

CURRICULUM VITAE ET STUDIORUM

Andrea Caravaggio

Personal information

Born on 7 October 1990 in Chieti, Italy
Institutional email: andrea.caravaggio@unisi.it
ORCID: [0000-0002-5896-8386](https://orcid.org/0000-0002-5896-8386)
Scopus Author ID: 57196148665
Google Scholar: [Google Scholar profile](#)

University of Siena

Department of Economics and Statistics (DEPS)
Piazza San Francesco, 7/8
53100 Siena, Italy

Research profile

My research lies in the field of mathematical methods applied to economics, with particular emphasis on nonlinear economic dynamics, bifurcation theory, differential games, and agent-based models. It initially focused on theoretical dynamic models for economic and economic-environmental systems and subsequently expanded to problems involving the sustainable management of natural resources, water-tariff regulation, epidemic control, and strategic interaction between public and private actors.

Current position

Associate Professor (SSD: STAT-04/A, ex SECS-S/06)

University of Siena, Department of Economics and Statistics

Previous positions

Assistant Professor (RTD-A)

December 2020 – September 2023

University of Foggia, Department of Economics

Research on mathematical models for the sustainable management of water resources.

Postdoctoral Research Fellow

February 2020 – December 2020

University of Pisa, Department of Economics and Management

Research on mathematical models for the study of economic-environmental dynamics in strategic and spatial settings.

Adjunct Professor

September 2019 – December 2019

University of Pisa, Department of Economics and Management

Co-lecturer for *Principles of Mathematics* in the B.Sc. in Management for Business and Economics and *Mathematics* in the B.Sc. in Economics and Commerce, academic year 2019–2020.

Research Fellow

March 2019 – September 2019

University of Pisa, Department of Economics and Management

Research activity on *Nonlinear Economic Models: Qualitative and Numerical Analysis*.

Education

Ph.D. in Quantitative Methods for Economic Policy

November 2015 – October 2018

University of Macerata

Degree awarded *summa cum laude*; dissertation defended on 24 May 2019. Thesis: *The emergence of nonlinear dynamics in three different economic models*.

Supervisors: Prof. Elisabetta Michetti, University of Macerata; Prof. Mauro Sodini, University of Pisa.

M.Sc. in Economics

October 2013 – October 2015

University of Pisa and Scuola Superiore Sant'Anna, Pisa

Thesis: *Heterogeneous beliefs and asset pricing models: The dynamical systems approach*.

Supervisor: Prof. Mauro Sodini.

Final grade: 110/110 *cum laude*.

B.Sc. in Business Economics

October 2010 – October 2013

University of Pisa

Thesis: *Predatory dumping and anti-dumping policies*.

Supervisor: Prof. Paolo Scapparone.

Final grade: 106/110.

Visiting periods and international mobility

Visiting Researcher

April 2026

London South Bank University, Business School, Business and Economics Insights Research Group, United Kingdom

Visiting research period undertaken at the invitation of Professor Valerio Ficcadenti, Associate Professor in Business Research Methods and Co-Lead of the Business and Economics Insights Research Group. The activity focused on the development of a joint research project on procurement decisions, with particular reference to sustainability, the circular economy, and quantitative modelling.

Visiting Ph.D. Fellow

March 2018 – June 2018

University of Manchester, School of Social Sciences, Department of Economics, United Kingdom

Research period carried out under the supervision of Professor Mario Pezzino.

Erasmus+ international mobility period

January 2015 – June 2015

Durham University, Durham University Business School, United Kingdom

International mobility period undertaken during the second year of the M.Sc. in Economics.

Academic qualifications and roles

- **Italian National Scientific Habilitation** 2023 – present
Italian National Scientific Habilitation for the position of Associate Professor in competition sector 13/D4 – Mathematical Methods for Economics and Actuarial and Financial Sciences.
- **Member of the Ph.D. Faculty Board** 2024 – present
Ph.D. in Economics of the Tuscan Universities, Universities of Siena–Florence–Pisa.
- **AMASES member** 2017 – present
Member of the Italian Association for Mathematics Applied to Economic and Social Sciences (AMASES).
- **Member of the MDEF research group** 2023 – present
Member of the *Dynamic Models in Economics and Finance* (MDEF) research group, a scientific network devoted to the study of dynamic models in economics and finance.

