

Positions

- 2024-now **Postdoctoral researcher**, *Inria Universit   de C  t   d'Azur - PreMeDICAL team*, Montpellier, France
- 2021-2024 **Ph.D. student**, *Inria Saclay - Mind team*, Palaiseau, France
- April 2021 - **Internship**, *Inria Saclay*, Palaiseau, France
- September 2021 ○ Advisors: Samuel Vaite  , Thomas Moreau and Pierre Ablin
- 2021 ○ Subject: Stochastic bilevel optimization for hyperparameter selection
- May 2020 - **Internship**, *EDF R&D*, Chatou, France
- November 2020 ○ Advisors: Alexandre Girard, Yannig Goude, Giorgio Simonini
- 2020 ○ Subject: Machine learning for nuclear unit control

Education

- 2021-2024 **Ph.D. student in Mathematics & Computer Science**, *Inria Saclay & Universit   Paris-Saclay*, Palaiseau, France
- Advisors: Samuel Vaite  , Thomas Moreau and Pierre Ablin
- Subject: Contributions to stochastic bilevel optimization
- 2020-2021 **M.Sc. Mathematics, Vision, Learning**, *  cole Normale Sup  rieure Paris-Saclay*, Gif-Sur-Yvette, France
- 2019-2020 **First year in Master's degree in Mathematics**, *Sorbonne Universit  *, Paris, France
- Remote track - Probabilities, statistics, dynamic systems, functional analysis, stochastic calculus and stochastic control
- 2018-2019 **Bachelor's degree in Mathematics**, *Sorbonne Universit  *, Paris, France
- Remote track, with highest honour
- 2017-2020 **Engineering degree**, *  cole Centrale de Nantes*, Nantes, France
- 2014-2017 **Classes pr  paratoires**, *Lyc  e Michel Montaigne*, Bordeaux, France

Publications

International Conferences

1. **M. Dagr  ou**, T. Moreau, S. Vaite  ., P. Ablin. A Lower Bound and a Near-Optimal Algorithm for Bilevel Empirical Risk Minimization. In *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2024.
2. **M. Dagr  ou**, P. Ablin, S. Vaite  ., T. Moreau. A framework for bilevel optimization that enables stochastic and global variance reduction algorithms. In *Advances in Neural Information Processing Systems (NeurIPS)*, **Oral equivalent paper (Top 2%)**, 2022.
3. T. Moreau, M. Massias, A. Gramfort, Pierre Ablin, P.-A. Bannier, B. Charlier, **M. Dagr  ou**, T. Dupre la Tour, G. Durif, C. F Dantas, Q. Klopfenstein, J. Larsson, E. Lai, T. Lefort, B. Mal  zieux, B. Moufad, B. T Nguyen, A. Rakotomamonjy, Z. Ramzi, J. Salmon, S. Vaite  . Benchopt: Reproducible, efficient and collaborative optimization benchmarks. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2022.

National Conferences

1. **M. Dagr  ou**, T. Moreaux, S. Vaite  , P. Ablin. Borne inf  rieure de complexit   et algorithme quasi-optimal pour la minimisation de risque empirique bi-niveaux. In

- XXIXème Colloque Francophone de Traitement du Signal et des Images GRETSI, 2023.
2. **M. Dagr  ou**, P. Ablin, S. Vaite  r, T. Moreau. Algorithmes stochastiques et r  duction de variance gr  ce    un nouveau cadre pour l'optimisation bi-niveaux. In *XXVIII  me Colloque Francophone de Traitement du Signal et des Images GRETSI*, 2022.

Miscellaneous

1. **M. Dagr  ou**, P. Ablin, S. Vaite  r., T. Moreau. How to compute Hessian-vector products?. In *ICLR blogpost track*, **Highlight (top 10%)**, 2024, <https://iclr-blogposts.github.io/2024/blog/bench-hvp/>.

Other activities

Teaching

2023 **Optimization**, *CentraleSupelec*, Teaching assistant

Reviewing

2025 **Transactions on Machine Learning Research (TMLR)**, *Journal*, Reviewer
 2025 **International Conference on Machine Learning (ICML)**, *Conference*, Reviewer
 2024 **Neural Information Processing Systems (NeurIPS)**, *Conference*, Reviewer
 2024 **Journal of Machine Learning Research (JMLR)**, *Journal*, Reviewer
 2024 **International Conference on Machine Learning (ICML)**, *Conference*, Reviewer
 2023 **EEE Signal Processing Magazine**, *Journal*, Reviewer
 2023 **Conference on Artificial Intelligence and Statistics (AISTATS)**, *Conference*, Reviewer
 2023 **Journal of Machine Learning Research (JMLR)**, *Journal*, Reviewer
 2023 **Neural Information Processing Systems (NeurIPS)**, *Conference*, Reviewer
 2023 **International Conference on Machine Learning (ICML)**, *Conference*, Reviewer
 2022 **Machine Learning**, *Journal*, Reviewer

Achievements

2023 **Top Reviewer**, *NeurIPS 2023*, (Top 10%)
 2023 **TICS Doctoral School of Paris-Saclay prize**

Communication

2025-02 Talk at Machine Learning in Montpellier, Theory & Practice (Montpellier): *Bilevel optimization for machine learning*
 2024-06 Talk at STIC doctoral day (Gif-sur-Yvette): *A framework for bilevel optimization that enables stochastic and global variance reduction algorithms*
 2024-05 Poster Session at AISTATS (Valencia): *A lower bound a near-optimal algorithm for bilevel empirical risk minimization*
 2023-09 Poster Session at GRETSI (Grenoble): *A lower bound a near-optimal algorithm for bilevel empirical risk minimization*
 2023-06 Poster Session at the workshop "Optimization and machine learning (Toulouse): *A lower bound a near-optimal algorithm for bilevel empirical risk minimization*
 2023-02 Talk at Center of Data Science (ENS): *A framework for bilevel optimization that enables stochastic and global variance reduction algorithms*
 2022-12 Poster Session at NeurIPS (New Orleans): *A framework for bilevel optimization that enables stochastic and global variance reduction algorithms*
 2022-11 Poster Session at NeurIPS@Paris (Paris): *A framework for bilevel optimization that enables stochastic and global variance reduction algorithms*
 2022-10 Poster Session at GDR MOA (Nice): *A framework for bilevel optimization that*

- enables stochastic and global variance reduction algorithms*
- 2022-09 Poster Session at GRETSI (Nancy): *A framework for bilevel optimization that enables stochastic and global variance reduction algorithms*
- 2022-06 Poster Session at Curves and Surfaces (Arcachon): *A framework for bilevel optimization that enables stochastic and global variance reduction algorithms*
- 2022-04 Talk at the Parietal Meeting: *A framework for bilevel optimization that enables stochastic and global variance reduction algorithms*
- 2022-03 Talk at Proba-Stat seminar (LJAD Nice):: *A framework for bilevel optimization that enables stochastic and global variance reduction algorithms*
- 2022-03 Talk at the Miles team seminar (LAMSADÉ): *A framework for bilevel optimization that enables stochastic and global variance reduction algorithms*