

Filippo Fabiani, Ph.D.

CURRENT POSITION & CONTACT

Associate Professor
DYSCO Research Unit
IMT School for Advanced Studies Lucca
Piazza S. Francesco 19, 55100, Lucca, IT

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RESEARCH INDICATORS

	Google Scholar	Scopus
Citations	784	514
h-index	14	11

RESEARCH INTERESTS

Learning-based methods for control and optimization, game theory, robust control

EDUCATION

Ph.D. (*cum laude*), Automatic Control – University of Pisa — May 2019

- Thesis: *Potential game theoretic control of complex multi-agent systems*
- Supervisor: Prof. A. Caiti, Prof. S. Grammatico (co-supervisor)

M.Sc. (*full marks*), Automatic Control Engineering – University of Pisa — Apr. 2015

- Thesis: *Fault detection and isolation on thrusters of an over-actuated marine vehicle*
- Supervisor: Prof. A. Caiti

B.Sc., Bioengineering - University of Pisa — Dec. 2012

- Thesis: *A software system for testing parameter identifiability of biomedical models*
- Supervisor: Prof. A. Landi

RESEARCH EXPERIENCE

Tenure-track Assistant Professor (RTD-B) — Nov. 2023 – Apr. 2026
DYSCO Research Unit
IMT School for Advanced Studies Lucca (IT)

Assistant Professor (RTD-A) — Sept. 2022 – Oct. 2023
DYSCO Research Unit
IMT School for Advanced Studies Lucca (IT)

Post-doctoral Research Assistant — Nov. 2019 – Aug. 2022
Department of Engineering Science – Control Group
University of Oxford (UK)
Supervisor: Prof. P. J. Goulart

Post-doctoral Research Fellow — Nov. 2018 – Oct. 2019
Delft Center for Systems and Control
Delft University of Technology (NL)
Supervisor: Prof. S. Grammatico

Ph.D. Candidate Nov. 2015 – Oct. 2018
Department of Information Engineering
University of Pisa (IT)
Supervisor: Prof. A. Caiti, Prof. S. Grammatico (co-supervisor)

Research Fellow Jun. 2015 – Oct. 2015
Research Center "E. Piaggio"
University of Pisa (IT)
Supervisor: Prof. A. Caiti

Research Stays

KTH Royal Institute of Technology May – Jun. 2026
Department of Intelligent Systems

Beijing Institute of Technology Apr. 2026
School of Automation

Harbin Institute of Technology, CH Jan., Sept. 2024
School of Astronautics

Delft University of Technology, NL Nov. 2017 – Jun. 2018
Delft Center for Systems and Control
Supervisor: Prof. S. Grammatico, Prof. B. De Schutter
Topic: Mixed-integer game theoretic control, potential game theory, automated driving

University of Udine, IT May 2017
Department of Mathematics and Informatics
Supervisor: Prof. F. Blanchini
Topic: Set-theoretic and constrained control, decentralized optimization and control

Teaching Activity

Instructor (PhD course) Fall 2027
Course: Algorithmic Game Theory
Class hours: 12
IMT School for Advanced Studies Lucca

Instructor Spring 2026
Course: Optimization and Game Theory
Class hours: 12
School of Automation, Beijing Institute of Technology

Instructor Spring 2024 – Today
Course: Optimization and Machine Learning for Dynamical Systems
Class hours: 60
University of Florence

Instructor Jan. 2024
Course: Numerical Optimization for Control
Class hours: 10
Harbin Institute of Technology

Instructor Dec. 2022
Course: An overview on polytopic systems
Class hours: 6
Department of Information Engineering, University of Pisa

Instructor Apr. 2022
Course: Game Theory - An Introductory Taste (virtual)
Class hours: 6
Harbin Institute of Technology

Teaching assistant Trinity Term 2022
Course: LEGO football coursework
Class hours: 16
Department of Engineering Science, University of Oxford

