Bianca Marin Moreno

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EDUCATION

• Ph.D. in Applied Mathematics Inria - THOTH and EDF R&D Grenoble and Paris, France

2022 - 2025

Supervision: Pierre Gaillard, Nadia Oudjane and Margaux Brégère

Subject: Learning methods for mean-field models: application to electricity consumption control.

• Masters 2 MVA - "Mathematics, Vision and Learning"

Paris, France

École Normale Supérieure Paris Saclay

2021 - 2022

M.Sc.in Applied Mathematics with focus in Machine Learning

Relevant coursework: Reinforcement learning, sequential learning, convex optimisation, kernel methods, optimal transport, random matrices, graphs in machine learning.

• École Polytechnique

Paris, France

X2018 Ingénieur polytechnicien

M.Sc. and B.S. in Applied Mathematics.

2019 - 2021

• University of Campinas (Unicamp)

Campinas, Brazil

B.S. Mathematics & Physics

2016 - 2018

Publications and Preprints

• Efficient Model-Based Concave Utility Reinforcement Learning through Greedy Mirror Descent Marin Moreno, Bianca; Brégère, Margaux; Gaillard, Pierre; Oudjane, Nadia 27th International Conference on Artificial Intelligence and Statistics (AISTATS) 2024

• Reimagining Demand Side Management with Mean Field Learning

Marin Moreno, Bianca; Brégère, Margaux; Gaillard, Pierre; Oudjane, Nadia Under revision

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

Marin Moreno, Bianca; Fricker, Christine; Mohamed, Hanene; Philippe, Amaury; Trépanier, Martin. 33rd International Conference on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithms (AofA2022)

RESEARCH TALKS

• PGMO days 2023 EDF R&D

Paris, France

Nov 2023

• SESO 2023 International Thematic Week

École des Ponts

Paris, France

Oct 2023

• Workshop days of the Energy Markets Finance Laboratory (FIME)

EDF R&D

Paris, France Sep 2023

May 2023

• Inria THOTH team seminar

Inria Grenoble

Grenoble, France

AofA 2022 Philadelphia, USA

University of Pennsylvania

Jun~2022

Work Experience

• EDF R&D

Paris, France

Apr 2022 - Oct 2022

Research and Development Subject: Sequential learning methods for mean-field models: application to power

consumption control.

Advisors: Nadia Oudjane, Pierre Gaillard and Margaux Brégère.

• Inria DYOGENE and Polytechnique Montréal

Paris, France

Research Apr 2021 - Aug 2021

Subject: Stochastic modelisation and data analysis of the incentive policy of a car-sharing system by Markov processes and mean-field analysis.

Advisors: Christine Fricker and Martin Trépanier.

Prizes: Research internship prize from Ecole Polytechnique.

• PathControl

Research and Development **Tasks:** Responsible for developing and implementing algorithms for well drilling.

Also implemented a graphical interface joined into the company software.

Paris, France

Jun 2020 - Aug 2020

• Unicamp - Quantum Mechanics Group MathFoundQ

Research

Subject: Research project on a graph approach to quantum correlations.

Advisor: Marcelo T. Cunha.

Teaching

• Teaching assistant in Time Series

Master 1 level, Institut Polytechnique de Paris

Instructor: Yannig Goude

• Teaching assistant in Mathematical Analysis

Bacehlor level, Unicamp

Instructor: Paulo Ruffino

Training courses • StatMatAppli 2023

Conference on statistics Reinforcement Learning Summer School

In-depth introduction to Reinforcement Learning EECI 2023 International Graduate School on Control

Multi-agent optimization and learning: resilient and adaptative solutions

Frejus, France Sep 2023 - Sep 2023

Barcelona, Spain

Campinas, Brazil Jan. 2018 - Dec. 2018

Paris, France

Feb 2023 - Apr 2023

Campinas, Brazil Mar 2017 - Jul. 2017

Jun 2023 - Jul 2023

Paris-Saclay, France

Feb 2023 - Feb 2023

Computer Skills

• Programming Languages: Python, R, Latex, MATLAB, AMPL

LANGUAGES

o Portuguese: Native Speaker

• English: Fluent — Grade A in "First Certificate in English", Cambridge
• French: Fluent — Test de Connaissance du Français (TCF): C1