courses in Quantitative Models.

Publications

1. **Andreana, G.**, Grampella, M., Martini, G., & Scotti, D. (2024). Airport noise assessment and mitigation: A simple and flexible methodology. **Case Studies on Transport Policy**.

2. Adler, N., & **Andreana, G.** (2023). Aiding airlines for the benefit of whom? An applied game-theoretic approach. **European Journal of Operational Research**.

3. **Andreana, G.**, Gualini, A., Martini, G., Porta, F., & Scotti, D. (2021). The disruptive impact of COVID-19 on air transportation: An ITS econometric analysis. **Research in Transportation Economics**

Working Papers

1. Adler, N., **Andreana G.**, de Jong, G. Estimating the Societal Value of Airport Slots. Available at **SSRN 5062524**. (*R&R* at Transportation Research Part B: Methodological)

2. **Andreana G.**, Coniglio S., Halbrügge S., Märtz A., Weibelzahl M. Understanding Flexibility Investments in Liberalized Electricity Markets under Different Risk Attitudes. (*R&R* at European Journal of Operational Research)

3. Adler, N., **Andreana, G.**, de Jong, G. Competing on Emission Charges

Teaching Experience

2025 - Present	**Neural Network and Deep Learning (M.S. 149022-ENG)**, University of Bergamo *Professors:* Dr. Gianmarco Andreana and Prof. Stefano Coniglio Lecturer for a graduate-level course. Led weekly classes, developed course materials and assignments, and held regular office hours throughout the semester.
2024 - Present	**Microeconomics (B.I.E.M. 30065-17)**, Università Commerciale Luigi Bocconi *Professors:* Prof. Laura Bonacorsi and Prof. Martino Banchio Teaching Assistant for an undergraduate course. Led weekly exercise sessions and office hours, and graded assignments and exams.
2024 - Present	**Microeconomics (B.I.E.M. 30065-16)**, Università Commerciale Luigi Bocconi *Professor:* Prof. Laura Bonacorsi Tutor for an undergraduate course. Provided targeted support to students and held office hours throughout the semester. Graded exams and assignments.
2024 - 2025	**Industrial Organization (M.S.E. 37210-1)**, University of Bergamo *Professor:* Dr. Gianmarco Andreana Lecturer for graduate-level course. Taught weekly classes, mangaged discussion groups and designed exams.
2023 - 2024	**Quantitative Models (M.B.A. 55815)**, Hebrew University of Jerusalem *Professor:* Dr. Gianmarco Andreana Lecturer for an M.B.A. course. Taught weekly classes to international students and designed exams
2020 - 2021	**Health Economics and Policy (M.S.E. 148009-M2)**, University of Bergamo *Professor:* Prof. Giuliano Masiero Teaching assistant graduate-level course. Curated course materials and homework assignments, and graded exams.
2020 - 2021	**Market Regulation and Health Care (M.S.E. 37186-ENG)**, University of Bergamo *Professor:* Prof. Giuliano Masiero Teaching assistant graduate-level course. Curated course materials and homework assignments, and graded exams.
2020	**Summer School in Applied Health Econometrics and Health Policy**, University of Bergamo *Professors:* Prof. Gianmaria Martini and Prof. Giuliano Masiero

Tutor for Summer School courses. Prepared course programs and grading rubrics, and coordinated student schedules, software availability, and course materials.

2019 - 2022 | **Economics (B.S.E. 22045)**, University of Bergamo
Professor: Prof. Gianmaria Martini
Teaching assistant undergraduate-level course. Led weekly exercise sections for a class of more than 120 students. Graded final exams.

2019 - 2020 | **Health Economics (B.S.E. 95010)**, University of Bergamo
Professor: Prof. Giuliano Masiero
Tutor undergraduate-level course. Created weekly homework assignments and graded exams.

Honors & Awards

2024 | **Young Independent Researcher Grant - Principal Investigator**, University of Bergamo
Awarded as principal investigator for the project "Modeling International Rivalry and Emissions in Electricity Markets: A Game-Theoretic Framework" in collaboration with the University of Luxembourg.

2023 | **ISTRC Conference Grant Summer 2023**, The Israeli Smart Transport Research Center
Travel grant awarded for the paper "Air Transport Demand in Europe and North America: Estimation and Application in an Aviation Environmental Policy Game".