Teaching assistant (Ph.D. course) Hilary Term 2022
Course: Introduction to Modern Control
Class hours: 30
CDT AIMS[1] – Department of Engineering Science, University of Oxford

College tutor – Christ Church Michaelmas Term 2021
Course: A1 (Mathematics) + A2 (Electronic and Information Engineering)
Class hours: 30
Department of Engineering Science, University of Oxford

College tutor – Hertford Michaelmas Term 2021
Course: A2 (Electronic and Information Engineering)
Class hours: 10
Department of Engineering Science, University of Oxford

Teaching assistant Trinity Term 2021
Course: LEGO football coursework
Class hours: 30
Department of Engineering Science, University of Oxford

Teaching assistant (Ph.D. course) Hilary Term 2021
Course: Introduction to Modern Control
Class hours: 30
CDT AIMS – Department of Engineering Science, University of Oxford

Teaching assistant (Ph.D. course) Hilary Term 2020
Course: Introduction to Modern Control
Class hours: 30
CDT AIMS – Department of Engineering Science, University of Oxford

Teaching assistant Winter 2019
Course: Model Predictive Control – 4 ECTS
Class hours: 18
3mE – Delft Center for Systems and Control, Delft University of Technology

Teaching assistant Fall 2017
Course: Automatic Control – 6 CFU
Class hours: 20
Department of Civil and Industrial Engineering, University of Pisa

Teaching assistant Fall 2016 – Spring 2017
Course: Automatic Control – 9 CFU
Class hours: 30
Department of Civil and Industrial Engineering, University of Pisa

Teaching assistant Fall 2016
Course: Systems and Control Theory – 12 CFU
Class hours: 10
Department of Information Engineering, University of Pisa

Teaching assistant Spring 2016
Course: Systems and Control Theory – 12 CFU
Class hours: 20
Department of Information Engineering, University of Pisa

[1] Centre for Doctoral Training in Autonomous Intelligent Machines & Systems

Ph.D. student Supervision

- E. Dimou, XLI Ph.D. Cycle (A.A. 2025-2028) –IMT School for Advanced Studies Lucca, Italy. Ph.D. in Systems Science - Learning and Control track (co-supervised with Prof. A. Bemporad)
- Y. Zhang, PhD student in Control Engineering, School of Automation, Beijing Institute of Technology, 2024 (co-supervised with Prof. Chengpu Yu)
- S. Shahi, XXXIX Ph.D. Cycle (A.A. 2023-2026) –IMT School for Advanced Studies Lucca, Italy. Ph.D. in Systems Science - Learning and Control track (co-supervised with Prof. M. Zanon)

M.Sc. student Supervision

- "From value function approximation to optimal control design via input convex neural networks," IMT Honors Program. Student: M. Agazzi, MSc in Control Engineering at the Politecnico di Milano. Academic year: 2025/2026.
- "Multi-Agent Deep Reinforcement Learning for Automated Highway Driving," M.Sc. program in Mechanical Engineering – Systems and Control, Delft University of Technology. Student: Lou Bakker. Academic year: 2018/2019.
- "Rilevamento di guasti sugli attuatori di un veicolo marino sovra-attuato tramite Analisi delle Componenti Principali," M.Sc. program in Automatic Control, University of Pisa. Student: Simone Della Tommasina. Academic year: 2015/2016.

Participation in Research Projects

Local Energy Oxfordshire (LEO) Nov. 2019 – Aug. 2022
Website: `project-leo.co.uk`
Total budget: £40m
Financial support: UK Research and Innovation (UKRI) + private funding
Partners: Scottish and Southern Electricity Networks, Oxford City Council, Oxfordshire County Council, Low Carbon Hub, University of Oxford, Oxford Brookes University, Origami, Piclo, Nuvve, EDF
Role: Principal researcher in control and optimization – Workpackage 3

Intelligent Autonomous Vehicles Nov. 2018 – Oct. 2019
Website: `intelligent-vehicles.org/research/projects`
Total budget: €60k
Financial support: Delft University of Technology – 3mE Cohesion project
Role: Principal researcher in control and optimization

