Lorenzo CROISSANT
Postdoc, Ph.D. in Applied Mathematics

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🎓 CURSUS

2026 | **Ramon-Llull AIRA Postdoctoral Fellow, AI&ML GROUP, UNIVERSITAT POMPEU FABRA, Barcelona, Spain**
Under the supervision of Anders Jonsson and Gergely Neu.
> Research and supervision on Reinforcement Learning, bandits, optimal transport, and confidence sequences.

2025 —24 | **Postdoc, ENSAE, CREST & INRIA (FAIRPLAY TEAM), Palaiseau, France**
Under the supervision of Vianney Perchet.
> TA in Mathematics, Statistics, and Machine Learning
> Research in Reinforcement Learning, Bandits, and Optimal Transport
> Research and supervision on algorithms with predictions, Prophet inequalities, and Hawkes processes.

2023 —20 | **PhD in Mathematics, UNIVERSITÉ PARIS DAUPHINE-PSL, CEREMADE; CRITEO AI LAB, Paris, France**
🔗 *Diffusion limit control and Reinforcement Learning.*
Under the supervision of Bruno Bouchard (CEREMADE) & Marc Abeille (Criteo AI Lab)
> Stochastic control and diffusive limits of pure jump processes
> Partial Differential Equations, HJB equations, viscosity solutions
> Online non-episodic Reinforcement Learning
> Auction Theory

2019 | **Researcher, CRITEO AI LAB, Paris, France**
> Research in Auction Theory and Online Learning [7]
> Research on Reinforcement Learning Theory

'18–'19 | **Research Master's** (M2), **École Normale Supérieure Paris-Saclay**; Paris, France. MVA : Mathematiques, Vision, Apprentissage. Thesis : *Dynamic reserve in second-price auctions*, under Marc Abeille (Criteo AI Lab).

'14–'18 | **Master of Science (MSci)**, **University of Lancaster**; Lancaster, United Kingdom.

📖 PUBLICATIONS

[1] Lorenzo Croissant. *Bandit Optimal Transport*. Feb. 2026. URL: `https://hal.science/hal-04938170`.

[2] Remi Verronneau et al. "FeatHawkes: Scalable Feature-Based Attribution For Temporal Event Data". Feb. 2026. URL: `https://hal.science/hal-05284437`.

[3] Ziyad Benomar et al. *Pareto-Optimality, Smoothness, and Stochasticity in Learning-Augmented One-Max-Search*. Ed. by Aarti Singh et al. 13–19 Jul 2025.

[4] Marc Abeille, Bruno Bouchard, and Lorenzo Croissant. "Diffusive limit approximation of pure jump optimal ergodic control problems". en. In: *Stochastic Processes and their Applications* 181 (Mar. 2025), p. 104536.

[5] Lorenzo Croissant, Marc Abeille, and Bruno Bouchard. "Near-continuous time Reinforcement Learning for continuous state-action spaces". In: *Proceedings of the 35th International Conference on Algorithmic Learning Theory*. Vol. 237. San Diego, CA: PMLR, Mar. 2024, pp. 444–498.

[6] Marc Abeille, Bruno Bouchard, and Lorenzo Croissant. "Diffusive limit approximation of pure-jump optimal stochastic control problems". In: *Journal of Optimization Theory and Applications* 196.1 (2023), pp. 147–176.

[7] Lorenzo Croissant, Marc Abeille, and Clement Calauzenes. "Real-Time Optimisation for Online Learning in Auctions". In: *Proceedings of the 37th International Conference on Machine Learning*. Ed. by Hal Daumé III and Aarti Singh. Vol. 119. Proceedings of Machine Learning Research. PMLR, July 2020, pp. 2217–2226.

🏆 Awarded grants

2025 **Ramon-Llull AIRA Postdoctoral Fellowship**, MSCA COFUND program, jointly by the European Union and the government of Catalonia, Spain. Awarded fully funded scholarship for a 3-year postdoctoral position at Universitat Pompeu Fabra, ranked first on the project call and fifth across all 15 awarded projects.

CIRM research in residence, Société Mathématique Appliquées et Industrielles (SMAI), France. Awarded full scholarship and travel for a week-long research stay at CIRM, in collaboration with Marius Potfer.

2024 **Soutien aux manifestations scientifiques**, Fondation Mathématique Jacques Hadamard, France. Awarded 3000€ for the organisation of the ML/Fin Workshop.

BOUM project, Société Mathématique Appliquées et Industrielles (SMAI), France. Awarded 1000€ for the for the organisation of the ML/Fin Workshop.

2022 **BOUM project**, Société Mathématique Appliquées et Industrielles (SMAI), France. Awarded 1000€ for the for the organisation of CEREMADE young researchers' winter school.

💬 Research Talks and Posters

2025 **Ellis Unconference**, Copenhagen, Denmark; Invited talk, 20', [1].
EWRL, Tübingen, Germany; Poster, [1].
FairPlay Retreat, Fréjus, France; 30', [1].
ICML, Vancouver, Canada; Poster, [3].
University of Tübingen, Tübingen, Germany. Invited talk, 45', [1].

2024 **ML/Fin Workshop**, Aussois, France. Mini-course, 3x45'.
FairPlay Autumn School, Aussois, France. 45'.
Mathematical and Computational Finance seminar, Oxford, UK. Invited talk, 45', [5].
ALT, San Diego, USA. Oral, 12', [5].
Workshop ANR Reliscorp, Paris, France. Invited talk, 45', [5].
Séminaire Bachelier (PhD student days), Paris, France. Invited talk, 20', [5].

