

# Duri Andrea Janett

## Curriculum Vitae

### Research Interests

Computational complexity theory, in particular proof complexity, and its connections to circuit complexity and the Weisfeiler–Leman algorithm

### Education

- Sep 2023– **PhD in Computer Science**, University of Copenhagen.  
Aug 2026 Supervisor: Jakob Nordström  
(expected) Working on topics in proof complexity and related areas.
- Sep 2021– **Master of Science in Mathematics**, ETH Zürich.  
Mar 2023 Thesis: Analysis of Static Unary Unbiased Evolutionary Algorithms  
Supervisors: Carola Doerr (CNRS, Sorbonne Université) and Johannes Lengler (ETH Zürich)
- Feb 2021– **SEMP Student Exchange – Mathematics**, University of Copenhagen.  
Jul 2021
- Sep 2018– **Bachelor of Science in Mathematics**, ETH Zürich.  
Aug 2022 Thesis: The  $(1 + 1)$ -EA on Adversarial Dynamic Linear Functions  
Supervisor: Johannes Lengler (ETH Zürich)

### Publications

In theoretical computer science, authors are typically listed in alphabetic order. This is also the case for my publications.

#### Conference Publications

- C1. Susanna F. de Rezende, Noah Fleming, **Duri Andrea Janett**, Jakob Nordström, and Shuo Pang. **Truly Supercritical Trade-offs for Resolution, Cutting Planes, Monotone Circuits, and Weisfeiler–Leman**. In *Proceedings of the 57th Annual ACM Symposium on Theory of Computing (STOC '25)*, pages 1371–1382, June 2025.
- C2. Carola Doerr, **Duri Andrea Janett**, and Johannes Lengler. **Tight Runtime Bounds for Static Unary Unbiased Evolutionary Algorithms on Linear Functions**. In *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO '23)*, pages 1565–1574, July 2023.
- C3. **Duri Janett** and Johannes Lengler. **Two-Dimensional Drift Analysis: Optimizing Two Functions Simultaneously Can Be Hard**. In *Proceedings of the 17th International Conference on Parallel Problem Solving From Nature (PPSN '22)*, pages 612–625, September 2022. *Nominated for Best Paper Award*.

#### Journal Publications

- J1. Carola Doerr, **Duri Andrea Janett**, and Johannes Lengler. **Tight Runtime Bounds for Static Unary Unbiased Evolutionary Algorithms on Linear Functions**. *Algorithmica*, volume 86, issue 10, pages 3115–3152, July 2024.
- J2. **Duri Janett** and Johannes Lengler. **Two-Dimensional Drift Analysis: Optimizing Two Functions Simultaneously Can Be Hard**. *Theoretical Computer Science*, volume 971, page 114072, September 2023.

## International Research Experience

### Long Visits

- Feb 2026– **Graduate Research Traineeship, McGill.**  
Jun 2026 Stay abroad as part of my PhD studies, hosted by Robert Robere.  
(planned)  
Sep 2022– **Research Internship, Sorbonne Université.**  
Mar 2023 Conducting research towards my Master thesis, hosted by Carola Doerr.

### Short Visits

- May 5– **Research Visit, University of Chicago.**  
May 9, 2025 Visiting UChicago, hosted by Alexander Razborov.  
Jan 20– **Research Visit, EPFL.**  
Jan 24, 2025 Visiting the group of Mika Göös at EPFL.

### Workshops by Invitation

- Jan 2026 *Theory and Practice of SAT and Combinatorial Solving*, Banff International Research Station  
(planned)  
Mar 2024 *Proof Complexity and Beyond*, Mathematisches Forschungsinstitut Oberwolfach

### Schools and Workshops

- Mar 2025 *Complexity as a Kaleidoscope*, CIRM, Marseille, France  
Jan 2025 *Swiss Winter School on Theoretical Computer Science*, Zinal, Switzerland  
Aug 2024 *Aarhus Summer School on Learning Theory*, Aarhus University  
Jul 2024 *Frontiers in Complexity Theory: A Graduate Workshop*, DIMACS, Rutgers University

### Awards and Scholarships

- 2022 Nominated for Best Paper Award at *PPSN 2022*  
2022 SEMP Scholarship for Master thesis, CHF 2449  
2021 SEMP Scholarship for Student Exchange, CHF 1600

### Presentations

#### **Truly Supercritical Trade-offs for Resolution, Cutting Planes, Monotone Circuits, and Weisfeiler–Leman**

- Jun 26, 2025 Conference Presentation at *STOC 2025*, Prague. *Pre-recorded video available on youtube*  
Apr 7, 2025 Seminar RO, LIP6, Sorbonne Université  
Mar 4, 2025 BARC/MIAO Seminar, University of Copenhagen. *Available on youtube*  
Jan 21, 2025 Theory Coffee, EPFL  
Jan 7, 2025 IRN CLoVe Workshop on Complexity Theory, Copenhagen

#### **Supercritical Trade-Offs for Resolution Depth Versus Width**

- Apr 12, 2024 ARCO Workshop, Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark

#### **Tight Runtime Bounds for Static Unary Unbiased Evolutionary Algorithms on Linear Functions**

- Jul 19, 2023 Conference Presentation at *GECCO 2023*, Lisbon  
Mar 23, 2023 Mittagsseminar of the D1 Group, Max Planck Institute for Informatics, Saarbrücken  
Mar 14, 2023 Mittagsseminar, Department of Computer Science, ETH Zürich  
Feb 27, 2023 Seminar S, RO Team, LIP6, Sorbonne Université

## Two Dimensional Drift Analysis: Optimizing Two Functions Simultaneously Can Be Hard

Jan 5, 2023 Proofs and Algorithms Seminar, LIX, École Polytechnique

Nov 30, 2022 Contributed Talk, PGMO Days, Palaiseau

Sep 13, 2022 Poster Presentation at *PPSN 2022*, Dortmund

## Teaching Experience

Fall 2025 & **Teaching Assistant for Advanced Algorithms and Data Structures, University of Copenhagen.**

Master course on algorithms for Computer Science students.  
Prepared and held exercise classes, graded assignments.

Fall 2021 & **Teaching Assistant for Algorithms and Complexity, ETH Zürich.**

Fall 2020 Second year algorithms course for Mathematics Bachelor students.  
Prepared and held weekly exercise classes (both in person and online), graded weekly homework.

## Service

**Conference reviewing:** ICALP 2024, SAT 2024, ITCS 2025, STOC 2025

**Journal reviewing:** Information Processing Letters (2024), Journal of the ACM (2024)

2024 Assisted organizers of Oberwolfach Workshop *Proof Complexity and Beyond*. Assisted with video conferencing and created a [youtube channel](#) with video recordings.

## References

**Jakob Nordström**, Professor (University of Copenhagen and Lund University), PhD Advisor, jn@di.ku.dk.