Institutional Activity

Participation in evaluation committees

- External reviewer of the PhD thesis of Eng. Simone Tolomei at the University of Pisa. Thesis: "Learning contact-rich loco-manipulation". Advisor(s): Prof. Franco Angelini, Manolo Garabini, Paolo Salaris Jun. 2026
- Member of the PhD thesis examination committee for Eng. Dieter Teichrib at the Technical University of Dortmund. Thesis: "Neural Networks for Control: Design and Analysis". Advisor: Prof. Moritz Schulze Darup Apr. 2026
- Member of the evaluation panel for a Postdoc position in "Sustainable data-centric control" at UCLouvain. Advisor: Prof. Gianluca Bianchin Sept. 2025
- Member of the selection committee for the admission to the PhD program in Systems Science at IMT Lucca 2023 – Today

Administrative activity at IMT Lucca

- Scientific Board member – PhD Program in Systems Science 2024 – Today
- Member of the Space Commission and IT Services 2022 – Today

Research Grants

Digital Futures 2026 Summer Early Career programme 2026
Website: SEC programme
Total budget: €6k
Financial support: Digital Futures
Program: Mobility grant to spend a period as Visiting Scholar at KTH

Erasmus+ Traineeship Grant 2018-2019
Website: Erasmus+
Total budget: €1k
Financial support: European Community/TU Delft
Program: Mobility grant to attend workshops at the Politecnico di Torino

Ph.D. Scholarship 2015-2018
Website: Ph.D. @ University of Pisa
Total budget: €42k
Financial support: Italian Ministry for the Instruction, University and Research (MIUR)
Program: Ph.D. course in Information Engineering – Automatic Control

Technological transfer activity

- "Progetto e sviluppo di software di isolamento e accomodamento guasti per il veicolo subacqueo autonomo sovra-attuato "V-Fides"", research contract funded by Research Center "E. Piaggio", University of Pisa, €4.5k, 2015.

Participations to Scientific Events

IEEE Conference on Decision and Control Dec. 2026
Website: CDC'26 (Honolulu, US)
Paper(s):" Stability Certificates for Receding Horizon Games", "Finite-Sample Guarantees for Data-Driven Forward-Backward Operator Methods", " On the Role of Stubbornness in Nash Equilibrium Problems"

IEEE Conference on Decision and Control Dec. 2025
Website: CDC'25 (Rio de Janeiro, BR)
Paper(s):"Actively learning equilibria in Nash games with misleading information"

IEEE Conference on Decision and Control Dec. 2024
Website: CDC'24 (Milan, IT)
Paper(s):"Generalized Nash equilibrium problems under partial-decision information with biased agents", "Distributed equilibrium seeking in aggregative games: linear convergence under singular perturbations lens"

Learning for Dynamics and Control Jul. 2024
Website: L4DC'24 (Oxford, UK)
Paper(s):"Probably approximately correct stability of allocations in uncertain coalitional games with private sampling"

IEEE Conference on Decision and Control Dec. 2023
Website: CDC'23 (Singapore, SGP)
Paper(s): "Counter-example guided inductive synthesis of control Lyapunov functions for uncertain systems"

IEEE Conference on Decision and Control Dec. 2022
Website: CDC'22 (Cancún, MEX)
Paper(s): "Proximal-like algorithms for equilibrium seeking in mixed-integer Nash equilibrium problems"

Symposium on Mathematical Theory of Networks and Systems Sept. 2022
Website: MTNS'22 (Bayreuth, DE)
Paper(s): "On the exact neural approximations of MPC laws"

European Control Conference July 2022
Website: ECC'22 (London, UK)
Paper(s): "Learning equilibria with personalized incentives in a class of nonmonotone games"

IEEE Conference on Decision and Control Dec. 2021
Website: CDC'21 (virtual)
Paper(s): "Probabilistic stabilizability certificates for a class of black-box linear systems", "Pursuing robust decision in uncertain traffic equilibrium problems"