2023 **FairPlay Autumn School**, St.-Pierre-Canivet, France. 45', [5].
EWRL, Vrije Universiteit Brussels, Brussels, Belgium. Poster, [5].
FiME Summer School, Aussois, France. 45', Invited talk, [5]
CEREMADE Young Researchers' Summer School; Université Paris-Dauphine, Paris, France. 50'.
Quantmetry, Paris, France. Invited talk, 45', [7].
CEREMADE 3rd years' Day, Université Paris-Dauphine, Paris, France. 10', [4].

2022 **Young Researchers' Seminar of LPSM**, Sorbonne Université, Paris, France. Invited talk, 45', [4].
EDF Labs, Palaiseau, France. 150', [4, 6, 5].
Paris-London Bachelier Workshop; Institut Henri Poincaré, Paris, France. 15', [4]
CEREMADE Young Researchers' Winter School, St.-Pierre-Canivet, France. 60'.

2020 **CMStatistics**, Virtual. Oral; 20', [7].
ICML, Virtual. Poster; 15', [7].

📋 Organisational Responsibilities

COLT Women in Machine Learning (WiML) event   June '25

Co-organising (with Claire Vernade) an over-lunch social and networking event for women in machine learning. Organised ice breaker activities, and handled on site logistics.

ML/Fin Workshop on Mathematical insights from markets, control, and learning.   September '24

🔗 Web Page

Organisation of a 5-day conference for 27 young researchers in applied mathematics, finance and computer science. Secured funding for 19k€ in grants and partnerships. Set up scientific and organisational committee, selected and invited speakers, and created the program. As part of a three-person organizing committee.

FairPlay Reading Group   Aug. '23 – Aug. '25

Organising a reading group for about fifteen people. Planning, including managing scheduling constraints, room booking. Scientific program, including book selection, pedagogical breakdown, and chapter distribution.

FairPlay Autumn School   October '23

Advising and supporting the organization of a 3-day retreat for 25 researchers (faculty, postdocs, Ph.D. students) based on the experience from the following point.

CEREMADE Young Researchers' Winter School March '22
🔗 Web Page
Organizing a 5-day retreat for 30 young researchers in applied mathematics. Budget management, including accommodation and transportation selection, requesting and comparing quotes, and obtaining funding. Organizing the scientific program, including format choices, thematic composition, speaker selection, registration and logistical management. As part of a three-person organizing committee.

Criteo AI Lab Ph.D. Seminar '19 – '20
Organizing a seminar for Ph.D. students, including planning, speaker selection, and inviting external speakers. Setting up and managing a virtual solution (COVID-19).

🏃 Participation in Scientific Events

🗨 Conferences

Feb. '26	**Mannheim mini-workshop on Reinforcement Learning**, University of Mannheim, Germany.
Dec. '25	**EurIPS and Ellis Unconference**, Copenhagen, Denmark.
Dec. '25	**EurIPS and Ellis Unconference**, Copenhagen, Denmark.
Sept. '25	**EWRL**, Tübingen, Germany.
July '25	**ICML**, Vancouver, Canada.
June '25	**COLT**, Lyon, France.
Oct. '24	**EWRL**, Université Toulouse 1 Capitole, Toulouse, France.
Sep. '24	**ML/Fin Workshop on Mathematical insights from markets, control, and learning**, Centre Paul Langevin, Aussois, France.
Dec. '23	**From matchings to markets. A tale of Mathematics, Economics and Computer Science**, CIRM, Luminy, France.
Sept. '23	**EWRL**, Vrije Universiteit Brussels, Bruxelles, Belgium.
June. '23	**FiME Summer School on Big Data and Finance**, Centre Paul Langevin, Aussois, France.
Sept. '22	**Advances in Stochastic Control and Optimal Stopping with Applications in Economics and Finance**, CIRM, Luminy.
June '21	**Summer School "Distributed control : Decentralization and Incentives"**, CIRM, Luminy.
Dec. '20	**CMStatistics**, Virtuel.
Jui. '20	**ICML**, Virtuel.

📅 Seminars

'24-'25	**FairPlay Seminar**, Inria, Palaiseau.
'24-'25	**CREST Statistics Seminar**, ENSAE, Palaiseau.
'20-'23	**Analysis-Probability Seminar**, CEREMADE, Université Paris-Dauphine.
'20-'23	**Probability-Statistics Seminar**, CEREMADE, Université Paris-Dauphine.
'21-'23	**FDD-FiME Seminar**, Institut Henri Poincaré.
'21-'23	**Young Researchers' Seminar**, CEREMADE, Université Paris-Dauphine.
'19-'20	**Ph.D. Students' Seminar**, Criteo AI Lab.

⚖ Reviewing

- International Conference on Machine Learning, Reviewer, 2020, 2021, 2025, 2026
- Artificial Intelligence and Statistics (AISTATS), Reviewer, 2020
- International Colloquia on Automata, Languages and Programming (ICALP), Reviewer, 2022
- Journal of Optimisation Theory and Applications, Reviewer
- ESAIM Control, Optimisation, and Calculus of Variations, Reviewer
- Finance and Stochastics, Reviewer
- Dynamic Games And Applications, Reviewer

🌐 Languages

French ●●●●●
English ●●●●●

➕ Code

- Python
- R
- LaTeX
- Jekyll