

RESEARCH EXPERIENCE

PhD candidate in Applied Mathematics, INRIA and EDF R&D

Grenoble, France

Research Topics: Online Learning, Reinforcement Learning, Convex Optimization.

Nov 2022 – Nov 2025

Under the supervision of Pierre Gaillard, Nadia Oudjane and Margaux Brégère.

Dissertation: Learning Methods for Mean-Field Models and Applications to Energy Management Problems.

Research visit, Università degli Studi di Milano

Milan, Italy

Research Topics: Bandit Algorithms, Online Non-stochastic Control.

Sep 2024 – Nov 2024

Collaboration with Nicolò Cesa-Bianchi and Marcello Restelli.

EDUCATION

École Normale Supérieure Paris Saclay, M2 MVA

Gif-sur-Yvette, France

Master's degree in Machine Learning, graduated with highest honors (*mention très bien*).

2021 – 2022

Topics: Reinforcement Learning, Online Learning, Convex Optimization, Kernel Methods, Optimal Transport, Random Matrices, Graphs in Machine Learning.

École Polytechnique, Cycle Ingénieur

Palaiseau, France

Bachelor and masters degree. Specialized in Applied Mathematics.

2018 – 2021

Universidade de Campinas, Bachelor

Campinas, Brazil

Bachelor in Mathematical Physics. Interrupted to join École Polytechnique.

2016 – 2018

OTHER PROFESSIONAL EXPERIENCE

RESEARCH INTERNSHIPS:

Électricité de France (EDF) R&D

Palaiseau, France

Topic: Mean-field learning applied to energy management problems.

Apr 2022 – Oct 2022

INRIA and Polytechnique Montréal

Paris, France

Topic: A stochastic model and data analysis of a car sharing system.

Apr 2021 – Aug 2021

TEACHING:

Teaching assistant at CentraleSupélec

Gif-sur-Yvette, France

Reinforcement Learning for Master 1 level, theoretical and practical sessions in Python.

2025

Teaching assistant at ENSTA Paris

Palaiseau, France

Times Series for Master 1 level, theoretical and practical sessions in R.

2023 and 2024

PRIZES AND SCHOLARSHIPS

Research Internship Award, Ecole Polytechnique.

2021

Ecole Polytechnique Foundation Scholarship, (funding for the Master 2 year).

2021- 2022

SKILLS AND LANGUAGES

COMPUTER:

Programming languages: Python, R, L^AT_EX.

Python packages: Numpy, Pandas, PyTorch, Gym.

LANGUAGES:

Portuguese: Native.

English: Fluent, Grade A in “First Certificate in English”, Cambridge.

French: Fluent, Test de Connaissance du Français (TCF): C1.

RESEARCH ARTICLES:

Online Markov Decision Processes with Terminal Law Constraints

B. Marin Moreno; M. Brégère; P. Gaillard; N. Oudjane
Preprint

Online Episodic Convex Reinforcement Learning

B. Marin Moreno; K. Eldowa; M. Brégère; P. Gaillard; N. Oudjane
42nd International Conference on Machine Learning (ICML) 2025

MetaCURL: Non-stationary Concave Utility Reinforcement Learning

B. Marin Moreno; M. Brégère; P. Gaillard; N. Oudjane
38th Annual Conference on Neural Information Processing Systems (NeurIPS) 2024

Efficient Model-Based Concave Utility Reinforcement Learning through Greedy Mirror Descent

B. Marin Moreno; M. Brégère; P. Gaillard; N. Oudjane
27th International Conference on Artificial Intelligence and Statistics (AISTATS) 2024

(Online) Convex Optimization for Demand-Side Management

B. Marin Moreno; M. Brégère; P. Gaillard; N. Oudjane
Journal of Optimization Theory and Applications, 2025

An Incentive Algorithm for a Closed Stochastic Network: Data and Mean-Field Analysis

B. Marin Moreno; C. Fricker; H. Mohamed; P. Amaury; M. Trépanier
La Matematica, Springer, 2024

Mean Field Analysis of an Incentive Algorithm for a Closed Stochastic Network

B. Marin Moreno; C. Fricker; H. Mohamed; P. Amaury; M. Trépanier
33rd International Conference on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithms (AofA2022)

MAIN RESEARCH TALKS:

Paris Women in Machine Learning and Data Science , Paris, France	<i>Apr 2025</i>
38th Annual Conference on Neural Information Processing Systems , Vancouver, Canada (video link)	<i>Dec 2024</i>
NeurIPS@Paris , Sorbonne Université, Paris, France	<i>Dec 2024</i>
Stochastic Programming Society (SPS) virtual seminars , online (video link)	<i>Nov 2024</i>
6th International Thematic Week Smart Energy and Stochastic Optimization , Paris, France	<i>Oct 2023</i>
Journées Ateliers Laboratoire de Finance des Marchés de L'Energie , Palaiseau, France	<i>Sep 2023</i>
33rd International Conference on the Analysis of Algorithms (AofA) , Philadelphia, USA (video link)	<i>Jun 2022</i>

REVIEWING:

NeurIPS, ICML, Optimization (journal)

SCIENTIFIC FORMATIONS:

Conference StatMathAppli , Fréjus, France	<i>Sep 2023</i>
Reinforcement Learning Summer School , Barcelona, Spain	<i>Jun 2023</i>
EECI 2023 International Graduate School on Control , Paris, France	<i>Feb 2023</i>