IEEE American Control Conference May 2021
Website: ACC'21 (virtual)
Paper(s): "The optimal transport paradigm enables data compression in data-driven robust control"

IEEE Conference on Decision and Control Dec. 2020
Website: CDC'20 (virtual)
Paper(s): "On the robustness of equilibria in generalized aggregative games"

IEEE Mediterranean Control Conference Sept. 2020
Website: MED'20 (virtual)
Paper(s): "A forward-backward algorithm for decomposable semi-definite programs"

IEEE Conference on Decision and Control Dec. 2019
Website: CDC'19 (Nice, FRA)
Paper(s): "Charging plug-in electric vehicles as a mixed-integer aggregative game"

European Control Conference June 2019
Website: ECC'19 (Naples, ITA)
Paper(s): "Nash equilibrium seeking in potential games with double-integrator agents"

IEEE Conference on Decision and Control Dec. 2018
Website: CDC'18 (Miami, USA)
Paper(s): "On merging constraints and optimal control-Lyapunov functions", "A Mixed-Logical-Dynamical model for Automated Driving on highways"

MTS/IEEE Oceans Sept. 2016
Website: Oceans'16 (Monterey, USA)
Paper(s): "A passivity-based framework for coordinated distributed control of AUV teams: Guaranteeing stability in presence of range communication constraints"

IFAC Conference on Control Applications in Maritime Systems Sept. 2016
Website: CAMS'16 (Trondheim, NOR)
Paper(s): "A distributed, passivity-based control of autonomous mobile sensors in an underwater acoustic network"

IEEE Conference on Control and Fault-Tolerant Systems Sept. 2016
Website: SysTol'16 (Barcelona, SPA)
Paper(s): "A NLPCA hybrid approach for AUV thrusters fault detection and isolation"

Invited Talks & Seminars

Control meets AI – Keynote speaker July 2027
Title: To be announced

Workshop at IRIM3D 2026 – Keynote speaker Oct. 2026
"Interdisciplinary Perspectives on Intelligent Machines"
Title: "When a robot trust what it has learned"

KTH Royal Institute of Technology May 2026
"Game On!" Seminar Series
Title: "Data-based certificates in stochastic Nash games"

Technical University of Dortmund Mar. 2026
Dept. of Mechanical Engineering
Title: "Rigorous machine learning methods for control and decision-making"

University of Pisa July 2025
Dept. of Information Engineering
Title: "Neural network paradigms for identification and optimal control"

University of Seville Nov. 2024
Dept. of Systems Engineering and Automation
Title: "Rigorous machine learning methods for control and decision-making"

Northwestern Polytechnical University Sept. 2024
School of Marine Science and Technology
Title: "Game-theoretic control of complex multi-agent systems"

University of Bologna May 2024
Dept. of Electrical, Electronic & Information Engineering
Title: "Neural network paradigms for identification and control"

Beijing Institute of Technology Jan., Sept. 2024
School of Automation
Title: "Rigorous machine learning methods for control and decision-making"

Harbin Institute of Technology Oct. 2020
Overseas Postdoctoral Series (virtual)
Title: "Convergence in uncertain linear systems"

University of Pisa Feb. 2016
Research Center "E. Piaggio"
Title: "Positive invariance and fault tolerant controls"

Academic Community Service

- IEEE CDC 2026 Best Student Paper Award committee member
- SIDRA PhD Best Thesis Award 2026

Invited session

- Organizer of the session on "Recent advancements in data-driven decision-making and control" – American Control Conference (ACC), 2024.
- Organizer of the session on "Risk Assessment in Learning-Based Control and Decision-Making" – 61st IEEE Annual Conference on Decision and Control (CDC), 2022.
- Organizer of the sessions on "Learning with Guarantees in Control and Decision-Making I/II" – 60th IEEE Annual Conference on Decision and Control (CDC), 2021.

