

Paul Mangold

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Education

- 2020–2023 **PhD Student**, *Inria Lille*.
Privacy-perserving decentralized optimization for machine learning.
Supervisors: Marc Tommasi et Aurélien Bellet.
- 2018–2019 **Agrégation de mathématiques option informatique**, *Université Lyon 1*.
- 2017–2018 **Master 2 Data Sciences**, *École Polytechnique*.
- 2015–2017 **Bachelor et Master 1 of Fundamental Computer Science**, *ENS de Lyon*.
- 2013–2015 **Preparatory School for French Engineering Schools MPSI-MP***, *Lycée du Parc*.

Teaching

- 2020–2022 **Course and tutorials in Bachelor and Master**, *Université de Lille, France*.
TD de sciences de données en M1 Informatique
Cours et TD de graphes et machine learning en L3 MIASHS.
- 2020–2021 **Supervision of a Student Research Project**, *Université de Lille, France*.
- 2016–2017 **Weekly oral examiner**, *Lycée la Martinière Diderot, Lyon, France*.

Research Internships

- 2020 **CHU (projet INCLUDE)**, *Lille, France*, Proof of concept of federated learning on medical data..
4 mois
- 2019–2020 **INRIA (équipe MAGNET)**, *Lille, France*, Private and federated optimization for machine learning.
6 mois
- 2018 **Weierstrass Institute**, *Berlin, Allemagne*, Numerical methods for unbalanced optimal transport.
3 mois
- 2017 **KU Leuven – Kulak**, *Courtrai, Belgique*, Development of a parameterized framework for evaluating machine learning on yeast gene expression network.
3 mois
- 2016 **Institut Rhônalpin des Systèmes Complexes**, *Lyon, France*, Analysis of sociolinguistic relation between language and social networks on a database of tweets.
2 mois

Technical Skills

- OS Linux and Windows.
- Text \LaTeX , Emacs and LibreOffice.
- Languages Python, C/C++, Cython, Julia, R...

Languages

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|----------|-------------------------|----------|-----|
| Français | Mother tongue. | Russe | B2. |
| Anglais | C1 (CAE 2017: 199/210). | Allemand | B1. |

Interests

Free software, cooking, environment, biking, chess, electronic music.

Publications

- *High-Dimensional Private Empirical Risk Minimization by Greedy Coordinate Descent*, with Aurélien Bellet, Joseph Salmon and Marc Tommasi, Preprint, 2022.
- *Differentially Private Coordinate Descent for Composite Empirical Risk Minimization*, with Aurélien Bellet, Joseph Salmon and Marc Tommasi, ICML 2022.
- *Specifications for the Routine Implementation of Federated Learning in Hospitals Networks*, with Antoine Lamer, Alexandre Filiot, Yannick Bouillard, Paul Andrey and Jessica Schiro, MIE 2022.
- *A decentralized framework for biostatistics and privacy concerns*, with Alexandre Filiot, Mouhamed Moussa, Vincent Sobanski, Grégoire Ficheur, Paul Andrey, Antoine Lamer, EFMI STC 2021.
- *Optional realization of the French negative particule (ne) on Twitter: Can big data reveal new sociolinguistic patterns?*, with Jean-Pierre Chevrot, Eric Fleury, Márton Karsai, Jean-Philippe Magué, Aurélie Nardy, Julie Peuvergne, ICLAVE, 2017