Clément Berenfeld | CV

(DE) +49 1525 1014373 • (FR) +336 32 77 94 32 • clement.berenfeld@gmail.com
cberenfeld.github.io

Experience

- **Postdoctoral Researcher at the University of Potsdam**, topics in unsupervised learning. **Potsdam**
  Under the supervision of Prof. A. Carpentier. *2022–today*
- **Research Engineer at Signactif.** **Bagneux**
  Machine Learning applied to crowd motion and user preferences prediction. *2017*

Education

- **PhD. thesis**, *Statistical inference on unknown manifolds*. Defended on 20th September, 2022. **Paris**
  Under the supervision of Prof. M. Hoffmann, CEREMADE, Université Paris-Dauphine. *2019–2022*
- **Master** at Université Paris-Saclay, *Statistics and Machine Learning*. Highest Honor. **Orsay**
  Research internship under the supervision of Prof. E. Arias-Castro at UCSD, San Diego. *2017–2018*
- **École Normale Supérieure**, rue d'Ulm. **Paris**
  Bachelor thesis: *Complex Multiplication Theory*, under the direction of Prof. J. Nekovar. *2014–2019*
- **Baccalauréat S**, Highest Honor. **Ussel**
  Lycée Bernart-de-Ventadour. *2012*

Honors & Awards

- **Marie-Jeanne Laurent-Duhamel Award** **French Statistical Society**
  Best PhD, awarded every three years. *2023*
- **Humboldt Fellowship** (declined) **Humboldt Fundation**
  For a project in active learning with application to chemical kinetics. *2023*

Articles & Preprints

- **Computational seriation of Toeplitz matrices** (2024), with A. Carpentier and N. Verzelen. *In preparation*.
- **A Theory of Stratification Learning** (2024), with E. Aamari. *In revision*.
- **Predictable recovery rates in near-surface materials after earthquake damage** (2024), with L. Illien, J.M. Turowski, , C. Sens-Schönfelder, and N. Hovius. *In revision*.
- **Theoretical Foundations of Ordinal Multidimensional Scaling, Including Internal and External Unfolding** (2023), with E. Arias-Castro and D. Kane. *In revision*.
- **Optimal Reach Estimation and Metric Learning** (2023), with E. Aamari and C. Levrard. *Annals of Statistics*.
- **Estimating a density near an unknown manifold: a Bayesian nonparametric approach** (2022), with P. Rosa, J. Rousseau. *In revision*.
- **Estimating the Reach of a Manifold via its Convex Defect Function** (2022), with J. Harvey, M. Hoffmann and K. Shankar. *Discrete and Computational Geometry*.
- **From Graph Centrality to Data Depth** (2021), with E. Aamari and E. Arias-Castro. *ALEA*.
- **Density Estimation on an Unknown Submanifold** (2021), with M. Hoffmann. *Electronic Journal of Statistics*.
- **Some Random Paths with Angle Constraints** (2021), with E Arias-Castro. *AIHP Probability & Statistics*.

Technical and Personal skills

Programming skills : Python (incl. PyTorch, Pyro), R.
Spoken languages : French (mother tongue), English (fluent), German (beginner).

Other interests

Brazilian Jiu-Jitsu, Rock climbing, Music production.