

# ALBERTO MARIA METELLI

*Curriculum Vitae et Studiorum*



Dipartimento di Elettronica, Informazione e Bioingegneria  
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## SUMMARY

Alberto Maria Metelli is an Assistant Professor of Information Processing Systems with the Dipartimento di Elettronica, Informazione e Bioingegneria (DEIB) in the Artificial Intelligence and Robotics Laboratory (AIRLab) at Politecnico di Milano (PoliMi). He obtained the Ph.D. in Information Technology (cum Laude) in March 2021 at Politecnico di Milano defending a thesis about environment configuration in reinforcement learning, awarded the “Premio NeoDottori di Ricerca Marco Cadoli 2021” as the best Italian Ph.D. thesis in Artificial Intelligence (from AIxIA) and recently published in the book series “Frontiers in Artificial Intelligence and Applications” (FAIA) [B1]. He is co-founder of ML Cube S.r.l., an innovative start-up, providing cutting-edge solutions for machine learning systems and life-cycle-management optimization, nominated by Fortune Italia as one of the top 20 Italian AI start-ups in 2022. His main research interests revolve around artificial intelligence and machine learning for *sequential decision-making*, in particular *reinforcement learning* (RL). He is currently working on theoretical and algorithmic aspects of inverse RL [C22, C19, C4], RL in configurable environments [C29, T2, C18], off-policy RL [C28, J9, C17], automated RL [C13, J4], and RL in structured environments [C6]. He participates in research projects about reinforcement learning for autonomous driving [J10], defense, Industry 4.0, complex networks, and about machine learning for climate science [A4, A3]. He is also interested in algorithms, optimization, statistics, probability, and recommendation systems [W23].

## HIGHLIGHTS

- **Assistant professor** at DEIB, Politecnico di Milano, since March 2023.
- **National scientific qualification** as Italian associate professor (sector 09/H1), until February 2034.
- Author/Co-author of 11 publications in peer-reviewed international journals (4 as main contributor, 1 single-author), including JMLR (2), Machine Learning (2), RAS (1), ESWA (1), IEEE TNNLS (1), and IEEE T-ITS (1). According to Scimago Journal Rank: **8 articles in Q1 journals**. Author/Co-author of 30 publications in peer-reviewed international conferences (11 as main contributor), including ICML (10), NeurIPS (8), AAAI (6), AISTATS (2), UAI (1). According to GGS Conference Rating: **24 publications in A++ venues** and 2 publications in A+ venues (Class 1).
- Winner of both “Premio NeoDottori di Ricerca Marco Cadoli 2021” and “Premio NeoLaureati Leonardo Lesmo 2018” for the best Italian Ph.D. thesis and M.Sc. thesis in Artificial Intelligence respectively, awarded by Associazione Italiana per l’Intelligenza Artificiale (AIxIA).
- **Oral presentation at NeurIPS 2018** (30/4856 submissions, 0.62%), spotlight presentation at NeurIPS 2021 (260/9122 submissions, 2.9%), notable paper at AISTATS 2023 (32/1689 submissions, 1.9%), oral presentation at ICML 2023 (156/6538 submissions, 2.39%).
- **Lecturer** of the Ph.D. course Reinforcement Learning (since a.y. 2021-2022) and of the B.Sc. course Computer Science (since a.y. 2023-2024) at Politecnico di Milano. Teaching assistant of M.Sc. course Machine Learning (since a.y. 2021-2022), B.Sc. and M.Sc. course Foundations of Artificial Intelligence (since a.y. 2021-2022) at Politecnico di Milano.
- **Associate Editor** of IEEE Robotics and Automation Letters (RA-L). **Program chair and co-organizer** of the 15th European Workshop of Reinforcement Learning (EWRL 2022). Session chair of ECML-PKDD 2021. **Senior PC member** of two top-tier conferences (AAAI 2022 and IJCAI 2021).
- Participation in 7 industrial research projects funded by private companies (1 as **co-PI**) and in 4 competitive research project funded by public institutions (1 as **co-PI** of the local research unit).
- (Co-)Supervisor of 10+ Ph.D. students and of 30+ M.Sc. students at Politecnico di Milano.
- Member of the ELLIS Society and CLAIRE supporter.
- **Co-founder** of ML Cube S.r.l., accredited spin-off of the Politecnico di Milano, born in November 2020.

## PERSONAL INFORMATION

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Webpage: <https://albertometelli.github.io>  
  
dblp: <https://dblp.org/pid/209/4941.html>  
Google Scholar: <https://scholar.google.com/citations?user=R31IsPwAAAAJ>  
ORCID: <https://orcid.org/0000-0002-3424-5212>  
Scopus: <https://www.scopus.com/authid/detail.uri?authorId=57195947711> (57195947711)  
Web of Science: <https://www.webofscience.com/wos/author/record/2074428> (AAY-5206-2020)

## ACADEMIC EXPERIENCE

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**Assistant Professor** (Ricercatore a tempo determinato (Junior) - L.240/2010, art.24, c.3, lett.a)) *March 2023-*  
*Politecnico di Milano - Dipartimento di Elettronica, Informazione e Bioingegneria* *Milan, Italy*  
Research programme: “Artificial intelligence foundations for sequential decision making”.  
SSD: ING-INF/05, Settore concorsuale: 09/H1 - Sistemi di elaborazione delle informazioni.  
  
**Postdoctoral Researcher** (Assegnista di ricerca - L.240/2010, art.22) *November 2020-February 2023*  
*Politecnico di Milano - Dipartimento di Elettronica, Informazione e Bioingegneria* *Milan, Italy*  
Research title: “Development of reinforcement learning algorithms for autonomous driving applications”.  
Research manager: Prof. Marcello Restelli.  
SSD: ING-INF/05, Area: 09.

## NATIONAL SCIENTIFIC QUALIFICATIONS

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**National Scientific Qualification as Italian Associate Professor** *February 2023*  
(Abilitazione Scientifica Nazionale - L.240/2010, art.16)  
Professore di II fascia - Settore concorsuale: 09/H1 - Sistemi di elaborazione delle informazioni.  
Validità: 06/02/2023 - 06/02/2034

## NATIONAL PROFESSIONAL QUALIFICATIONS

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**Professional Qualification as Italian Information Engineer** *September 2021*  
(Abilitazione all'esercizio della professione di Ingegnere dell'Informazione - DPR.328/2001)  
Sezione A - Settore dell'informazione. I Sessione 2021 - Politecnico di Milano.

## EDUCATION

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**Ph.D. in Information Technology** (Dottorato di ricerca) *November 2017-October 2020*  
*Politecnico di Milano - Dipartimento di Elettronica, Informazione e Bioingegneria* *Milan, Italy*  
Supervisor: Prof. Marcello Restelli. Tutor: Prof. Nicola Gatti.  
Ph.D. Thesis: “Exploiting environment configurability in reinforcement learning”.  
Reviewers: Prof. Amir-massoud Farahmand (Vector Institute, University of Toronto), Prof. Alessandro Lazaric (Facebook AI, Paris).  
Date of award: 11 March 2021. Final Mark: **Laude**.  
  