Teaching activity

2026–2027

- **University of Siena:** *Financial Mathematics*, bachelor of science in Economics and Management, 60 hours, taught in English.
- **University of Siena:** *Quantitative Methods for Economic Applications (Statistics)*, master of science in Economics, 40 hours, taught in English.
- **Ph.D. in Economics of the Tuscan Universities:** *Mathematics*, Cycle XLII, Universities of Florence–Pisa–Siena, 10 hours, taught in English.

2025–2026

- **University of Siena:** *Financial Mathematics*, bachelor of science in Economics and Management, 60 hours, taught in English.
- **University of Siena:** *Mathematics Preparatory Course*, 15 hours.
- **Ph.D. in Economics of the Tuscan Universities:** *Mathematics*, Cycle XLI, Universities of Florence–Pisa–Siena, 10 hours, taught in English.

2024–2025

- **University of Siena:** *Financial Mathematics*, bachelor of science in Economics and Management, 60 hours, taught in English.
- **University of Siena:** *Mathematics Preparatory Course*, 15 hours.

2023–2024

- **University of Siena:** *Financial Mathematics*, bachelor of science in Economics and Management, 60 hours, taught in English.
- **University of Siena:** *Computational Finance*, master of science in Finance, 20 hours, taught in English.

2022–2023

- **University of Foggia:** *Dynamic Systems and Economic Applications*, B.Sc. in Economics, 48 hours.
- **University of Foggia:** *Mathematics*, B.Sc. in Business Economics and Economics, 64 hours.
- **University of Macerata:** *Matlab: Instruments, Programming and Economic Applications*, Ph.D. in Quantitative Methods for Economic Policy, ciclo XXXVIII, 10 hours, taught in English.

2021–2022

- **University of Foggia:** *Dynamic Systems and Economic Applications*, B.Sc. in Economics, 48 hours.
- **University of Foggia:** *Mathematics*, B.Sc. in Business Economics, 64 hours.
- **Scuola Superiore Sant'Anna:** Teaching support for *Mathematical Methods for Economics*, master of science in Economics, 40 hours, taught in English.

2020–2021

- **University of Foggia:** *Mathematics*, B.Sc. in Business Economics, 64 hours.

2019–2020

- **University of Pisa:** *Financial Mathematics*, bachelor of science in Management for Business and Economics, 21 hours, taught in English.

- **University of Pisa:** *Principles of Mathematics*, bachelor of science in Management for Business and Economics, 21 hours, taught in English.
- **University of Pisa:** *Mathematics*, B.Sc. in Economics and Commerce, 42 hours.
- **Scuola Superiore Sant'Anna:** Teaching support for *Mathematical Methods for Economics*, master of science in Economics, 80 hours, taught in English.
- **University of Pisa:** Teaching support for *Mathematics*, B.Sc. in Economics and Commerce, 28 hours.

2018–2019

- **Scuola Superiore Sant'Anna:** Teaching support for *Mathematical Methods for Economics*, master of science in Economics, 40 hours, taught in English.

2017–2018

- **University of Pisa:** Teaching support for *Mathematics*, B.Sc. in Economics and Commerce, 28 hours.

Thesis supervision

Ph.D. thesis supervisor

May 2026 – present

Ph.D. in Economics of the Tuscan Universities, Cycle XLI

Supervisor of the Ph.D. thesis of Judith Victoria Sardinas.

Research proposal title: *Algorithmic vs. Human Competition in Strategic Markets: A Microeconomic and Computational Approach*.

B.Sc. thesis supervisor

2021 – present

University of Foggia e University of Siena

Supervisor of 16 B.Sc. theses on mathematics for economics, mathematical finance, optimisation, stochastic processes, dynamic models, and economic and financial applications, including:

- Impact of cryptocurrencies on monetary policies;
- Ornstein–Uhlenbeck processes and application to pairs trading;
- Applications of probability theory to investment strategies;
- Portfolio optimisation;
- Models for option pricing;
- Models for the study of rough volatility;
- Dynamic correlation between financial markets and its impact on portfolio diversification;
- DEA application to private hospitals;
- Fully endogenous algorithm for football-player valuation;
- Comparison of deterministic models for the study of financial dynamics;
- Vasicek model applied to futures pricing;
- Constrained optimisation and applications to consumer theory;
- Integral calculus and applications to firm decisions;
- Nonlinear dynamics starting from a basic OLG model;
- Discrete-time dynamic systems applied to a monopoly problem with differentiated goods and heterogeneous demand;
- Application of constrained optimisation to a marketing problem.

