

Hector Kohler
hector.kohler@inria.fr
[kohlerhector.github.io/homepage/
github](https://kohlerhector.github.io/homepage/github)

Education

2022-2025* **Ph.D.**, Interpretable and Reproducible Reinforcement Learning (RL), Université de Lille
2020-22 **M.Sc.**, Artificial Intelligence *Excellence Track*, Sorbonne Université
2016-20 **B.Sc.**, Computer Science & Mathematics, University of Manchester

Research Experience

2025 Visiting Researcher designing new RL algorithms and evaluation tools, [RLAI Lab](#), University of Alberta, (Advisor: [Dr. A. White](#))
2021 Research Assistant working on unmanned underwater drone control, [Lab-STICC](#), ENSTA, (Advisors: [Pr. B. Clement](#) and [G. Le Chenadec](#))
2020-2021 Research Assistant working on Reinforcement Learning, [ISIR](#), Sorbonne Université, (Advisor: [Pr. O. Sigaud](#))

Awards & Honors

2025 [Université de Lille International Mobility Grant](#) (1650 €)
2022 [AI_PhD Lille](#) (Competitive admission to fully funded Ph.D. program)
2022 Sorbonne Université Computer Science Excellence diploma (10/400 students)

Publications

 [Google Scholar](#)

Journal Articles

- J1. Mathieu, T., Medeiros Centa, M., Della Vecchia, R., **Kohler, Hector**, Shilova, A., Maillard Maillard, O.-A. & Preux, P. AdaStop: adaptive statistical testing for sound comparisons of Deep RL agents. *Transactions on Machine Learning Research* (2024).
- J2. **Kohler, Hector**, Clement, B., Chaffre, T. & Le Chenadec, G. PID Tuning using Cross-Entropy Deep Learning: a Lyapunov Stability Analysis. *IFAC-PapersOnLine* (2022).

*Expected.

Peer-reviewed Conference Proceedings

- C1. **Kohler, Hector**, Akrou, R. & Preux, P. *Breiman meets Bellman: Non-Greedy Decision Trees with MDPs* in *Proceedings of the 31st ACM SIGKDD Conference on Knowledge Discovery and Data Mining* (2025).

Posters

- P1. **Kohler, Hector**, Delfosse, Q., Radji, W., Akrou, R. & Preux, P. *Evaluating Interpretable Reinforcement Learning by Distilling Policies into Programs* Workshop on Programmatic Reinforcement Learning (Edmonton, Canada). 2025.
- P2. **Kohler, Hector**, Delfosse, Q., Akrou, R., Kersting, K. & Preux, P. *Interpretable and editable programmatic tree policies for reinforcement learning* 17th European Workshop on Reinforcement Learning (Toulouse, France). 2024.

Tools & Software

Reinforcement Learning

In short I consider myself an expert in prototyping new RL algorithms with the `stable-baselines3` API and benchmarking them on clusters.

[Core contributor to `rlberry`](#): PyTorch implementation of deep reinforcement learning agents. Compatibility with `stable-baselines3`. Advanced training analysis with robust stats. Usage of git for development and continuous integration. Organized hackhatons.

[Maintainer of a set of fully-transparent control policies for games and robots](#): inspired by the `stable-baselines3-zoo` and the `gymnasium` API.

[designed statistical test for the reliable and cheap comparison and benchmarking of RL.](#)

Supervised Learning

[Maintainer of my own `scikit-learn` estimator](#): I developped DPDT, a decision tree induction algorithm which is SOTA for tabular problems.

Teaching

Ecole Normale Supérieure de Cachan (MVA)

2024 Assistant Instructor, Reinforcement Learning (6 hours)

Centrale Lille

2024 Assistant Instructor, Sequential Decision Making (6 hours)

Université de Lille

2023-2024 Assistant Instructor, Algorithms and Programming (60 hours)
2022 Assistant Instructor, Reinforcement Learning (24 hours)

Academic Advising

Graduate

2023 Veronika Shilova, Ecole Polytechnique, Entropy-regularized RL
2023 Quentin Dinel, Université de Lille, Image Segmentation
2023 Mathieu Medeng Essia, Centrale Lille, Imitation Learning
2023 Antonio Al-Makdissi, Centrale Lille, Object-centric Atari Learning
2023 Gabriele Maggioni, Centrale Lille, Model-Based Reinforcement Learning

Academic Service

Conference Reviewer

2025 ICLR, RLC, AISTATS, ICML
2024 NeurIPS

Chairing

2024 Organized the [InterpPol](#) workshop at the first Reinforcement Learning Conference in Amherst (USA).

Responsibilities

2023-2025 Elected representative of Ph.D. students and Postdocs at the CRISAL laboratory (Université de Lille).

Other Experience

2018 Analyst Intern, **Barclays**, Radbroke (UK)
2017 AI Intern for A350 maintenance, **Airbus**, Madrid (Spain)

Last updated: June 19, 2025