**M.Sc. in Computer Science and Engineering** (LM-32 Ingegneria Informatica) *October 2015-July 2017*  
*Politecnico di Milano* *Milan, Italy*  
M.Sc. Thesis: “Compatible reward inverse reinforcement learning”.  
Supervisor: Prof. Marcello Restelli. Co-supervisor: Dott. Matteo Pirota.  
Date of award: 27 July 2017. GPA: 30/30. Final Mark: **110/110 cum Laude**.  
  
**B.Sc. in Engineering of Computing Systems** (L-8 Ingegneria dell'informazione) *October 2012-July 2015*  
*Politecnico di Milano* *Milan, Italy*  
Date of award: 24 July 2015. GPA: 30/30. Final Mark: **110/110 cum Laude**.  
  
**High School Diploma** *September 2007-July 2012*  
*IISS Ettore Majorana* *Seriate (Bg), Italy*  
Specialization in Computer Science (Perito Informatico). Final Mark: 100/100 cum Laude.

## PUBLICATIONS

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**Scientific Productivity** 41 publications (41 entries on Scopus, 51 co-authors according to Scopus)

- **International Journals:** Author/Co-author of **11 publications** in peer-reviewed international journals (4 as main contributor, 1 single-author), including **Journal of Machine Learning Research (2)**, **Machine Learning (2)**, **Robotics and Autonomous Systems (1)**, **Expert Systems with Applications (1)**, **IEEE Transactions on Neural Networks and Learning Systems (1)**, and **IEEE Transactions on Intelligent Transportation Systems (1)**.
  - According to Scimago Journal Rank (SJR):<sup>1</sup> **8 publications in Q1 journals** (of which 6 in “Artificial Intelligence” area and 2 in “Computer Science Applications” area).
  - According to CORE Journal Ranks:<sup>2</sup> **3 publications in A\*** journals and 2 publications in A journals.
- **International Conferences:** Author/Co-author of **30 publications** in peer-reviewed international conferences (11 as main contributor), including **ICML (10)**, **NeurIPS (8)**, **AAAI (6)**, **AISTATS (2)**, and **UAI (1)**.
  - According to GII-GRIN-SCIE (GGS) Conference Rating:<sup>3</sup> **24 publications in A++ venues** and 2 publications in A+ venues (Class 1).
  - According to CORE Conference Ranks:<sup>4</sup> **24 papers in A\*** venues and 3 papers in A venues.

<b>Publication Impact</b>	Google Scholar:	citations <b>708</b>	<i>h</i> -index <b>15</b>	<i>i10</i> -index <b>19</b>
(accessed on 5 December 2023)	Scopus:	citations <b>332</b>	<i>h</i> -index <b>11</b>	<i>i10</i> -index <b>13</b>

## FELLOWSHIPS, AWARDS, AND RECOGNITIONS

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### PERSONAL RESEARCH AWARDS AND RECOGNITIONS

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#### AAAI 2024 - New Faculty Highlights

December 2023

*Association for the Advancement of Artificial Intelligence (AAAI)*

Description: Invited speaker program at AAAI conference (GGS: A++) highlighting AI researchers who have just begun careers as new faculty members or the equivalent in industry.

(link: <https://aaai.org/aaai-conference/aaai-24-new-faculty-highlights/>)

#### DAAD AInet Fellowship - Postdoc-NeT-AI on Human-centered AI

October 2023

*German Academic Exchange Service (DAAD)*

Description: Fellowship granted to excellent early-career researchers to meet the German AI research community.

(link: <https://www.daad.de/en/the-daad/postdocnet/fellows/fellows/>)

#### Publication of the Ph.D. Thesis as Book

June 2022

*European Association for Artificial Intelligence (EurAI)*

Description: Publication of the Ph.D. thesis in the “Dissertation in AI” series “Frontiers in Artificial Intelligence and Applications” as a recognition for the outstanding theses participating in the EurAI “Dissertation Award”.

(link: <https://www.iospress.com/catalog/books/exploiting-environment-configurability-in-reinforcement-learning>)

#### Winner of “Premio NeoDottori di Ricerca Marco Cadoli 2021”

November 2021

*Associazione Italiana per l'Intelligenza Artificiale (AIxIA)*

Description: Award for the best Italian Ph.D. thesis in Artificial Intelligence (public selection). Amount: 1000€.

(link: <https://aixia.it/premi/premio-per-neodottori-di-ricerca-marco-cadoli-annuale/>)

#### Recipient of a “Springer Award”

April 2021

*IT PhD Board of Professors, Politecnico di Milano*

Description: Publication in a Polimi SpringerBriefs volume, for the best results from the IT PhD program doctors.

(link: <https://link.springer.com/book/10.1007/978-3-030-85918-3>)

#### Winner of “Premio NeoLaureati Leonardo Lesmo 2018”

October 2018

*Associazione Italiana per l'Intelligenza Artificiale (AIxIA)*

Description: Award for the best Italian M.Sc. thesis in Artificial Intelligence (public selection). Amount: 500€.

(link: <https://aixia.it/premi/premio-per-neolaureati-leonardo-lesmo-annuale/>)

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<sup>1</sup><https://www.scimagojr.com>

<sup>2</sup><http://portal.core.edu.au/jnl-ranks>

<sup>3</sup><https://scie.lcc.uma.es/>

<sup>4</sup><http://portal.core.edu.au/conf-ranks>

## CONFERENCE AWARDS AND RECOGNITIONS

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### Oral Presentation at ICML 2023 (top 2.39%)

July 2023

*International Conference on Machine Learning 2023, Honolulu, HI, US*

Description: Best 156 papers out of 6538 submissions (top 2.39%) to ICML 2023 (GGS: A++) for the paper “Towards Theoretical Understanding of Reinforcement Learning” [C4].

### Notable Paper at AISTATS 2023 (top 1.9%)

April 2023

*International Conference on Artificial Intelligence and Statistics 2023, Valencia, Spain*

Description: Best 32 papers out of 1689 submissions (top 1.9%) to AISTATS 2023 (GGS: A+) for the paper “A Tale of Sampling and Estimation in Discounted Reinforcement Learning” [C7].

### Spotlight Presentation at NeurIPS 2021 (top 2.9%)

December 2021

*Neural Information Processing Systems 2021, Online*

Description: Best 260 papers out of 9122 submissions (top 2.9%) to NeurIPS 2021 (GGS: A++) for the paper “Subgaussian and Differentiable Importance Sampling for Off-Policy Evaluation and Learning” [C17].

### Oral Presentation at NeurIPS 2018 (top 0.62%)

December 2018

*Neural Information Processing Systems 2018, Montreal, Canada*

Description: Best 30 papers out of 4856 submissions (top 0.62%) to NeurIPS 2018 (GGS: A++) for the paper “Policy Optimization via Importance Sampling” [C28].

## STUDENT AWARDS AND RECOGNITIONS

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### Winner of a Ph.D. Scholarship

July 2017

*Ministero dell’Istruzione, dell’Università e della Ricerca (MIUR)*

Description: Ranked first among 50 applicants of Politecnico di Milano in Computer Science and Engineering area.

### Recipient of a “Le migliori matricole dell’A.A. 2012/2013” award

May 2014

*Politecnico di Milano*

Description: Awarded for the best freshmen students of Politecnico di Milano.