Research projects and funding

Co-Principal Investigator

2025 – present

F-INTERDX 25 Project, University of Siena

Project entitled *Valorization of Solid Waste from Sheep industry for a chemically circular and sustainable approach to metal-catalyzed industrial processes – ValorWasteS*. The scientific contribution concerns the quantitative modelling of decision-making processes and the economic evaluation of sustainable strategies in circular-economy contexts.

Principal Investigator

2023

PRA 2022 Project, University of Foggia

Project entitled *Optimal management of water resource in presence of heterogeneous stakeholders and seasonal effects: a game theoretic approach*. The project focuses on the mathematical modelling of sustainable water-resource management, with particular reference to heterogeneous stakeholders, seasonality, and game-theoretic tools.

Research team member

2021 – 2023

PRA-HE 21 Project, University of Foggia

Project entitled *Climate risk and sustainability: interdisciplinary research on emerging impacts and future perspectives for the financial intermediaries*. The scientific contribution concerned the analysis and modelling of climate and environmental risks, with particular attention to the literature on quantitative methodologies for measuring risk and sustainability.

Institutional service and academic appointments

- **Admissions Examination Committee, Scuola Superiore Sant'Anna** 2020 – present
Confirmed member of the admissions examination committee for undergraduate students at Scuola Superiore Sant'Anna.
- **Ph.D. thesis evaluation committees**
Member of the following evaluation committees:
 - Dr. Daniele Ravasi, Ph.D. in Economics and Quantitative Methods, University of Genoa, 2025;
 - Dr. Patrick Donkor, Ph.D. in Quantitative Methods for Economic Policy, University of Macerata, 2024.
- **Outreach activities** 2026
Thematic lectures (4 hours in total) entitled *Going all-in: investing vs. gambling* within the course *Play the finance! - Level up your financial education* for high-school students, Department of Economics and Statistics, University of Siena.

Organisation of seminars, conferences and scientific activities

- **Special session *Differential Games for Socio-Economic Issues*, AMASES Annual Meeting** 2025
Organisation of the special session *Differential Games for Socio-Economic Issues* nell'ambito dell'AMASES Annual Meeting 2025, in collaborazione con Angela Martiradonna, University of Foggia.
- **Lunch Seminars, Department of Economics and Management, University of Pisa** 2019 – 2020
Member of the organising committee of the departmental seminar series *Lunch Seminars* for Ph.D. students and early-career researchers.

Editorial and reviewing activity

- **Guest Editor, Special Issue *Nonlinear Dynamics and Complex Systems*** 2022 – 2024
Guest editor of the special issue *Nonlinear Dynamics and Complex Systems* published in the journal *Computational Economics*.
- **Peer-review activity for scientific journals**
Referee for the following journals: *Journal of Economic Behavior & Organization*; *Journal of Evolutionary Economics*; *Mathematical Social Sciences*; *Energy Economics*; *Annals of Operations Research*; *Metroeconomica*; *Economic Modelling*; *Socio-Economic Planning Sciences*; *Decisions in Economics and Finance*; *Dynamic Games and Applications*; *Computational Economics*; *Discrete Dynamics in Nature and Society*; *Mathematics*; *Complexity*; *Journal of Difference Equations and Applications*; *Physica A: Statistical Mechanics and its Applications*.