2022 | **TSL Cross Regional Grants**, INFORMS, Transportation Science and Logistics
Visiting grant awarded for the project "Aiding airlines for the benefit of whom? An applied game-theoretic approach" in collaboration with the Business School of the Hebrew University of Jerusalem.

2022 | **AAS Best Student Presentation Competition**, INFORMS, Aviation Application Section (AAS)
Awarded for the presentation of "Competing on Emissions Charges", presented at the INFORMS Annual Meeting in Indianapolis, USA.

2022 | **Best Paper by a Junior Researcher**, International Transport Economics Association (ITEA)
Awarded for the paper "Aiding airlines for the benefit of whom? An applied game-theoretic approach", presented at the ITEA conference in Toulouse, France.

2022 | **Giovanni Manera Fellowship**, University of Pavia
Fellowship awarded for the project "Aiding airlines for the benefit of whom? An applied game-theoretic approach".

2022 | **Discrete Choice Analysis course tuition scholarship**, Ecole Polytechnique Fédérale de Lausanne (EPFL)
Tuition scholarship awarded for the course.

2021 | **Best Student Paper Award**, Air Transport Research Society (ATRS) Worldwide
Awarded for the paper "A general and simplified methodology to define airport noise influenced zones and measure the related social cost", presented at the ATRS Worldwide conference in Sidney, Australia.

2019 - 2023 | **Ph.D. Scholarship**, University of Bergamo
Three-year fellowship funding doctoral research in applied economics.

Conferences

2025	**Winter Workshop DSE of the University of Bergamo**, Castione della Presolana, Italy Estimating the Societal Value of Airport Slots
2024	**INFORMS Annual Meeting**, Seattle, Washington, USA Estimating the Societal Value of Airport Slots
2024	**25th ISMP International Symposium on Mathematical Programming**, Montréal, Canada Competing on Emissions Charges
2024	**5th SoAR Symposium on Aviation Research**, Luxembourg, Luxembourg Air Transport Demand in Europe and North America: Estimation and Application in a Game-Theoretical Analysis of Slot Values
2023	**INFORMS Annual Meeting**, Phoenix, Arizona, USA Air Transport Demand in Europe and North America: Estimation and Application in an Aviation Environmental Policy Game
2023	**11th hEART Symposium of the European Association for Research in Transportation**, ETH Zurich, Switzerland Competing on Emission Charges
2023	**4th SoAR Symposium on Aviation Research**, Toulouse, France Competing on Emission Charges
2022	**INFORMS Annual Meeting**, Phoenix, Arizona, USA Competing on Emission Charges
2022	**International Transportation Economics Association (ITEA)**, Toulouse, France Aiding airlines for the benefit of whom? An applied game-theoretic approach
2022	**3rd SoAR Symposium on Aviation Research**, Bergamo, Italy Aiding airlines for the benefit of whom? An applied game-theoretic approach
2021	**2021 INFORMS Annual Meeting**, Anaheim, California, USA Aiding airlines for the benefit of whom? An applied game-theoretic approach
2021	**24th ATRS Worldwide**, Sidney, Australia A general and simplified methodology to define airport noise influenced zones and measure the related social cost

Training

2022	**Transportation Economics School**, International Transportation Economics Association (ITEA)
2022	**Discrete Choice Analysis course – Predicting Individual Behavior and Market Demand**, Ecole Polytechnique F´ed´erale de Lausanne (EPFL)
2020	**Bootcamp**, Advanced Risk and Portfolio Management (ARPM)
2018	**Summer School Applied Health Econometrics and Health Policy**, University of Bergamo
2018	**Introductory Level Certificate**, International Project Management Association (IPMA)

Reviewer Activity

Transportation research part A: Policy and Practice, Transportation research part E: Logistics and Transportation Review, Economics of Transportation, Journal of Air Transport Management, IEEE Transactions On Industrial Informatics, Applied Energy, Science Progress, European Journal of Operational Research, Case Studies on Transport Policy, Asian-Pacific Journal of Operational Research.

References

Nicole Adler, Hebrew University of Jerusalem - Business School
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Stefano Coniglio, University of Bergamo - Department of Economics
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