### B.Sc. and M.Sc. Student Scholarships

2012-2017

*Politecnico di Milano*

Description: Full reduction of student tuition fees for merit GPA > 29/30 (each eligible year).

### Enrollment to the “Albo Nazionale delle Eccellenze”

2012

*Istituto Nazionale di Documentazione Innovazione e Ricerca Educativa (INDIRE)*

Description: National register of the best among the Italian high-school graduates.

(link: <https://www.indire.it/eccellenze/>)

## COMPETITIONS

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### Runner-Up (Best Academic Team) at ACM RecSys Challenge 2017

July 2017

*Association for Computing Machinery (ACM)*

Description: Recommender systems challenge with a team of 8 students from Politecnico di Milano. Amount: 1500€.  
(link: <http://www.recsyschallenge.com/2017/>)

### Winner of “Migliori Elaborati 2011-2012”

June 2012

*IISS Ettore Majorana*

Description: Best project award for the developing of a database system to manage remedial courses.

### Winner of a Bronze medal at “Olimpiadi Italiane di Informatica 2011”

October 2011

*Associazione Italiana per l’Informatica ed il Calcolo Automatico (AICA)*

Description: Italian Olympiad in Informatics, ranked 24th.

(link: <https://www.olimpiadi-informatica.it/index.php/olimpiadi-italiane-2010-2011.html>)

## REVIEWING SERVICE RECOGNITIONS

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He has been recognized for the reviewing service for international conferences: NeurIPS 2019 (top 50%), ICML 2020 (top 33%), AAAI 2021 (top 25%), ICLR 2021 (outstanding reviewer), AISTATS 2022 (top 10%), NeurIPS 2023 (top reviewer).

He has been awarded travel/accommodation/registration support for international conference participation, granted by conference organizers via conference sponsor: NIPS 2017 (Long Beach, CA, US), ICML 2018 (Stockholm, Sweden), NeurIPS 2018 (Montreal, Canada), ICML 2019 (Long Beach, CA, US), NeurIPS 2019 (Vancouver, Canada), ICML 2022 (Baltimore, MD, US), NeurIPS 2023 (New Orleans, LA, US).

## TEACHING ACTIVITY<sup>5</sup>

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### PRIMARY RESPONSIBILITY TEACHING ACTIVITIES

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#### **Lecturer and coordinator of Computer Science**

*Politecnico di Milano*

6 CFU - B.Sc. in Civil Engineering - Campus Leonardo - II semester. Avg no. of students: ~75.  
a.y. 2023-2024 (36 hours).

*2023-2024  
Milan, Italy*

#### **Lecturer and co-coordinator of Reinforcement Learning**

*Politecnico di Milano*

5 CFU - Ph.D. in Information Technology - Campus Leonardo. Avg no. of students: ~80. Co-coordinator: Prof. Marcello Restelli.  
a.y. 2021-2022 (15 hours, corresponding to 3 CFU), a.y. 2023-2024 (15 hours, corresponding to 3 CFU).

*2021-2022, 2023-2024  
Milan, Italy*

#### **Lecturer of Deep Reinforcement Learning**

*GSSI - Gran Sasso Science Institute*

Ph.D. in Computer Science. Avg no. of students: ~10.  
a.y. 2021-2022 (2 hours).

*2021-2022  
Online*

### TEACHING ASSISTANCE ACTIVITIES

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#### **Teaching Assistant of Machine Learning**

*Politecnico di Milano*

5 CFU - M.Sc. Computer Science and Engineering and M.Sc. Mathematical Engineering - Campus Leonardo - II semester. Avg no. of students: ~100. Lecturer: Prof. Daniele Loiacono.  
a.y. 2021-2022 (10 hours), a.y. 2022-2023 (20 hours), a.y. 2023-2024 (20 hours).

*2021-2024  
Milan, Italy*

#### **Teaching Assistant of Foundations of Artificial Intelligence**

*Politecnico di Milano*

5 CFU - B.Sc. and M.Sc. Computer Science and Engineering - Campus Leonardo - I semester. Avg no. of students: ~80+80. Lecturers: Proff. Francesco Amigoni and Pier Luca Lanzi.  
a.y. 2021-2022 (10+10 hours), a.y. 2022-2023 (16+16 hours), a.y. 2023-2024 (8+8 hours).

*2021-2024  
Milan, Italy*

#### **Teaching Assistant of Computer Science (Informatica)**

*Politecnico di Milano*

8 CFU - B.Sc. in Environmental and Land Planning Engineering - Campus Leonardo - I semester. Average no. of students: ~150. Lecturer: Prof. Andrea Bonarini.  
a.y. 2018-2019 (24 hours), a.y. 2019-2020 (24 hours), a.y. 2020-2021 (30 hours), a.y. 2021-2022 (30 hours), a.y. 2022-2023 (24 hours).

*2018-2023  
Milan, Italy*

#### **Laboratory Teaching Assistant of Computer Science (Informatica)**

*Politecnico di Milano*

8 CFU - B.Sc. in Environmental and Land Planning Engineering - Campus Leonardo - I semester. Avg no. of students: ~150. Lecturer: Prof. Andrea Bonarini.  
a.y. 2018-2019 (20 hours), a.y. 2019-2020 (20 hours), a.y. 2020-2021 (20 hours).

*2018-2021  
Milan, Italy*

#### **Laboratory Teaching Assistant of Computer Science A (Informatica A)**

*Politecnico di Milano*

10 CFU - B.Sc. in Management Engineering - Campus Bovisa - I semester. Avg no. of students: ~80. Lecturer: Prof. Florian Daniel.  
a.y. 2017-2018 (36 hours).

*2017-2018  
Milan, Italy*

#### **Academic Tutor**

*Cefriel S.c.a.r.l.*

Supervision of a student for the project of the Master CEFRIEL on AI&ML (24 hours).

*2020  
Milan, Italy*

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<sup>5</sup>Total 68 hours of teaching and 370 hours of teaching assistance.



## EVALUATION COMMITTEES

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### EXAMINATION COMMITTEES

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#### President of the Ph.D. Final Examination Committee

*Ph.D. in Information Technology - Politecnico di Milano*

*April 2023*

*Milan, Italy*

Candidate: Dr. Giulia Romano. Thesis: "Pricing and advertising strategies in e-commerce scenarios"

PhD Committee: Proff. Alberto Maria Metelli, Ioannis Caragiannis (Aarhus University, Denmark), Negin Golrezaei (MIT Sloan School of Management, Cambridge, Massachusetts, US).

## RESEARCH PROJECTS

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### COMPETITIVE RESEARCH PROJECTS

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#### AI4REALNET (AI for REAL-world NETWORK operation)

*October 2023-*

*HORIZON EUROPE*

Role: **Co-principal investigator** of the local research unit and **WP co-leader** (with Prof. Marcello Restelli).

Topic: Reinforcement learning for operating complex real-world network infrastructures.

Project coordinator: INESC TEC, Porto, Portugal. Funding institution: European Union. Budget: 4M€ (456k€ to Politecnico di Milano). Duration: 42 months.

#### iBeCHANGE

*December 2023-*

*HORIZON RIA*

Role: Research scientist.

Topic: Develop the iBeChange platform for personalizing cancer prevention.

Project coordinator: Istituto Europeo Di Oncologia Srl (IEO), Milan, Italy. Local co-principal investigators: Proff.