Publications

Journal articles

1. **A. Caravaggio**, M. Catola and S. Leoni (2026). “Nonlinear dynamics of higher education participation under social influence and endogenous returns”. *Mathematical Social Sciences*, DOI: 10.1016/j.mathsocsci.2026.102565.
2. **A. Caravaggio** and S. Leoni (2026). “Spatial Heterogeneity and Budget-Constrained Treatments in Epidemic Dynamics: An Agent-Based Approach”. *Journal of Evolutionary Economics*, DOI:10.1007/s00191-026-00974-5.
3. **A. Caravaggio**, A. Di Liddo and A. Martiradonna (2026). “When cures are costly: Budget-constrained epidemic control and strategic drug pricing”. *Journal of Economic Behavior & Organization*, 245, 107529. DOI: 10.1016/j.jebo.2026.107529.
4. **A. Caravaggio**, A. Di Liddo and A. Martiradonna (2025). “Cooperation against invasions: multi-agent control of alien species in connected landscapes”. *Annals of Operations Research*. DOI: 10.1007/s10479-025-06759-6.
5. **A. Caravaggio**, G. Iannucci, M. Sodini and F. Tramontana (2025). “Introduction to the Special Issue on Nonlinear Dynamics and Complex Systems”. *Computational Economics*, 65, 579–583. DOI: 10.1007/s10614-025-10897-1.
6. G. Biggi and **A. Caravaggio** (2025). “Striving for balance: past choices and future expectations in a critical resource competition dynamic model”. *Journal of Economic Interaction and Coordination*, 20, 701–723. DOI: 10.1007/s11403-024-00429-9.
7. **A. Caravaggio**, L. De Cesare and A. Di Liddo (2024). “Socio-economic determinants of pricing water for domestic use: A comparison of blocks and linear tariffs”. *Socio-Economic Planning Sciences*, 93, 101876. DOI: 10.1016/j.seps.2024.101876.
8. **A. Caravaggio**, L. De Cesare and A. Di Liddo (2024). “Optimal water tariffs for domestic, agricultural and industrial use”. *Annals of Operations Research*, 337(3), 1135–1165. DOI: 10.1007/s10479-024-05822-y.
9. **A. Caravaggio**, L. De Cesare and A. Di Liddo (2023). “A differential game for optimal water price management”. *Games*, 14(2). DOI: 10.3390/g14020033.
10. **A. Caravaggio** and M. Sodini (2023). “Environmental sustainability, nonlinear dynamics and chaos reloaded: 0 matters!”. *Communications in Nonlinear Science and Numerical Simulation*, 117. DOI: 10.1016/j.cnsns.2022.106908.

11. **A. Caravaggio**, L. Gori and M. Sodini (2022). “Endogenous preferences in a dynamic Cournot duopoly”. *Chaos, Solitons & Fractals*, 161. DOI: 10.1016/j.chaos.2022.112303.
12. **A. Caravaggio**, L. Gori and M. Sodini (2022). “Monopolistic Dynamics with Endogenous Product Differentiation”. *Mathematics*, 10(3). DOI: 10.3390/math10030302.
13. **A. Caravaggio** and M. Sodini (2022). “Local environmental quality and heterogeneity in an OLG agent-based model with spatial externalities”. *Journal of Economic Interaction and Coordination*, 17(1), 287–317. DOI: 10.1007/s11403-022-00346-9.
14. **A. Caravaggio**, L. Cerboni Baiardi and M. Sodini (2021). “A note on symmetry breaking in a non linear marketing model”. *Decisions in Economics and Finance*, 44(2), 507–531. DOI: 10.1007/s10203-021-00339-6.
15. **A. Caravaggio**, L. Gori and M. Sodini (2021). “Population dynamics and economic development”. *Discrete & Continuous Dynamical Systems-B*, 26(11), 5827–5848. DOI: 10.3934/dcdsb.2021178.
16. **A. Caravaggio** and M. Sodini (2020). “I love shopping.....but what am I going to buy? Social interaction and consumption choices”. *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 30(9). DOI: 10.1063/5.0004988.
17. **A. Caravaggio** and M. Sodini (2020). “Monopoly with differentiated final goods and heterogeneous markets”. *Chaos, Solitons & Fractals*, 130, 109429. DOI: 10.1016/j.chaos.2019.109429.
18. **A. Caravaggio** and M. Sodini (2018). “Heterogeneous players in a Cournot model with differentiated products”. *Decisions in Economics and Finance*, 40(2), 277–295. DOI: 10.1007/s10203-018-0228-x.
19. **A. Caravaggio** and M. Sodini (2018). “Nonlinear dynamics in coevolution of economic and environmental systems”. *Frontiers in Applied Mathematics and Statistics*. DOI: 10.3389/fams.2018.00026.
20. **A. Caravaggio** and M. Sodini (2018). “Multiple attractors and dynamics in an OLG model with productive environment”. *Communications in Nonlinear Science and Numerical Simulation*, 58, 167–184. DOI: 10.1016/j.cnsns.2017.09.019.