Editorial activity

- Associate Editor – IEEE Control Systems Letters 2025 – Today
- Guest Editor – Special issue on "Recent Advances in Optimization and Games for the Control of Multiple Autonomous Vehicles", *IET Control Theory and Applications*, 2023.

- Guest Editor – Special issue on "Game Theory and Its Application in Energy Management and Power Systems", *Games* (ISSN 2073-4336), 2022.
- Guest Editor – Special issue on "Symmetry of Intelligent Systems: Learning Based Control and Filtering", *Symmetry* (ISSN 2073–8994), 2022.
- International Program Committee member – IFAC Conference on Nonlinear Model Predictive Control (NMPC) 2024.
- PC member – Learning for Dynamics & Control Conference (L4DC) 2024 – Today
- CEB member – European Control Conference (ECC) 2022 – 2025

Reviewer

- Automatica
- IEEE Transactions on Automatic Control
- IEEE Transactions on Control of Network Systems
- IEEE Control Systems Letters

Awards

- IEEE Control Systems Letters Outstanding Reviewer 2022

Preprints

10. Y. Zhang, C. Yu, and **F. Fabiani**, "Identification of switched ARMAX systems via log-sum-exp smoothing with adaptive annealing," submitted to *Automatica*, 2026.
9. S. Shahi, J. Frey, **F. Fabiani**, M. Diehl, and M. Zanon, "A heuristic for optimal coordination of autonomous vehicles: Real-time algorithms," submitted to the *IEEE Transactions on Intelligent Transportation Systems*, 2026. (Available at `arxiv.org/abs/2610.37632`)
8. S. Shahi, **F. Fabiani**, and M. Zanon, "A heuristic for optimal coordination of autonomous vehicles: Dynamic problems," submitted to the *IEEE Transactions on Intelligent Transportation Systems*, 2026. (Available at `arxiv.org/abs/2610.37288`)
7. S. Shahi, **F. Fabiani**, and M. Zanon, "A heuristic for optimal coordination of autonomous vehicles: Static problems," submitted to the *IEEE Transactions on Intelligent Transportation Systems*, 2026. (Available at `arxiv.org/abs/2610.37275`)
6. A. Martin, **F. Fabiani**, and G. Belgioioso, "Finite-sample guarantees for data-driven operator splitting methods via martingale inequalities," submitted to *Automatica*, 2026. (Available at `arxiv.org/abs/2609.16353`)
5. **F. Fabiani**, "Generalization as a robust performance property of learning-enabled dynamical systems," submitted to the *IEEE Transactions on Automatic Control*, 2026. (Available at `arxiv.org/abs/2608.30431`)
4. F. Gao, Z. Feng, Z. Zhang, **F. Fabiani**, and S. Yuan, "Distributed task allocation for multi-robot lunar construction: A generalized mixed-integer potential game approach," submitted to the *IEEE Transactions on Aerospace and Electronic Systems*, 2026.

3. Y. Zhang, C. Yu, and **F. Fabiani**, "A Koopman-based approach for nonlinear switching systems identification," submitted to *Automatica*, 2026.

2. Y. Zhang, C. Yu, and **F. Fabiani**, "A data-driven identification method for piecewise affine state-space systems," submitted to *Science China Information Sciences*, 2026.

1. **F. Fabiani**, and S. Sagratella, "Best-response algorithms for a class of monotone Nash equilibrium problems with mixed-integer variables," submitted to *Mathematics of Operations Research*, 2025. (Available at arxiv.org/abs/2310.09885)

Journal Publications

31. **F. Fabiani** and B. Franci, "Certifying ε-equilibria in stochastic games with limited data availability," *European Journal of Control*, pp. 101558, 2026.

30. B. Franci, **F. Fabiani**, and L. Zino, "On the role of stubborness in Nash equilibrium problems," *IEEE Control Systems Letters*, vol. 10, pp. 433–438, 2026.

29. Y. Zhang, C. Yu, G. Ferrer, and **F. Fabiani**, "Neural network-based identification of state-space switching nonlinear systems," *IEEE Transactions on Automatic Control*, vol. 71, no. 8, pp. 5160–5172, 2026.