Francesco Trovò, Emilia Ambrosini. Funding institution: European Union. Budget: 5.9M€ (644k€ to Politecnico di Milano). Duration: 60 months.

#### FAIR (Future Artificial Intelligence Research) - Spoke 4: Adaptive AI

*March 2023-*

*Extended Partnership - National Recovery and Resilience Plan (PNRR)*

Role: Research scientist.

Topic: Artificial intelligence: foundational aspects - Adaptive AI.

Spoke coordinator: Politecnico di Milano (Prof. Nicola Gatti). Funding institution: Italian Ministry of University and Research (MUR). Budget: 12M€ (6M€ to Politecnico di Milano). Duration: 36 months.

#### CLINT (CLimate INTelligence)

*July 2021-*

*HORIZON 2020*

Role: Research scientist.

Topic: Extreme events detection, attribution and adaptation using machine learning.

Project coordinator: Politecnico di Milano (Prof. Andrea Castelletti). Funding institution: European Union.

Budget: 6M€ (1.1M€ to Politecnico di Milano). Duration: 48 months.

### COMPETITIVE RESEARCH PROJECTS FOR COMPUTATIONAL TIME

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#### PGCLaSI - Policy Gradients for Control of Large-Scale Industrial Plants

*October 2023-July 2024*

*CINECA Supercomputing Centre - Class C Project*

Role: Principal Investigator.

Topic: Development of efficient policy gradient algorithms for large-scale industrial plants.

Grant: 80k GPU hours.

### INDUSTRIAL-FUNDED RESEARCH PROJECTS

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#### Nuovo Pignone Tecnologie S.r.l. (Baker Hughes group)

*April 2023-*

*Development of reinforcement learning algorithms for the control of industrial compressors*

Role: **Co-principal investigator** (with Prof. Marcello Restelli).

Topic: Development of reinforcement learning algorithms for streams of multiple compressors.

Budget: 62k€.

#### ML cube S.r.l.

*December 2020-December 2022*

*Life-Cycle-Management and Optimization of Machine learning algorithms in real-time biddings*

Role: Research scientist.

Topic: Study, analysis, and design of machine learning algorithms for optimized real-time bidding.

Co-principal investigators: Proff. Marcello Restelli, Nicola Gatti, Francesco Trovò. Budget: 84k€.

#### Nuovo Pignone Tecnologie S.r.l. (Baker Hughes group)

*October 2021-June 2022*

#### *PID controller tuning using Reinforcement Learning*

Role: Research scientist.

Topic: Development of reinforcement learning algorithms for anti-surge control in centrifugal gas turbines.

Principal investigator: Prof. Marcello Restelli. Budget: 40k€.

#### **Leonardo S.p.A.**

*May 2021-*

*Machine Learning per l'Autonomia dei Velivoli*

Role: Research scientist.

Topic: Development of ML-based systems for autonomous mission and fleet management.

Co-principal investigators: Proff. Marcello Restelli and Nicola Gatti. Budget: 250k€.

#### **Ferrari S.p.A.**

*December 2020-January 2021*

*Reinforcement Learning Techniques for Developing Artificial Test Drivers on a F1 Simulator*

Role: Research scientist.

Topic: Development of reinforcement learning algorithms to test F1 vehicles in simulation.

Principal Investigator: Prof. Marcello Restelli. Budget: 80k€.

#### **Magneti Marelli S.p.A.**

*March 2019-February 2020*

*Decision Making based on Reinforcement Learning for Automated Driving (2nd project)*

Role: Research scientist.

Topic: Development of reinforcement learning algorithms for autonomous driving.

Principal investigator: Prof. Marcello Restelli. Budget: 60 k€. Reference Publications: [W20, J10].

#### **Magneti Marelli S.p.A.**

*March 2018-February 2019*

*Decision Making based on Reinforcement Learning for Automated Driving (1st project)*

Role: Research scientist.

Topic: Development of reinforcement learning algorithms for autonomous driving.

Principal investigator: Prof. Marcello Restelli. Budget: 56k€.

## STUDENT SUPERVISION

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He is currently **supervising 2 Ph.D. students**:

1. **Filippo Lazzati**, “Inverse Reinforcement Learning”, Ph.D. in Information Technology (Cycle: XXXIX), DEIB, Politecnico di Milano.
2. **Alessandro Montenegro**, “Policy Gradient Methods for Industrial Applications”, Ph.D. in Information Technology (Cycle: XXXIX), DEIB, Politecnico di Milano. Co-supervisor: Matteo Papini.

He is **co-supervising 11 Ph.D. students** mostly of the Information Technology programme at Politecnico di Milano.

He **supervised (relatore) 3 M.Sc. theses** and **co-supervised (correlatore) 33 concluded M.Sc. theses** mostly in Computer Science and Engineering at Politecnico di Milano and he is currently **(co-)supervising 10 M.Sc. students** at Politecnico di Milano, including **4 students** admitted to the **Honours Programme of Politecnico di Milano** and **1 student** awarded with the “**Premio NeoLaureati Leonardo Lesmo 2019**” (AIXIA) for the best Italian M.Sc. thesis in artificial intelligence.

He is the **research manager (responsabile) of the research fellowship** (assegno di ricerca) “Development of adaptive reinforcement learning algorithms for control of industrial plants” at DEIB Politecnico di Milano.

## TECHNOLOGY TRANSFER

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### START-UPS AND SPIN-OFFS

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#### **Co-founder of ML Cube S.r.l.**

*November 2020*

*Accredited spin-off of Politecnico di Milano*

Innovative start-up providing cutting-edge solutions for machine learning systems and life-cycle management optimization. (link: <https://www.mlcube.com>)

Nominated by Fortune Italia as one of the **top 20 Italian AI start-ups** in 2022.

Funding: “**Smart & Start Italia**” granted by Ministero dello Sviluppo Economico (MiSE) to innovative start-ups (~323 k€).

## OPEN-SOURCE TOOLS

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#### **ARLO (Automated Reinforcement Learning Optimizer)**

*July 2021-*

Description: Open-source Python library for Automated Reinforcement Learning (AutoRL), aimed at making RL accessible by non-expert users automatizing the development of a learning pipeline. Project status: First released in April 2022, still in development. Role: Scientific advisor.  
(github: <https://github.com/arlo-lib/ARLO>, doc: <https://arlo-lib.github.io/arlo-lib/index.html>)

## DEVELOPMENT OF PRODUCTS

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### ML Cube Platform

*November 2020-*

Description: B2B innovative Machine Learning product for Life-cycle Management real-time Optimization, aimed at preventing model obsolescence and providing automatic diagnosis and retraining of the models in production.

Project status: First release. Role: Scientific advisor.

