

Francesco Frattolillo

Curriculum Vitae

Research Experience

Sapienza University of Rome, Rome

- 2022 **Participated in the 2022 IEEE RAS Summer School on Multi-Robot Systems.**
- 2022 **Participated in the Joint EurAI Advanced Course on AI, TAILOR Summer School 2022.**
The topic of the Summer School was both Explainable AI and Trustworthy AI
- 2022 **Participated as speaker at the International Conference on Cognitive Aircraft Systems .**
I presented a work entitled "Mixed Human-UAV reinforcement learning: Literature review and open challenges"
- 2022 – **Review on Cooperative Multi-UAV Deep Reinforcement Learning solutions.**
present Currently working on a review on cooperative deep reinforcement learning solutions for multi-UAV applications.
- 2022 **Participated in the Eurocontrol Masterclass challenge.**
The topic was conflict resolution with reinforcement learning in a Multi-UAV scenario.
- 2021 **Adaptive Playing and Opponent Modeling in Competitive Games.**
Proposed and implemented a new method to dynamically scale the opponent's strength, in proportion to the player's abilities, in a two player, perfect information, turn based, zero sum and competitive game.
[Link to the Thesis](#), [Link to the Code](#).

Advisor : **Prof. Luca locchi**, Full Professor, Sapienza University of Rome ([Personal Web-page](#))

Education

- 2017–2021 : **MSc in Artificial Intelligence and Robotics**, Sapienza University of Rome, Rome.
MSc Thesis: "Adaptive Playing and Opponent Modeling in Competitive Games", supervised by Prof. Luca locchi
Final Grade: 110/110L
- 2014–2017: **BSc in Computer Engineering**, University of Naples Federico II , Naples.
BSc Thesis: "Fusione di dati radar e multispettrali per il monitoraggio di infrastrutture critiche", supervised by Prof. Giuseppe Ruello
Final Grade: 98/110

Publications

In Conference Proceedings

- 2022 Nicolo' Brandizzi, Damiano Brunori, Francesco Frattolillo, Alessandro Trapasso, and Luca locchi.
Mixed human-UAV reinforcement learning: Literature review and open challenges. In *The International Conference on Cognitive Aircraft Systems (ICCAS)*, 2022. To appear.

Supervised Master Students

Luca Faraoni, Multi agent model based reinforcement learning.

Computer skills

Programming Languages Python, C++, Javascript, SQL, MATLAB, Java

Main Pytorch, RLlib, Tensorflow, Numpy, Hugging Face, Matplotlib, OpenCV,...
Libraries