28. **F. Fabiani**, and B. Franci, "Finite-sample guarantees for data-driven forward-backward operator methods," *IEEE Transactions on Automatic Control*, vol. 71, no. 7, pp. 4665–4677, 2026.

27. D. Masti, D. Grande, A. Peruffo, and **F. Fabiani**, "Fault-tolerant control of nonlinear systems: An inductive synthesis approach," *Automatica*, vol. 187, pp. 112897, 2026.

26. **F. Fabiani**, and A. Simonetto, "Concentration inequalities for semidefinite least squares based on data," *IEEE Signal Processing Letters*, vol. 33, pp. 326–330, 2026.

25. Y. Zhang, C. Yu, and **F. Fabiani**, "Identification of non-causal systems with random switching modes," *Automatica*, vol. 182, pp. 112532, 2025.

24. S. Yuan, F. Gao, Y. Wang, **F. Fabiani**, and S. Yuan, "Path planning for lunar surface person following robot via flatness-based safe-MPC with virtual disturbances," *IEEE Transactions on Aerospace and Electronic Systems*, vol. 61, no. 5, pp. 12767–12778, 2025.

23. B. Franci, **F. Fabiani**, and A. Bemporad, "Actively learning equilibria in Nash games with misleading information," *IEEE Control Systems Letters*, vol. 9, pp. 312–317, 2025.

22. S. Yuan, Y. Wang, Z. Zhang and **F. Fabiani**, "Fast and safe spacecraft proximity and rendezvous: A hierarchical approach," *IEEE Transactions on Aerospace and Electronic Systems*, vol. 61, no. 2, pp. 5166–5177, 2025.

21. **F. Fabiani**, B. Stellato, D. Masti, and P. J. Goulart, "A neural network-based approach to hybrid systems identification for control," *Automatica*, vol. 174, pp. 112130, 2025.

20. **F. Fabiani** and A. Bemporad, "An active learning method for solving competitive multi-agent decision-making and control problems," *IEEE Transactions on Automatic Control*, vol. 70, no. 4, pp. 2374–2389, 2025.

19. **F. Fabiani** and P. J. Goulart, "Robust stabilization of polytopic systems via fast and reliable neural network-based approximations," *Int J. Robust Nonlinear Control*, vol. 34, no. 9, pp. 6180–6201, 2024.

18. G. Carnevale, **F. Fabiani**, F. Fele, K. Margellos and G. Notarstefano, "Tracking-based distributed equilibrium seeking for aggregative games," *IEEE Transactions on Automatic Control*, vol. 69, no. 9, pp. 6026–6041, 2024.

17. **F. Fabiani** and A. Simonetto, "Incentives and co-evolution: Steering linear dynamical systems with noncooperative agents ," *IEEE Transactions on Control of Network Systems*, vol. 11, no. 2, pp. 1067–1079, 2024.

16. **F. Fabiani** and B. Franci, "On distributionally robust generalized Nash games defined over the Wasserstein ball," *Journal of Optimization Theory and Applications*, vol. 199, pp. 298–309, 2023.

15. **F. Fabiani**, A. Simonetto and P. J. Goulart, "Personalized incentives as feedback design in generalized Nash equilibrium problems," *IEEE Transactions on Automatic Control*, vol. 68, no. 12, pp. 7724–7739, 2023.

14. D. Masti, **F. Fabiani**, G. Gnecco and A. Bemporad, "Counter-example guided inductive synthesis of control Lyapunov functions for uncertain systems," *IEEE Control Systems Letters*, vol. 7, pp. 2047–2052, 2023.

13. **F. Fabiani** and P. J. Goulart, "Reliably-stabilizing piecewise-affine neural network controllers," *IEEE Transactions on Automatic Control*, vol. 68, no. 9, pp. 5201–5215, 2023.