(link: <https://www.mlcube.com/mlcube-platform>)

### AD Cube

*December 2021-*

Description: AI platform for the optimization of multi-channel advertising campaigns. Project status: In production. Role: Scientific advisor. (link: <https://adcube.ai/>)

Funding: Winner of **ELISE's 2nd Open Call grants** (link: <https://www.elise-ai.eu/events/elise-s-2nd-open-call-grants-funding-to-16-smes-to-develop-ai-based-services-or-applications>)

## TALKS, SEMINARS, AND PRESENTATIONS

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### INVITED TALKS AND SEMINARS

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#### Invited Talk

*38th AAAI Conference on Artificial Intelligence - New Faculty Highlights*

GGs: A++. Title: "Recent Advancements in Inverse Reinforcement Learning"

*February 2024 (to happen)  
Vancouver, Canada*

#### Invited Talk

*1st Symposium on Lifelong Explainable Robot Learning (SYMLER)*

Title: "Explaining Human Intentions through Inverse Reinforcement Learning"

*December 2023  
Nürnberg, Germany*

#### Invited Seminar

*AI Seminars - Politecnico di Milano*

Title: "Inverse reinforcement learning: a theoretical view".

*May 2023  
Milan, Italy*

#### Invited Talk

*ELLIS@Milan Artificial Intelligence Workshop - Bocconi University*

Title: "Online Learning in Non-Cooperative Configurable Environments".

*September 2022  
Milan, Italy*

#### Invited Seminar

*Università del Piemonte Orientale*

Title: "Stream Learning in Non-Stationary Environments".

*May 2022  
Alessandria, Italy*

#### Invited Talk

*20th International Conference of the Italian Association for Artificial Intelligence (AIIA 2021)*

Title: "Exploiting Environment Configurability in Reinforcement Learning".

*December 2021  
Online*

#### Invited Seminar

*ML Modena Meetup*

Title: "From MAB to RL... and beyond!" (with Francesco Trovò).

*January 2021  
Online*

#### Invited Talk

*17th International Conference of the Italian Association for Artificial Intelligence (AIIA 2018)*

Title: "Compatible Reward Inverse Reinforcement Learning".

*November 2018  
Trento, Italy*

#### Seminar

*Politecnico di Milano - Dipartimento di Elettronica, Informazione e Bioingegneria*

Title: "Distributional Reinforcement Learning".

*November 2017  
Milan, Italy*

## INTERNATIONAL CONFERENCE AND WORKSHOP TALKS

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#### Conference Talk

*The Fortieth International Conference on Machine Learning (ICML 2023)*

GGs: A++. Title: "Towards Theoretical Understanding of Inverse Reinforcement Learning".

*July 2023  
Honolulu, HI, US*

#### Conference Talk

*The 26th International Conference on Artificial Intelligence and Statistics (AISTATS 2023)*

*April 2023  
Valencia, Spain*



GGs: A+. Title: “A Tale of Sampling and Estimation in Discounted Reinforcement Learning”.

**Conference Talk**

*Thirty-ninth International Conference on Machine Learning (ICML 2022)*

*July 2022  
Baltimore, MD, US*

GGs: A++. Title: “Stochastic Rising Bandits”.

**Spotlight Conference Talk**

*Thirty-fifth Conference on Neural Information Processing Systems (NeurIPS 2021)*

*December 2021  
Online*

GGs: A++. Title: “Subgaussian and Differentiable Importance Sampling for Off-Policy Evaluation and Learning”.

**Workshop Talk**

*Deep Reinforcement Learning Workshop - NeurIPS 2021*

*December 2021  
Online*

Title: “Policy Optimization via Optimal Policy Evaluation”.

**Conference Talk**

*European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2021)*

*September 2021  
Online*

GGs: A. Title: “Policy Space Identification in Configurable Environments”.

**Conference Talk**

*Thirty-eighth International Conference on Machine Learning (ICML 2021)*

*July 2021  
Online*

GGs: A++. Title: “Provably Efficient Learning of Transferable Rewards”.

**Conference Talk**

*35th AAAI Conference on Artificial Intelligence (AAAI 2021)*

*February 2021  
Online*

GGs: A++. Title: “Policy Optimization as Online Learning with Mediator Feedback”.

**Conference Talk**

*Thirty-seventh International Conference on Machine Learning (ICML 2020)*

*July 2020  
Online*

GGs: A++. Title: “Control Frequency Adaptation via Action Persistence in Batch Reinforcement Learning”.

**Short Conference Talk**

*Thirty-sixth International Conference on Machine Learning (ICML 2019)*

*June 2019  
Long Beach, CA, US*

GGs: A++. Title: “Reinforcement Learning in Configurable Continuous Environments”.

**Long Conference Talk**

*Thirty-fifth International Conference on Machine Learning (ICML 2018)*

*July 2018  
Stockholm, Sweden*

GGs: A++. Title: “Configurable Markov Decision Processes”.

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POSTER PRESENTATION AT INTERNATIONAL CONFERENCES

He presented his contributions in several international conferences: ICML 2023 (3 posters - Honolulu, HI, US), AISTATS 2023 (1 poster - Valencia, Spain), ICML 2022 (2 posters - Baltimore, MD, US), NeurIPS 2021 (2 posters - Online), ICML 2021 (1 poster - Online), AAAI 2021 (1 poster - Online), NeurIPS 2019 (1 poster - Vancouver, Canada), ICML 2019 (2 posters - Long Beach, CA, US), NeurIPS 2018 (1 poster - Montreal, Canada), ICML 2018 (1 poster - Stockholm, Sweden), NIPS 2017 (1 poster - Long Beach, CA, US).

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ACTIVITIES AND SERVICES<sup>6</sup>

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REFeree ACTIVITIES

**Registered to REPRIS**

*Register of Expert Peer Reviewers for Italian Scientific Evaluation - MUR*

*October 2023-*

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EDITORIAL ACTIVITIES

**Associate Editor**

*IEEE Robotics and Automation Letters (RA-L) - SJR: Q1*

*April 2023-*

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ORGANIZATION ACTIVITIES

**Program Chair and Member of the Organizing Committee**

*September 2022*

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<sup>6</sup>For both journal and conference publications, the rating is the most recent available. For Scimago Ranks (SJR), the “Artificial Intelligence” quartile is reported if no further specification.

15th European Workshop on Reinforcement Learning (EWRL 2022)

Milan, Italy

Responsibilities: Reviewer recruitment, call for papers writing, supervision of the review and decision process, definition of the meeting schedule, chairing a session.

(link: <https://ewrl.wordpress.com/ewrl15-2022/>)

**Session Chair**

September 2021

European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases 2021 (ECML-PKDD) - GGS: A

Online

Responsibilities: Chairing a Reinforcement Learning session (4 paper presentations).

