Mathieu Dagréou

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matdag.github.io

Positions

2024-now **Postdoctoral researcher**, *Inria Université de Côte d'Azur - PreMeDICaL team*, Montpellier, France

2021-2024 **Ph.D. student**, *Inria Saclay - Mind team*, Palaiseau, France

April 2021 - September 2021 **Internship**, *Inria Saclay*, Palaiseau, France
- Advisors: Samuel Vaiter, Thomas Moreau and Pierre Ablin
- Subject: Stochastic bilevel optimization for hyperparameter selection

May 2020 - November 2020 **Internship**, *EDF R&D*, Chatou, France
- Advisors: Alexandre Girard, Yannig Goude, Giorgio Simonini
- Subject: Machine learning for nuclear unit control

Education & Diplomas

2025 **CNU Qualification for Associate Professor (MCF)**, *Section 26 (Applied Mathematics)*

2021-2024 **Ph.D. student in Mathematics & Computer Science**, *Inria Saclay & Université Paris-Saclay*, Palaiseau, France
- Advisors: Samuel Vaiter, Thomas Moreau and Pierre Ablin
- Subject: Contributions to stochastic bilevel optimization

2020-2021 **M.Sc. Mathematics, Vision, Learning**, *École Normale Supérieure Paris-Saclay*, Gif-Sur-Yvette, France

2019-2020 **First year in Master's degree in Mathematics**, *Sorbonne Université*, Paris, France
Remote track - Probabilities, statistics, dynamic systems, functional analysis, stochastic calculus and stochastic control

2018-2019 **Bachelor's degree in Mathematics**, *Sorbonne Université*, Paris, France
Remote track, with highest honour

2017-2020 **Engineering degree**, *École Centrale de Nantes*, Nantes, France

2014-2017 **Classes préparatoires**, *Lycée Michel Montaigne*, Bordeaux, France

Publications

International Conferences

1. **M. Dagréou**, T. Moreau, S. Vaiter., 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. Dagréou**, P. Ablin, S. Vaiter., 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. Dagréou**, T. Dupre la Tour, G. Durif, C. F Dantas, Q. Klopfenstein, J. Larsson, E. Lai, T. Lefort, B. Malézieux, B. Moufad, B. T Nguyen, A. Rakotomamonjy, Z. Ramzi, J. Salmon, S. Vaiter. Benchopt: Reproducible, efficient and collaborative optimization benchmarks. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2022.

Preprint

1. L. Bleistein, **M. Dagréou**, F. de Lima Andrade, T. Boudou, and A. Bellet. *Optimal Transport under Group Fairness Constraints*. arXiv preprint, 2026.

National Conferences

1. **M. Dagréou**, T. Moreaux, S. Vaiter, P. Ablin. Borne inférieure de compléxité 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. Dagréou**, P. Ablin, S. Vaiter, T. Moreau. Algorithmes stochastiques et réduction de variance grâce à un nouveau cadre pour l'optimisation bi-niveaux. In *XXVIIIème Colloque Francophone de Traitement du Signal et des Images GRETSI*, 2022.

Workshop paper

1. L. Bleistein, **M. Dagréou**, F. de Lima Andrade, T. Boudou, and A. Bellet. *Optimal Transport under Group Fairness Constraints*. EurIPS workshop *Unifying Perspectives on Learning Biases*. 2025, `https://openreview.net/forum?id=FAi7sNLS9w`

Miscellaneous

1. **M. Dagréou**, P. Ablin, S. Vaiter, and 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/`

Awards

2023 **Top Reviewer**, *NeurIPS 2023*, (Top 10%), `https://neurips.cc/Conferences/2023/ProgramCommittee`

2023 **TICS Doctoral School of Paris-Saclay prize**, *https://www.universite-paris-saclay.fr/ecoles-doctorales/sciences-et-technologies-de-linformation-et-de-la-communication-stic*

Teaching

2023 **Optimization**, *CentraleSupelec*, Teaching assistant
- 2nd year of engineering program at CentraleSupelec, Master's level (M1)
- Supervision of tutorial sessions and practical labs on Matlab, grading of assignments

Reviewing service

Journals
- Transactions on Machine Learning Research (2025)
- Journal of Machine Learning research (2023, 2024, 2025)
- IEEE Signal Processing Magazine (2023)
- Machine Learning (2022)

Conferences
- International Conference on Learning Representations (2025)
- Neural Information Processing Systems (2023, 2024, 2025)
- International Conference on Machine Learning (2023, 2024, 2025)
- Conference on Artificial Intelligence and Statistics (2023, 2025)

Workshop
- Privacy-Preserving Machine Learning Workshop at EurIPS 2025 (2025)

Communication

2025-02 Talk at MAGNET team seminar (Lille): *Bilevel optimization for machine learning*

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 (LAMSADE): *A framework for bilevel optimization that enables stochastic and global variance reduction algorithms*

Computer skills

Language Python

Tools Unix, Git, LaTeX, SLURM

Languages

French Native speaker

English Fluent

Spanish Fluent