12. G. Pantazis, **F. Fabiani**, F. Fele and K. Margellos, "Probabilistically robust stabilizing allocations in uncertain coalitional games," *IEEE Control Systems Letters*, vol. 6, pp. 3128–3133, 2022.

11. S. Yuan, **F. Fabiani** and S. Baldi, "Numerical optimization-based extremum seeking control of a class of constrained nonlinear systems via finite-time state transition." *Int J. Robust Nonlinear Control*, vol. 32, no. 11, pp. 6379–6394, 2022.

10. **F. Fabiani**, K. Margellos and P. J. Goulart, "Probabilistic feasibility guarantees for solution sets to uncertain variational inequalities," *Automatica*, vol. 137, pp. 110120, 2022.

9. **F. Fabiani**, M. A. Tajeddini, H. Kebriaei and S. Grammatico, "Local Stackelberg equilibrium seeking in generalized aggregative games," *IEEE Transactions on Automatic Control*, vol. 67, no. 2, pp. 965–970, 2022.

8. **F. Fabiani**, K. Margellos and P. J. Goulart, "Probabilistic stabilizability certificates for a class of black-box linear systems," *IEEE Control Systems Letters*, vol. 6, pp. 584–589, 2022.

7. F. Blanchini, D. Casagrande, **F. Fabiani**, G. Giordano, D. Palma and R. Pesenti, "A threshold mechanism ensures minimum-path flow in lightning discharge," *Scientific Reports*, 11(1), 1–9, 2021.

6. **F. Fabiani**, G. Belgioioso, F. Blanchini, P. Colaneri and S. Grammatico, "Convergence in uncertain linear systems," *Automatica*, vol. 119, pp. 109058, 2020.

5. **F. Fabiani** and S. Grammatico, "Multi-vehicle automated driving as a generalized mixed-integer potential game," *IEEE Transactions on Intelligent Transportation Systems*, vol. 21, no. 3, pp. 1064–1073, 2020.

4. F. Blanchini, D. Casagrande, **F. Fabiani**, G. Giordano and R. Pesenti, "Network-decentralized optimization and control: an explicit saturated solution," *Automatica*, vol. 103, pp. 379–389, 2019.

3. G. Belgioioso, **F. Fabiani**, F. Blanchini and S. Grammatico, "On the convergence of discrete-time linear systems: a linear time-varying Mann iteration converges iff its operator is strictly pseudocontractive," *IEEE Control Systems Letters*, vol. 2, no. 3, pp. 453–458, 2018.

2. **F. Fabiani**, D. Fenucci and A. Caiti, "A distributed passivity approach to AUV teams control in cooperating potential games," *Ocean Engineering*, vol. 157, pp. 152–163. 2018.

1. S. Mintchev, R. Ranzani, **F. Fabiani** and C. Stefanini, "Towards docking for small scale underwater robots," *Autonomous Robots*, vol. 38, no. 3, pp. 283–299, 2015.

Conference Publications

25. E. Dimou, **F. Fabiani**, and A. Bemporad, "Receding horizon games with stability guarantees," *Decision and Control (CDC), 2026 IEEE 65th Annual Conference on*, IEEE. (To appear)

24. B. Franci, **F. Fabiani**, M. Schmidt and M. Staudigl, "A Gauss-Seidel method for solving multi-leader-multi-follower games," in *2025 European Control Conference (ECC)*. IEEE, 2025, pp. 2775–2780.

23. D. Masti, **F. Fabiani** and V. Breschi, "Enhancing direct data-driven model-reference controllers: A closed-loop estimation approach," in *2025 European Control Conference (ECC)*. IEEE, 2025, pp. 2678–2683.

22. B. Franci, **F. Fabiani** and L. Zino, "Generalized Nash equilibrium problems under partial-decision information with biased agents," *Decision and Control (CDC), 2024 IEEE 63rd Annual Conference on*, pp. 4694–4699, IEEE.