(SENIOR) PROGRAM COMMITTEE MEMBER AND REVIEWER FOR INTERNATIONAL CONFERENCES

**Senior Program Committee member**

2021

International Joint Conference on Artificial Intelligence (IJCAI) - GGS: A++

**Senior Program Committee member**

2022

AAAI Conference on Artificial Intelligence (AAAI) - GGS: A++

**Program Committee member**

2020, 2022

International Joint Conference on Artificial Intelligence (IJCAI) - GGS: A++

**Reviewer**

2019-2023

International Conference on Machine Learning (ICML) - GGS: A++

**Reviewer**

2019-2023

Neural Information Processing Systems (NeurIPS) - GGS: A++

**Program Committee member**

2020-2021, 2023

European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD) - GGS: A

**Program Committee member**

2020-2021, 2024

AAAI Conference on Artificial Intelligence (AAAI) - GGS: A++

**Reviewer**

2020-2022

International Conference on Artificial Intelligence and Statistics (AISTATS) - GGS: A+

**Reviewer**

2021-2024

International Conference on Learning Representations (ICLR) - GGS: A++

REVIEWER FOR INTERNATIONAL JOURNALS

**Reviewer**

2023

Scientific Report (Nature) - SJR: Q1 (Multidisciplinary)

**Reviewer**

2023

PLOS ONE - SJR: Q1 (Multidisciplinary)

**Reviewer**

2023

Expert Systems with Applications (ESWA) - SJR: Q1

**Reviewer**

2023

IEEE Transactions on Artificial Intelligence (TAI) - SJR: Q1

**Reviewer**

2023

IEEE Robotics and Automation Letters (RA-L) - SJR: Q1

**Reviewer**

2023

IEEE Transactions on Neural Networks and Learning Systems (TNNLS) - SJR: Q1

**Reviewer**

2022

Journal of Machine Learning Research (JMLR) - SJR: Q1

**Reviewer**

2022-2023

Transactions on Machine Learning Research (TMLR)

**Reviewer**

2022

Engineering Applications of Artificial Intelligence (EAAI) - SJR: Q1

**Reviewer**

2022

*Entropy (MDPI)* - SJR: Q2 (Information Systems)

**Reviewer** 2021

*Frontiers in Artificial Intelligence* - SJR: Q2

**Reviewer** 2021

*Intelligenza Artificiale* - SJR: Q3

**Reviewer** 2021

*IEEE Transactions on Intelligent Transportation Systems (ITS)* - SJR: Q1 (Computer Science Applications)

**Reviewer** 2019, 2022

*Journal of Artificial Intelligence Research (JAIR)* - SJR: Q2

**Reviewer** 2019

*Machine Learning (Springer)* - SJR: Q1

**Reviewer** 2018

*IEEE Transactions on Cognitive and Developmental Systems (TCDS)* - SJR: Q1

## MEMBERSHIPS OF SCIENTIFIC SOCIETIES

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**ELLIS Society Member** 2021-

*European Laboratory for Learning and Intelligent Systems*

**CLAIRE Supporter** 2023-

*Confederation of Laboratories for Artificial Intelligence Research in Europe*

**AAAI Member** 2020-

*Association for the Advancement of Artificial Intelligence*

**AIxIA Member** 2018-2022

*Associazione Italiana per l'Intelligenza Artificiale*

## LIST OF PUBLICATIONS<sup>7</sup>

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### BOOKS

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- [B1] Alberto Maria Metelli. *Exploiting environment configurability in reinforcement learning*, volume 361 of *Frontiers in Artificial Intelligence and Applications*. IOS Press, 2022.  
(link: <https://doi.org/10.3233/FAIA361>).

### BOOK CHAPTERS

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- [H1] Alberto Maria Metelli. “Configurable Environments in Reinforcement Learning: An Overview”. In **Special Topics in Information Technology**, pages 101–113, Cham, 2022. Springer International Publishing.  
(link: [https://doi.org/10.1007/978-3-030-85918-3\\_9](https://doi.org/10.1007/978-3-030-85918-3_9)).

### REFEREED INTERNATIONAL JOURNAL ARTICLES

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- [J1] Riccardo Poiani, Ciprian Stirbu, Alberto Maria Metelli, and Marcello Restelli. “Optimizing Empty Container Repositioning and Fleet Deployment via Configurable Semi-POMDPs”. **IEEE Transactions on Intelligent Transportation Systems**, 2023. SJR 2022: **Q1** (Computer Science Applications).  
(link: <https://doi.org/10.1109/TITS.2023.3329677>).
- [J2] Gianluca Drappo, Alberto Maria Metelli, and Marcello Restelli. “An Option-Dependent Analysis of Regret Minimization Algorithms in Finite-Horizon Semi-MDP”. **Transactions on Machine Learning Research**, 2023.  
(link: <https://openreview.net/forum?id=VP9p4u9jAo>).
- [J3] Filippo Fedeli, Alberto Maria Metelli, Francesco Trovò, and Marcello Restelli. “IWDA: Importance Weighting for Drift Adaptation in Streaming Supervised Learning Problems”. **IEEE Transactions on Neural Networks and Learning Systems - Special Issue on Stream Learning**, 34(10):6813–6823, 2023. CORE 2020: **A\***. SJR 2022: **Q1**.  
(link: <https://doi.org/10.1109/TNNLS.2023.3265524>).
- [J4] Marco Mussi, Davide Lombarda, Alberto Maria Metelli, Francesco Trovò, and Marcello Restelli. “ARLO: A framework for Automated Reinforcement Learning”. **Expert Systems with Applications**, 224:119883, 2023. CORE 2020: B. SJR 2022: **Q1**.  
(link: <https://doi.org/10.1016/j.eswa.2023.119883>).
- [J5] Alberto Maria Metelli. “A Unified View of Configurable Markov Decision Processes: Solution Concepts, Value Functions, and Operators”. **Intelligenza Artificiale**, 16(2):165–184, 2022. SJR 2022: Q3. (*Invited publication as winner of the “Premio Neodottori di Ricerca Marco Cadoli 2021”*).  
(link: <https://doi.org/10.3233/IA-220140>).
- [J6] Alberto Maria Metelli, Guglielmo Manneschi, and Marcello Restelli. “Policy space identification in configurable environments”. **Machine Learning**, 111(6):2093–2145, 2022. CORE 2020: **A**. SJR 2022: **Q1**.  
(link: <https://doi.org/10.1007/s10994-021-06033-3>).
- [J7] Alberto Maria Metelli, Matteo Pirotta, Daniele Calandriello, and Marcello Restelli. “Safe Policy Iteration: A Monotonically Improving Approximate Policy Iteration Approach”. **Journal of Machine Learning Research**, 22(97):1–83, 2021. CORE 2020: **A\***. SJR 2021: **Q1**.  
(link: <http://jmlr.org/papers/v22/19-707.html>).
- [J8] Amarildo Likmeta, Alberto Maria Metelli, Giorgia Ramponi, Andrea Tirinzoni, Matteo Giuliani, and Marcello Restelli. “Dealing with multiple experts and non-stationarity in inverse reinforcement learning: an application to real-life problems”. **Machine Learning**, 110(9):2541–2576, 2021. CORE 2020: **A**. SJR 2021: **Q1**.  
(link: <https://doi.org/10.1007/s10994-020-05939-8>).
- [J9] Alberto Maria Metelli, Matteo Papini, Nico Montali, and Marcello Restelli. “Importance Sampling Techniques for Policy Optimization”. **Journal of Machine Learning Research**, 21(141):1–75, 2020. CORE 2020: **A\***. SJR 2020: **Q1**.  
(link: <http://jmlr.org/papers/v21/20-124.html>).
- [J10] Amarildo Likmeta, Alberto Maria Metelli, Andrea Tirinzoni, Riccardo Giol, Marcello Restelli, and Danilo Romano. “Combining reinforcement learning with rule-based controllers for transparent and general decision-making in autonomous driving”. **Robotics and Autonomous Systems**, 131:103568, 2020. CORE 2020: B. SJR 2020: **Q1** (Computer Science Applications).  
(link: <https://doi.org/10.1016/j.robot.2020.103568>).

