Ernest van Wijland

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Education

- **PhD Computer Science** — **IRIF, Université Paris-Cité**
  Paris, France — *2024 – Present*
  - PhD student under Claire Mathieu (CNRS) and Vincent Cohen-Addad's (Google Research) supervision.
- **MSc Computer Science, BSc Mathematics** — **École Normale Supérieure**
  Paris, France — *2020 – 2024*
  - Graduated both the MSc (MPRI) and the BSc (double major in Mathematics and Computer Science) with highest honors.
- **Preparatory Class** — **Lycée Louis-le-Grand**
  Paris, France — *2018 – 2020*

Publications

- **Efficient Prover–Estimator Debate via Signed Level-Set Optimization** — **In Submission**
  Springer, Van Wijland — *2026*
- **TCS-Bench: Benchmarking State-of-the-Art Generative AI TCS Research Ability** — **In Submission**
  *Cohen-Addad *, Paparas *, Van Wijland *, Springer, Canitrot-Paradis,*
  Lin, Woodruff, Kumarappan, Jayaram, Das, Jain, Svensson, Lattanzi,
  Balunovic, Weber, Mirrokni (*: co-first authors) — *2026*
- **Learning Augmented Online Multi-Level Aggregation** — **In Submission**
  Mathieu, Naor, Van Wijland — *2026*
- **Spectral Dual Fitting for k-Means** — **SODA**
  Anand, Charikar, Cohen-Addad, Gao, Grandoni, Lee, Sharma, Van Wijland — *2027*
- **A $(4+\varepsilon)$-Approximation for Euclidean k-Means via Non-Monotone Dual Fitting** — **STOC**
  Charikar, Cohen-Addad, Gao, Grandoni, Lee, Van Wijland — *2026*
- **An Improved Greedy Approximation for (Metric) k-Means** — **FOCS**
  Charikar, Cohen-Addad, Gao, Grandoni, Lee, Van Wijland — *2025*
- **Faster Approximation Scheme for Euclidean k-TSP** — **SOCG**
  Van Wijland, Zhou — *2024*
- **Maximizing Nash Social Welfare in 2-Value Instances: Delineating Tractability** — **MOOR Journal**
  Akrami, Chaudhury, Hoefer, Mehlhorn, Schmalhofer,
  Shahkarami, Varricchio, Vermande, Van Wijland — *2023*
- **Maximizing Nash Social Welfare in 2-Value Instances** — **AAAI**
  Akrami, Chaudhury, Hoefer, Mehlhorn, Schmalhofer,
  Shahkarami, Varricchio, Vermande, Van Wijland — *2022*

Experience

- **Student Researcher** — **Google Research**
  Paris — *2026*
  Worked for six months under Silvio Lattanzi and Vincent Cohen-Addad's supervision at Google Research on AI's mathematical abilities.

- **PhD Student: Clustering and Network Design** — **IRIF (Université Paris-Cité)**
  Paris, France — *2024 – Present*

  Currently working under Claire Mathieu and Vincent Cohen-Addad's supervision at IRIF on finding approximation algorithms for clustering and network design problems.
- **Research Intern: Approximating TSP generalizations** — **IRIF (Université Paris-Cité)**
  Paris, France — *2023 – 2024*

  Worked for a year under Claire Mathieu and Hang Zhou's supervision at IRIF on finding fast approximation schemes for generalizations of the TSP, in Euclidean spaces and general metric spaces.
- **Research Intern: Euclidean CVRP, k-TSP** — **LIX (Polytechnique)**
  Palaiseau, France — *2023*

  Worked for a semester under Hang Zhou's supervision in Polytechnique on finding faster approximation schemes for the Euclidean CVRP and k-TSP.
- **Research Intern: Approximating 2-WECSS** — **THL (EPFL)**
  Lausanne, Switzerland — *2022*

  Worked for a semester under Ola Svensson's supervision in the Combinatorial Optimization team at EPFL on finding a better than 2 approximation for 2-WECSS.
- **Research Intern: Fair Division for additive instances** — **AGT (Max Planck Institut)**
  Sarrebruck, Germany — *2021*

  Worked for two months under Kurt Mehlhorn's supervision in the Algorithmic Game Theory team of the MPII on the Fair Division problem for additive instances.
- **Research Intern: Spectrum of heavy-tailed random matrices** — **DMA (École Normale Supérieure)**
  Paris, France — *2021*

  Worked under Laure Dumaz' supervision on a paper by Ben Arous and Guionnet.

Academic achievements

- **Best French Developer Contest 5th place finisher**
  Paris, France — *2023*
  - French national contest in Computer Science, with thousands of participants from every major IT company
  - awarded the 5000€ Genius prize as a high scoring student
- **International Olympiad in Informatics Bronze medalist**
  Tsukuba, Japan — *2018*
- **Dutch National Olympiad in Informatics winner**
  Utrecht, Netherlands — *2018*
- **Innopolis University Olympiad in Informatics finalist**
  Innopolis, Russia — *2018*
- **International Olympiad in Informatics participant**
  Tehran, Iran — *2017*

  As part of the top 4 High-School students in the Dutch National Olympiad in Informatics.

Outreach

- **Member of the France-IOI association**
  France — *2018 – Present*

  I am involved in organizing the Castor and Algoréa contests, in which more than 700 000 students from elementary school to high-school participate every year. I am also involved in selecting and training the best students that participate in the Informatics Olympiad.
- **Member of the Netherlands-IO association**
  Netherlands — *2018 – Present*

I am involved with the computer science outreach campaign towards Dutch high-school girls and preparing the Dutch girls team for the European Girls Olympiad in Informatics.

- **Lecturer at the Moroccan Olympiad in Informatics training camp**
  Morocco *2019*
  Gave algorithms lectures to Moroccan middle-school and high-school students.

Other interests

- Active Judo black belt and Tennis player.
- Practicing piano for the past 20 years, part of the chamber music club in the ENS. Founder of the Early Music section.
- Graduated from the Juvisy Music Conservatory in Music Theory, Piano and Ensemble Playing (2018).
- Graduated ENS with a Musicology Minor.