Book chapters

1. **A. Caravaggio**, L. De Cesare and A. Di Liddo (2025). “The Methodologies of Climate and Environmental Risk Analysis and Measurement”, in *Climate Risk and Sustainability: Emerging Impacts and Future Perspectives for the Financial Intermediaries*, pp. 19–47, Springer Nature.

Papers under review, preprints and work in progress

Papers under review at scientific journals

1. **A. Caravaggio**, L. De Cesare and A. Martiradonna. “Storage as a Dynamic Outside Option: A Repeated Stackelberg Game with Endogenous Inventory Dynamics”. Under review at *Dynamic Games and Applications*.

Working papers and preprints

1. **A. Caravaggio**, M. Catola and S. Leoni (2026). “Nonlinear dynamics of educational choices under social influence and endogenous returns”. arXiv preprint arXiv:2604.03102.
2. **A. Caravaggio** and S. Leoni (2025). “An Agent-Based approach to high-cost drugs for infectious diseases”. Department of Economics and Management – University of Florence Working Paper, No.

20/2025, ISSN 2039-1854. Subsequent version accepted for publication in *Journal of Evolutionary Economics*.

3. **A. Caravaggio** and M. Sodini (2022). “Environmental sustainability, nonlinear dynamics and chaos reloaded: 0 matters!”. Department of Economics and Management – University of Pisa Discussion Paper, No. 287, ISSN 2039-1854.
4. **A. Caravaggio** and M. Sodini (2020). “Local Environmental Quality and Heterogeneity in a OLG Agent-Based Model with Network Externalities”. Department of Economics and Management – University of Pisa Discussion Paper, No. 257, ISSN 2039-1854.

Work in progress

1. **A. Caravaggio** and P. Guarnieri. “Local Stochastic Games for Tactical Decision-Making in Football”.
2. **A. Caravaggio** and A. Carrozzo Magli. “Dynamic Territorial Contest with War Fatigue and State-Dependent Military Effectiveness”.
3. **A. Caravaggio**, J. Li and V. Ficcadenti. “From Firm Strategy to Career Mobility: A Dynamic Network Model of CEOs and Board Directors”.
4. **A. Caravaggio** and V. Ficcadenti. “Optimal Control of Circular Production Systems with Endogenous Procurement and Environmental Externalities”.
5. **A. Caravaggio**. “Endogenous pricing of the groundwater resource and effect on heterogeneous agricultural firms”.
6. **A. Caravaggio** and M. Pezzino. “The influence of social norms and the effects of gender policies on the labour force participation of women”.

Ph.D. dissertation

1. **A. Caravaggio** (2019). *The emergence of nonlinear dynamics in three different economic models*. Ph.D. dissertation, Ph.D. in Quantitative Methods for Economic Policy, University of Macerata.

Conferences, seminars and invited talks

- **31st International Conference on Difference Equations and Applications (ICDEA 2026)**, Milano, 2026.
Talk title: “Nonlinear dynamics of higher education participation under social influence and endogenous returns”.
- **32th Conference on Computing in Economics and Finance (CEF26)**, Venezia, 2026.
Talk title: “Spatial Heterogeneity and Budget-Constrained Treatments in Epidemic Dynamics: An Agent-Based Approach”.
- **21st European Meeting on Game Theory (SING21)**, Napoli, 2026.
Talk title: “On the Role of Storage in Strategic Pricing”.
- **3rd Workshop of Tuscan Theorists**, Pisa, 2026.
Talk title: “On the Role of Storage in Strategic Pricing”.
- **Business and Economics Insights Research Group Meetings**, London South Bank University, Business School, Londra, 2026.
Talk title: “Business, Pricing and Public Policy in Epidemic Control: Integrating Optimal Control and Agent-Based Dynamics” (Invited Speaker).

