Vittorio Giammarino

PERSONAL DETAILS

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GitHub	https://github.com/VittorioGiammarino
Google Scholar	https://scholar.google.com/citations?user=ezcss6YAAAAJ&hl=it

WORK EXPERIENCE IN ACADEMIA

Assistant Professor in Industrial and Management Systems Engineering **08/2026 - Current**

University of South Florida, Tampa, Florida, USA.

Post-Doctoral Research Associate in Computer Science **09/2024 - 05/2026**

Purdue University, West Lafayette, Indiana, USA.

- Conducting research on Physics-Informed Reinforcement Learning (RL) and Formal Methods for Policy Learning with applications in Robot Locomotion and Manipulation.
- Mentoring and Supervising PhD, Grad and Undergrad students.

WORK EXPERIENCE IN INDUSTRY

AI Applied Scientist Intern **06/2022 - 09/2022**

Pickle Robot Co., Cambridge, Massachusetts, USA.

- Worked on end-to-end decision making algorithms for robotic pick-and-place using Imitation and RL.

Software Engineer Intern **01/2017 - 07/2017**

IMA Group, Bologna, Italy - Shanghai Tianyan Pharmaceutical Machinery Co. Ltd., Shanghai, China.

EDUCATION

PhD Systems Engineering (GPA: 3.91/4) **09/2019 - 08/2024**

Boston University, Boston, Massachusetts, USA.

- **Thesis Title:** "On the use of expert data to imitate behavior and accelerate Reinforcement Learning"
- **Key Knowledge Areas:** Imitation Learning, Reinforcement Learning, Data-Driven Control.

MSc Systems and Controls (GPA: 8.6/10) **09/2017 - 07/2019**

Technology University of Delft, Delft, The Netherlands.

- **Key Knowledge Areas:** Control Theory, Traffic Control, Dynamical Systems.

BSc Automation Engineering (GPA: 28/30) **09/2013 - 06/2017**

Tongji University, Shanghai, China - Università di Bologna, Bologna, Italy.

SKILLS

Languages:

- **English**: Fluent,
- **Italian**: Native,
- **Spanish**: Elementary.

PUBLICATIONS

Journals:

1. Chen Y., **Giammarino V.**, Queeney J. and Paschalidis I.C. Provably Efficient Off-Policy Adversarial Imitation Learning with Convergence Guarantees. Transactions of Machine Learning Research (TMLR). (2026) arXiv:2405.16668.
2. **Giammarino V.**, et al. "Adversarial Imitation Learning from Visual Observations using Latent Information. Transactions of Machine Learning Research (TMLR). (2024). arXiv:2309.17371.
3. **Giammarino V.**, Dunne MF, Moore KN, Hasselmo ME, Stern CE, Paschalidis IC. Combining imitation and deep reinforcement learning to human-level performance on a virtual foraging task. Adaptive Behavior. 2023;0(0). doi: 10.1177/10597123231201655
4. **Giammarino V.**, et al. "Traffic flow on a ring with a single autonomous vehicle: An interconnected stability perspective." IEEE Transactions on Intelligent Transportation Systems 22.8 (2020): 4998-5008, doi: 10.1109/TITS.2020.2985680.

Conferences:

1. **Giammarino V.**, Ramazzina A., El-Hariry M., Bijelic M., 2025. Beyond Domain Randomization: Event-Inspired Perception for Visually Robust Adversarial Imitation from Videos. The 2026 International Conference on Robotics and Automation (ICRA 2026). Arxiv Link.
2. **Giammarino V.**, Ahmed H. Qureshi, 2025. Goal Reaching with Eikonal-Constrained Hierarchical Quasimetric Reinforcement Learning. The Fourteenth International Conference on Learning Representations (ICLR 2026). Arxiv Link.
3. **Giammarino V.**, Ruiqi Ni, Ahmed H. Qureshi, 2025. Physics-informed Value Learner for Scalable Offline Goal-Conditioned Reinforcement Learning. The Thirty-Ninth Annual Conference on Neural Information Processing Systems (NeurIPS 2025). arXiv:2509.06782.
4. Manganaris A., **Giammarino V.**, Ahmed H. Qureshi, 2025. Automaton Constrained Q-Learning. The Thirty-Ninth Annual Conference on Neural Information Processing Systems (NeurIPS 2025). arXiv:2510.05061.
5. **Giammarino V.**, Queeney J. and Paschalidis I.C., 2025. Visually Robust Adversarial Imitation Learning from Videos with Contrastive Learning. The 2025 International Conference on Robotics and Automation (ICRA 2025). arXiv:2407.12792
6. Sabouni E., Ahmad H.M., **Giammarino V.**, Cassandras C.G., Paschalidis I.C. and Li W., 2024. Reinforcement Learning-based Receding Horizon Control using Adaptive Control Barrier Functions for Safety-Critical Systems. The 63rd IEEE Conference on Decision and Control (CDC 2024). arXiv:2403.17338.
7. Ozcan E.C., **Giammarino V.**, Queeney J. and Paschalidis I.C., 2024. A Model-Based Approach for Improving Reinforcement Learning Efficiency Leveraging Expert Observations. The 63rd IEEE Conference on Decision and Control (CDC 2024). arXiv:2402.18836.
8. **Giammarino V.**, et al. "Opportunities and Challenges from using Animals Videos in Reinforcement Learning." The 22nd World Congress of the International Federation of Automatic Control (IFAC 2023). (2023). arXiv:2209.12347
9. **Giammarino V.**, and Ioannis Ch Paschalidis. "Online Baum-Welch algorithm for hierarchical imitation learning." 2021 60th IEEE Conference on Decision and Control (CDC 2021). IEEE, 2021. (pp. 3717-3722). IEEE. arXiv:2103.12197.
10. **Giammarino V.**, et al. "On a weaker notion of ring stability for mixed traffic with human-driven and autonomous vehicles." 2019 IEEE 58th Conference on Decision and Control (CDC 2019). IEEE, 2019, doi: 10.1109/CDC40024.2019.9029529.