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<sup>7</sup>The first author represents the main contributor; in the case of multiple main contributors (equal contribution), they are marked with \*. For both journal and conference publications, the rating is the most recent available in the year of publication. For Scimago Ranks (SJR), the “Artificial Intelligence” quartile is reported if no further specification.

- [J11] Alberto Maria Metelli, Matteo Pirotta, and Marcello Restelli. “On the use of the policy gradient and Hessian in inverse reinforcement learning”. *Intelligenza Artificiale*, 14(1):117–150, 2020. SJR 2020: Q3. (*Invited publication as winner of the “Premio NeoLaureati Leonardo Lesmo 2018”*). (link: <https://doi.org/10.3233/IA-180011>).

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REFEREED INTERNATIONAL CONFERENCES PAPERS

- [C1] Riccardo Zamboni, Alberto Maria Metelli, and Marcello Restelli. “Distributional Policy Evaluation: a Maximum Entropy approach to Representation Learning”. In *Advances in Neural Information Processing Systems 36 (NeurIPS)*. 2023. **Acceptance rate: 26.1%**. CORE 2023: **A\***. GGS 2021: **A++**. (link: <https://openreview.net/forum?id=o91in9tDEs>).
- [C2] Riccardo Poiani, Alberto Maria Metelli, and Marcello Restelli. “Truncating Trajectories in Monte Carlo Policy Evaluation: an Adaptive Approach”. In *Advances in Neural Information Processing Systems 36 (NeurIPS)*. 2023. **Acceptance rate: 26.1%**. CORE 2023: **A\***. GGS 2021: **A++**. (link: <https://openreview.net/forum?id=PkKpTK7hJ6>).
- [C3] Alberto Maria Metelli, Samuele Meta, and Marcello Restelli. “On the Relation between Policy Improvement and Off-Policy Minimum-Variance Policy Evaluation”. In *Proceedings of the Thirty-Ninth Conference on Uncertainty in Artificial Intelligence (UAI)*, volume 216, pages 1423–1433. PMLR, 2023. **Acceptance rate: 243/778 (31.2%)**. CORE 2023: **A**. GGS 2021: **A**. (link: <https://proceedings.mlr.press/v216/metelli23a.html>).
- [C4] Alberto Maria Metelli, Filippo Lazzati, and Marcello Restelli. “Towards Theoretical Understanding of Inverse Reinforcement Learning”. In *Proceedings of the 40th International Conference on Machine Learning (ICML)*, volume 202, pages 24555–24591. PMLR, 2023. **Acceptance rate: 1827/6538 (27.9%)**, **Oral: 156/6538 (2.39%)**. CORE 2023: **A\***. GGS 2021: **A++**. (link: <https://proceedings.mlr.press/v202/metelli23a.html>).
- [C5] Riccardo Poiani, Alberto Maria Metelli, and Marcello Restelli. “Truncating Trajectories in Monte Carlo Reinforcement Learning”. In *Proceedings of the 40th International Conference on Machine Learning (ICML)*, volume 202, pages 27994–28042. PMLR, 2023. **Acceptance rate: 1827/6538 (27.9%)**. CORE 2023: **A\***. GGS 2021: **A++**. (link: <https://proceedings.mlr.press/v202/poiani23a.html>).
- [C6] Marco Mussi, Alberto Maria Metelli, and Marcello Restelli. “Dynamical Linear Bandits”. In *Proceedings of the 40th International Conference on Machine Learning (ICML)*, volume 202, pages 25563–25587. PMLR, 2023. **Acceptance rate: 1827/6538 (27.9%)**. CORE 2023: **A\***. GGS 2021: **A++**. (link: <https://proceedings.mlr.press/v202/mussi23a.html>).
- [C7] Alberto Maria Metelli, Mirco Mutti, and Marcello Restelli. “A Tale of Sampling and Estimation in Discounted Reinforcement Learning”. In *Proceedings of The 26th International Conference on Artificial Intelligence and Statistics*, volume 206, pages 4575–4601. PMLR, 25–27 Apr 2023. **Acceptance rate: 496/1689 (29.3%)**, **Notable paper (oral presentation): 32/1689 (1.9%)**. CORE 2023: **A**. GGS 2021: **A+**. (link: <https://proceedings.mlr.press/v206/metelli23a.html>).
- [C8] Eldowa Khaled Mazen Mahmoud Elsayed, Nicolò Cesa-Bianchi, Alberto Maria Metelli, and Marcello Restelli. “Bandits with Stochastic Experts: Towards Instance-Based Optimality”. In *2023 IEEE Information Theory Workshop (ITW)*, pages 30–35. 2023. CORE 2023: **B**. GGS 2021: **B**.
- [C9] Davide Maran, Alberto Maria Metelli, and Marcello Restelli. “Tight Performance Guarantees of Imitator Policies with Continuous Actions”. In *The Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI)*, pages 9073–9080. AAAI Press, 2023. **Acceptance rate: 19.6%**. CORE 2023: **A\***. GGS 2021: **A++**. (link: <https://doi.org/10.1609/aaai.v37i8.26089>).
- [C10] Amarildo Likmeta, Matteo Sacco, Alberto Maria Metelli, and Marcello Restelli. “Wasserstein Actor-Critic: Directed Exploration via Optimism for Continuous-Actions Control”. In *The Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI)*, pages 8782–8790. AAAI Press, 2023. **Acceptance rate: 19.6%**. CORE 2023: **A\***. GGS 2021: **A++**. (link: <https://doi.org/10.1609/aaai.v37i7.26056>).
- [C11] Luca Sabbioni, Luca Al Daire, Lorenzo Bisi, Alberto Maria Metelli, and Marcello Restelli. “Simultaneously Updating All Persistence Values in Reinforcement Learning”. In *The Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI)*, pages 9668–9676. AAAI Press, 2023. **Acceptance rate: 19.6%**. CORE 2023: **A\***. GGS 2021: **A++**. (link: <https://doi.org/10.1609/aaai.v37i8.26156>).
- [C12] Riccardo Poiani, Alberto Maria Metelli, and Marcello Restelli. “Multi-Fidelity Best-Arm Identification”. In *Advances in Neural Information Processing Systems 35 (NeurIPS)*, volume 35, pages 17857–17870. 2022. **Acceptance rate: 2665/10411 (25.6%)**. CORE 2021: **A\***. GGS 2021: **A++**.