- **Health, Environment, Development and Growth Economics: New Perspective and Challenges (HEDGE 2026)**, Pisa, 2026.
Talk title: “Spatial Heterogeneity and Budget-Constrained Treatments in Epidemic Dynamics: An Agent-Based Approach”.
- **4th ISDG Workshop on Dynamic Games and Applications**, Paris, 2025.
Talk title: “When Cures Are Costly: Budget-Constrained Epidemic Control and Strategic Drug Pricing”.
- **AMASES Annual Meeting**, Florence, 2025.
Talk title: “Pricing High-Cost Drugs for Chronic and Infectious Diseases: A Differential Game Approach”.
- **Workshop on Evolutionary dynamics, game theory and uncertainty in economic modelling: theory and applications**, University of Milano-Bicocca, Milan, 2025.
Talk title: “The price of curing. A differential Stackelberg game for strategic interaction between drug producers and public health authorities” (Invited Speaker).
- **NonLinear Economic Dynamics Conference (NED 2025)**, Naples, 2025.
Talk title: “Different shades of bargaining in water use: A static-dynamic analysis”.
- **DSABNS 2025 Conference**, Naples, 2025.
Talk title: “Diffusion and pricing of innovative drugs to treat infectious diseases: a differential game”.
- **Dynamic Models in Economics and Finance (MDEF 2024)**, Urbino, 2024.
Talk title: “A Dynamic Leader-Follower and Bargaining Model for the Diffusion of an Innovative Drug to treat an Infectious Disease”.
- **AMASES Annual Meeting**, Ischia, 2024.
Talk title: “Socio-economic determinants of pricing water for domestic use: A comparison of blocks and linear tariffs”.
- **Health, Environment, Development and Growth Economics: New Perspective and Challenges (HEDGE 2024)**, Pisa, 2024.
Talk title: “A Dynamic Leader-Follower and Bargaining Model for the Diffusion of an Innovative Drug to treat an Infectious Disease”.
- **19th European Meeting on Game Theory (SING19)**, Besançon, 2024.
Talk title: “Socio-economic determinants of pricing water for domestic use: A comparison of blocks and linear tariffs”.
- **29th International Conference on Difference Equations and Applications (ICDEA 2024)**, Paris, 2024.
Talk title: “Postcards from the edge: Technological competition and market dynamics”.
- **AMASES Annual Meeting**, Milan, 2023.
Talk title: “A Differential Game for Optimal Water Price Management”.
- **NonLinear Economic Dynamics Conference (NED 2023)**, Kristiansand, 2023.
Talk title: “Optimal management of water resources for domestic and industrial use”.
- **Proceedings On Difference Equations (PODE 2023)**, Milan, 2023.
Talk title: “Endogenous preferences in a dynamic Cournot duopoly”.
- **DISEI Workshop on climate change and ecological behaviour: driving the transition**, Florence, 2022.
Talk title: “Optimal management of water resources for domestic and industrial use”.
- **AMASES Annual Meeting**, Palermo, 2022.
Talk title: “Environmental sustainability, nonlinear dynamics and chaos reloaded: 0 matters!”.
- **Dynamic Models in Economics and Finance (MDEF 2022)**, Urbino, 2022.

Talk title: “Monopolistic Dynamics with Endogenous Product Differentiation”.

- **27th International Conference on Difference Equations and Applications (ICDEA 2022)**, online, 2022.

Talk title: “Environmental sustainability, nonlinear dynamics and chaos reloaded: 0 matters!”.

- **17th European Meeting on Game Theory (SING17)**, online, 2022.

Talk title: “Water pricing and its allocation among heterogeneous end users in high and low seasons: a game theoretic approach”.

- **10th International Conference on Mathematical and Statistical Methods for Actuarial Sciences and Finance (MAF2022)**, Salerno, online, 2022.

Talk title: “Strategic behaviours in water management along high and low seasons”.

- **DISEI-Workshop on Heterogeneity, Evolution and Networks in Economics**, Florence, 2021.