Surveys:

1. Manganaris A., **Giammarino V.**, Ahmed H. Qureshi, Jagannathan S, 2025. Formal Methods in Robot Policy Learning and Verification: A Survey on Current Techniques and Future Directions. Transactions of Machine Learning Research (TMLR). OpenReview Link.

PREPRINTS

1. **Giammarino V.**, Manganaris A., Qureshi A.H., 2026. Physics-informed Goal-Conditioned Reinforcement Learning under Hybrid Contact Dynamics. arXiv preprint arXiv:2605.30503. *Under review in the 2026 Conference of Robot Learning (CORL 2026).*
2. Bezick M., **Giammarino V.**, Ahmed H. Qureshi, 2025. Robust Point Cloud Reinforcement Learning via PCA-Based Canonicalization. Arxiv Link. *Under review in the 2026 International Conference on Intelligent Robots and Systems (IROS 2026).*
3. **Giammarino V.**, et al. "A Reinforcement Learning approach for Robotic Unloading from Visual Observations." arXiv preprint arXiv:2309.06621 (2023).
4. **Giammarino V.**, et al. "Unsupervised Reward Shaping for a Robotic Sequential Picking Task from Visual Observations in a Logistics Scenario." arXiv:2209.12350 (2022).

ABSTRACTS

1. **Giammarino V.**, et al. "From human behavioral experiments to improved autonomous agent through imitation and Reinforcement Learning " The 5th Multi-disciplinary Conference on Reinforcement Learning and Decision Making (RLDM2022). (2022).

AWARDS

- Research Fellowship and Student Travel Award from Boston University.
- Recipient of AlmaTong Scholarship from University of Bologna.

TEACHING EXPERIENCE

Guest Lecturer **11/2025 - 03/2026**

Purdue University, West Lafayette, IN, USA.

Course: Introduction to Robotics.

- Responsibilities: Invited talk.

Graduate Student Teacher **09/2021 - 12/2024**

Boston University, Boston, MA, USA.

Courses: Engineering Mechanics.

- Responsibilities: Guest lectures, lab supervision, grading, student support.

Graduate Teaching Assistant **09/2018 - 06/2019**

Technology University of Delft, Delft, The Netherlands.

Courses: Digital Control, Adaptive Control, Integration Project.

- Responsibilities: Guest lectures, project design, lab supervision, grading, student support.

INVITED TALKS

From Control to Reinforcement Learning and Back: Structured Learning for Reliable Autonomy **02/2026**

University of Central Florida, Orlando, FL, USA.

From Control to Reinforcement Learning and Back: Structured Learning for Reliable Autonomy **02/2026**

University of South Florida, Tampa, FL, USA.

From Data-Driven Control to Physics-informed RL: Toward Efficient Policy Learning **11/2025**

PEARL LAB, TU Darmstadt, Darmstadt, Germany.

SERVICES

Hybrid Architectures for Embodied Autonomy: Bridging Learning, Planning, and Control Workshop organizer **10/2026**

IROS 2026, Pittsburgh, PA, USA.

Responsabilities: main author and organizer.

2024 CISE Graduate Student Workshop organizer **01/2024**

Boston University, Boston, MA, USA.

Responsabilities: reviewed papers and hosted the event.

Reviewer **2019 - Current**

Journals: IEEE Transactions on Vehicular Technology, IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Robotics, IEEE Transactions on Automatic Control, IEEE Control Systems Letters, Transactions on Machine Learning Research, IET Intelligent Transport Systems, Automatica, Neural Networks.

Conferences: IEEE ACC 2024; IEEE CASE 2023; IEEE CDC 2019, 2020, 2021, 2024; IEEE ECC 2022, 2026; IEEE ICRA 2021, 2024, 2025, 2026; IFAC WC 2023, 2026; IEEE IROS 2022, 2025, 2026; ICLR 2026; NeurIPS 2026; CORL 2026.

FEATURED ARTICLES

Building Smarter, Safer AI: Alumnus Vittorio Giammarino's Research Journey **05/2026**

Reinforcement Learning: A More Efficient Way for Robots to Learn **05/2023**

REFERENCES

Ahmed H. Qureshi **Postdoc Supervisor**

Assistant Professor, Department of Computer Science, Purdue University

Email: ahqureshi@purdue.edu, Phone: (765) 496 3071

Ioannis Paschalidis **PhD Supervisor**

Distinguished Professor of Engineering (ECE, BME, SE); Director, Rafik B. Hariri Institute for Computing and Computational Science and Engineering, Boston University

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Simone Baldi **MSc Supervisor**

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Michael Hasselmo **Research Collaborator**

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