21. G. Carnevale, **F. Fabiani**, F. Fele, K. Margellos and G. Notarstefano, "Distributed equilibrium seeking in aggregative games: linear convergence under singular perturbations lens," *Decision and Control (CDC), 2024 IEEE 63rd Annual Conference on*, pp. 3918–3923, IEEE.

20. G. Pantazis, F. Fele, **F. Fabiani**, S. Grammatico and K. Margellos, "Probably approximately correct stability of allocations in uncertain coalitional games with private sampling," in *6th Annual Learning for Dynamics & Control Conference,* pp. 1702-1714. PMLR, 2024.

19. B. Franci and **F. Fabiani**, "Sharing beliefs to learn Nash equilibria," in *2024 European Control Conference (ECC)*. IEEE, 2024, pp. 317–322.

18. M. Fochesato, **F. Fabiani** and J. Lygeros, "Generalized uncertain Nash games: Reformulation and robust equilibrium seeking," in *2023 European Control Conference (ECC)*. IEEE, 2023, pp. 1–6.

17. **F. Fabiani**, B. Franci, S. Sagratella, M. Schmidt and M. Staudigl, "Proximal-like algorithms for equilibrium seeking in mixed-integer Nash equilibrium problems," *Decision and Control (CDC), 2022 IEEE 61st Annual Conference on*, pp. 4137–4142, IEEE.

16. **F. Fabiani** and B. Franci, "A stochastic generalized Nash equilibrium model for platforms competition in the ride-hail market," *Decision and Control (CDC), 2022 IEEE 61st Annual Conference on*, pp. 4455–4460, IEEE.

15. **F. Fabiani**, A. Simonetto and P. J. Goulart, "Learning equilibria with personalized incentives in a class of nonmonotone games," in *2022 European Control Conference (ECC)*. IEEE, 2022, pp. 2179–2184.

14. **F. Fabiani**, "Pursuing robust decisions in uncertain traffic equilibrium problems," *Decision and Control (CDC), 2021 IEEE 60th Annual Conference on*, pp. 5116-5121, IEEE.

13. **F. Fabiani** and P. J. Goulart, "The optimal transport paradigm enables data compression in data-driven robust control," *2021 American Control Conference (ACC), IEEE 2021*, pp. 2412-2417, IEEE.

12. **F. Fabiani**, K. Margellos and P. J. Goulart, "On the robustness of equilibria in generalized aggregative games." *Decision and Control (CDC), 2020 IEEE 59th Annual Conference on*, pp. 3725–3730, IEEE.

11. **F. Fabiani** and S. Grammatico, "A forward-backward algorithm for decomposable semi-definite programs." *Proceedings of the 28th IEEE Mediterranean Control Conference, Saint-Raphaël, France.* IEEE, 2020. pp. 580-585.

10. C. Cenedese, **F. Fabiani**, M. Cucuzzella, J. M. A. Scherpen, M. Cao and S. Grammatico, "Charging plug-in electric vehicles as a mixed-integer aggregative game." *Decision and Control (CDC), 2019 IEEE 58th Annual Conference on*, pp. 4904–4909, IEEE.

9. F. Blanchini, D. Casagrande, **F. Fabiani**, G. Giordano and R. Pesenti, "A network-decentralised strategy for shortest-path-flow routing." *Decision and Control (CDC), 2019 IEEE 58th Annual Conference on*, pp. 1126–1131, IEEE.

8. **F. Fabiani** and A. Caiti, "Nash equilibrium seeking in potential games with double-integrator agents," in *2019 18th European Control Conference (ECC)*. IEEE, 2019, pp. 548–553.

7. F. Blanchini, **F. Fabiani** and S. Grammatico, "On merging constraint and optimal control-Lyapunov functions." *Decision and Control (CDC), 2018 IEEE 57th Annual Conference on*, pp. 2328–2333, IEEE.

6. **F. Fabiani** and S. Grammatico, "A Mixed-Logical-Dynamical model for Automated Driving on highways." *Decision and Control (CDC), 2018 IEEE 57th Annual Conference on*, pp. 1011–1015, IEEE.

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