Talk title: “Local environmental quality and heterogeneity in an OLG Agent-Based model with network externalities”.

- **AMASES Annual Meeting**, online, 2021.

Talk title: “Local environmental quality and heterogeneity in an OLG Agent-Based model with network externalities”.

- **NonLinear Economic Dynamics Conference (NED 2021)**, Milan, 2021.

Talk title: “Local environmental quality and heterogeneity in an OLG Agent-Based model with network externalities”.

- **AMASES Annual Meeting**, Perugia, 2019.

Talk title: “Monopoly with differentiated final goods and heterogeneous markets”.

- **NonLinear Economic Dynamics Conference (NED 2019)**, Kyiv, 2019.

Talk title: “Competition and cooperation between public and private sectors in environmental maintenance”.

- **Institutions, Markets and Policy Issues**, Pisa, 2019.

Talk title: “Monopoly with differentiated final goods and heterogeneous markets”.

- **AMASES Annual Meeting**, Naples, 2018.

Talk title: “The influence of social norms and the effects of gender policies on the labour force participation of women”.

- **Dynamic Models in Economics and Finance (MDEF 2018)**, Urbino, 2018.

Talk title: “Monopoly with differentiated final goods and heterogeneous markets”.

- **Cycle of seminars in Economics and Finance**, University of Pisa, Pisa, 2018.

Talk title: “Multiple attractors and dynamics in an OLG model with productive environment”.

- **Annual seminar day**, University of Macerata, Macerata, 2017.

Talk title: “Heterogeneous players in a Cournot model with differentiated products”.

- **AMASES Annual Meeting**, Cagliari, 2017.

Talk title: “Heterogeneous players in a Cournot model with differentiated products”.

- **NonLinear Economic Dynamics Conference (NED 2017)**, Pisa, 2017.

Talk title: “Multiple attractors and dynamics in an OLG model with productive environment”.

- **Proceedings On Difference Equations (PODE 2017)**, Urbino, 2017.

Talk title: “Multiple attractors and dynamics in an OLG model with productive environment”.

- **Annual seminar day**, University of Macerata, Macerata, 2016.

Talk title: “Nonlinear Dynamics in an Environmental Model”.

Summer schools and training courses

- **Summer School of Mathematics for Economic and Social Sciences**, Ennio De Giorgi Mathematics Research Center – Scuola Normale Superiore, Pisa, 16–20 September 2019. Participation with a fellowship.
- **North West Social Science Doctoral Training Partnership (NWSSDTP) Workshop**, University of Liverpool, Liverpool, 10–11 May 2018.
- **Summer School in Economics and Finance – Canazei 2017**, University of Verona, Canazei, 17–21 July 2017.
- **2nd SOCRATES Workshop on Intuition, Reasoning, and Prosocial Behavior**, University of Pisa, Department of Economics and Management, Pisa, 19–20 February 2017.
- **11th SICC International Tutorial Workshop Topics in Nonlinear Dynamics, Paradigmatic Models in Social Sciences**, Politecnico di Milan, Department of Electronics, Information and Bioengineering, Milan, 26–28 September 2016.
- **Summer School of Mathematics for Economic and Social Sciences**, Ennio De Giorgi Mathematics Research Center – Scuola Normale Superiore, Pisa, 12–16 September 2016. Participation with a fellowship.
- **Tutorial Workshop on Recent Advances in Quantile and M-Quantile Regression**, University of Pisa, Department of Economics and Management, Pisa, 14–15 July 2016.

IT and language skills

- **IT skills**
Advanced knowledge of Maple, R, MATLAB and Python; good knowledge of Wolfram Mathematica, IDMC, E&F Chaos and Stata; basic knowledge of EViews, gretl and SPSS.
- **Language skills**
Italian: native speaker; English: fluent.

Siena, October 7, 2026

Andrea Caravaggio

Pursuant to Articles 46 and 47 of Italian Presidential Decree No. 445/2000, I declare that the information contained in this curriculum vitae is true and accurate.

I authorise the processing of the personal data contained in this curriculum vitae pursuant to EU Regulation 2016/679 and Italian Legislative Decree No. 196/2003, as amended by Legislative Decree No. 101/2018.