- (link: [http://papers.nips.cc/paper\\_files/paper/2022/hash/71c31ebf577ffdad5f4a74156daad518-Abstract-Conference.html](http://papers.nips.cc/paper_files/paper/2022/hash/71c31ebf577ffdad5f4a74156daad518-Abstract-Conference.html)).
- [C13] Alberto Maria Metelli, Matteo Pirola, Francesco Trovò, and Marcello Restelli. “Stochastic Rising Bandits”. In **Proceedings of the 39th International Conference on Machine Learning (ICML)**, volume 162, pages 15421–15457. PMLR, 2022. **Acceptance rate: 1235/5630 (21.9%)**. CORE 2021: **A\***. GGS 2021: **A++**. (link: <https://proceedings.mlr.press/v162/metelli22a.html>).
  - [C14] Giorgio Manganini, Angelo Damiani, Alberto Maria Metelli, and Marcello Restelli. “Balancing Sample Efficiency and Suboptimality in Inverse Reinforcement Learning”. In **Proceedings of the 39th International Conference on Machine Learning (ICML)**, volume 162, pages 4618–4629. PMLR, 2022. **Acceptance rate: 1235/5630 (21.9%)**. CORE 2021: **A\***. GGS 2021: **A++**. (link: <https://proceedings.mlr.press/v162/damiani22a.html>).
  - [C15] Julen Cestero, Marco Quartulli, Alberto Maria Metelli, and Marcello Restelli. “Storehouse: a Reinforcement Learning Environment for Optimizing Warehouse Management”. In **2022 IEEE World Congress on Computational Intelligence - International Joint Conference on Neural Networks (IJCNN)**, pages 1–9. 2022. CORE 2021: **B**. GGS 2021: **A-**. (link: <https://doi.org/10.1109/IJCNN55064.2022.9891985>).
  - [C16] Pierre Liotet, Francesco Vidaich, Alberto Maria Metelli, and Marcello Restelli. “Lifelong Hyper-Policy Optimization with Multiple Importance Sampling Regularization”. In **The Thirty-Sixth AAAI Conference on Artificial Intelligence (AAAI)**, pages 7525–7533. AAAI Press, 2022. **Acceptance rate: 1349/9020 (15.0%)**. CORE 2021: **A\***. GGS 2021: **A++**. (link: <https://doi.org/10.1609/aaai.v36i7.20717>).
  - [C17] Alberto Maria Metelli, Alessio Russo, and Marcello Restelli. “Subgaussian and Differentiable Importance Sampling for Off-Policy Evaluation and Learning”. In **Advances in Neural Information Processing Systems 34 (NeurIPS)**, pages 8119–8132. 2021. **Acceptance rate: 2344/9122 (25.7%)**, **Spotlight: 260/9122 (2.9%)**. CORE 2021: **A\***. GGS 2021: **A++**. (link: <https://proceedings.neurips.cc/paper/2021/hash/4476b929e30dd0c4e8bdbcc82c6ba23a-Abstract.html>).
  - [C18] Giorgia Ramponi, Alberto Maria Metelli, Alessandro Concetti, and Marcello Restelli. “Learning in Non-Cooperative Configurable Markov Decision Processes”. In **Advances in Neural Information Processing Systems 34 (NeurIPS)**, pages 22808–22821. 2021. **Acceptance rate: 2344/9122 (25.7%)**. CORE 2021: **A\***. GGS 2021: **A++**. (link: <https://proceedings.neurips.cc/paper/2021/hash/c0f52c6624ae1359e105c8a5d8cd956a-Abstract.html>).
  - [C19] Alberto Maria Metelli\*, Giorgia Ramponi\*, Alessandro Concetti, and Marcello Restelli. “Provably Efficient Learning of Transferable Rewards”. In **Proceedings of the 38th International Conference on Machine Learning (ICML)**, volume 139, pages 7665–7676. PMLR, 2021. **Acceptance rate: 1184/5513 (21.5%)**. CORE 2021: **A\***. GGS 2021: **A++**. (link: <http://proceedings.mlr.press/v139/metelli21a.html>).
  - [C20] Alberto Maria Metelli\*, Matteo Papini\*, Pierluca D’Oro, and Marcello Restelli. “Policy Optimization as Online Learning with Mediator Feedback”. In **The Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI)**, pages 8958–8966. AAAI Press, 2021. **Acceptance rate: 1692/7911 (21.4%)**. CORE 2021: **A\***. GGS 2021: **A++**. (link: <https://ojs.aaai.org/index.php/AAAI/article/view/17083>).
  - [C21] Alberto Maria Metelli, Flavio Mazzolini, Lorenzo Bisi, Luca Sabbioni, and Marcello Restelli. “Control Frequency Adaptation via Action Persistence in Batch Reinforcement Learning”. In **Proceedings of the 37th International Conference on Machine Learning (ICML)**, volume 119, pages 6862–6873. PMLR, 2020. **Acceptance rate: 1088/4990 (21.8%)**. CORE 2020: **A\***. GGS 2018: **A++**. (link: <http://proceedings.mlr.press/v119/metelli20a.html>).
  - [C22] Giorgia Ramponi, Amarildo Likmeta, Alberto Maria Metelli, Andrea Tirinzoni, and Marcello Restelli. “Truly Batch Model-Free Inverse Reinforcement Learning about Multiple Intentions”. In **Proceedings of the Twenty Third International Conference on Artificial Intelligence and Statistics (AISTATS)**, volume 108, pages 2359–2369. PMLR, 2020. CORE 2020: **A**. GGS 2018: **A+**. (link: <http://proceedings.mlr.press/v108/ramponi20a.html>).
  - [C23] Pierluca D’Oro\*, Alberto Maria Metelli\*, Andrea Tirinzoni, Matteo Papini, and Marcello Restelli. “Gradient-Aware Model-Based Policy Search”. In **The Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI)**, pages 3801–3808, 2020. **Acceptance rate: 1591/7737 (20.6%)**. CORE 2020: **A\***. GGS 2018: **A++**. (link: <https://doi.org/10.1609/aaai.v34i04.5791>).
  - [C24] Alberto Maria Metelli\*, Amarildo Likmeta\*, and Marcello Restelli. “Propagating Uncertainty in Reinforcement Learning via Wasserstein Barycenters”. In **Advances in Neural Information Processing Systems 32 (NeurIPS)**, pages 4335–4347, 2019. **Acceptance rate: 428/6743 (21.2%)**. CORE 2018: **A\***. GGS 2018:

A++.

(link: <https://papers.nips.cc/paper/8685-propagating-uncertainty-in-reinforcement-learning-via-wasserstein-barycenters>).

- [C25] Mario Beraha, [Alberto Maria Metelli](#), Matteo Papini, Andrea Tirinzoni, and Marcello Restelli. “Feature Selection via Mutual Information: New Theoretical Insights”. In **International Joint Conference on Neural Networks (IJCNN)**, pages 1–9. IEEE, 2019. CORE 2018: A. GGS 2018: B. (link: <https://doi.org/10.1109/IJCNN.2019.8852410>).
- [C26] [Alberto Maria Metelli](#), Emanuele Ghelfi, and Marcello Restelli. “Reinforcement Learning in Configurable Continuous Environments”. In **Proceedings of the 36th International Conference on Machine Learning (ICML)**, volume 97, pages 4546–4555. PMLR, 2019. **Acceptance rate: 773/3424 (22.6%)**. CORE 2018: A\*. GGS 2018: A++. (link: <http://proceedings.mlr.press/v97/metelli19a.html>).
- [C27] Matteo Papini, [Alberto Maria Metelli](#), Lorenzo Lupo, and Marcello Restelli. “Optimistic Policy Optimization via Multiple Importance Sampling”. In **Proceedings of the 36th International Conference on Machine Learning (ICML)**, volume 97, pages 4989–4999. PMLR, 2019. **Acceptance rate: 773/3424 (22.6%)**. CORE 2018: A\*. GGS 2018: A++. (link: <http://proceedings.mlr.press/v97/papini19a.html>).
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Autorizzo al trattamento dati ai sensi del GDPR 2016/679 del 27 aprile 2016 (Regolamento Europeo relativo alla protezione delle persone fisiche per quanto riguarda il trattamento dei dati personali).