Mathieu Dagréou

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matdag.github.io

Education

2021-Present **Ph.D. student in Mathematics & Computer Science**, *Inria Saclay & Université Paris-Saclay*, Palaiseau, France
- Advisors: Samuel Vaiter, Thomas Moreau and Pierre Ablin

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

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

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

Experience

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

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.

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.

Other activities

Teaching

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

Reviewing

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

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*