

Jonas Conneryd

Department of Computer Science
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Education

Lund University	Lund, Sweden
Ph.D. in Theoretical Computer Science	2026 (expected)
Advisor: Prof. Jakob Nordström	
KTH Royal Institute of Technology	Stockholm, Sweden
M.Sc. in Mathematics (joint with Stockholm University)	June 2021
Thesis: <i>Geometric Bounds for Steklov Eigenvalues on Graphs</i> (awarded Mittag-Leffler Prize)	
B.Sc. in Engineering Physics	June 2019
Thesis: <i>Explicit Symplectic Integrators for Non-Separable Hamiltonians in Molecular Dynamics</i>	

Research Interests

Computational complexity theory, particularly proof complexity with an algebraic flavor as well as connections between proof complexity and circuit complexity.

Publications

- [1] Jonas Conneryd, Susanna F. de Rezende, Jakob Nordström, Shuo Pang, and Kilian Risse. *Graph Colouring Is Hard on Average for Polynomial Calculus and Nullstellensatz*. Accepted to FOCS'23.
- [2] Jonas Conneryd. *Geometric Bounds for Steklov Eigenvalues on Graphs*. M.Sc. thesis. Stockholm University, 2021. 53 pp.
- [3] Jonas Conneryd and Anna Lassen. *Explicit Symplectic Integrators for Non-Separable Hamiltonians in Molecular Dynamics*. B.Sc. thesis. KTH Royal Institute of Technology, 2019. 27 pp.

Research Visits

Simons Institute for the Theory of Computing at UC Berkeley	Berkeley, CA
Visiting Graduate Student	Spring 2023
Visiting researcher for the semester program <i>Satisfiability: Extended Reunion</i> .	
Schloss Dagstuhl	Dagstuhl, Germany
Visiting Researcher	Fall 2022
Visiting researcher for the workshop <i>Satisfiability: Theory, Practice and Beyond</i> .	

Awards and Scholarships

- Mittag-Leffler Prize for outstanding Master's theses in Mathematics; Stockholm University, 2021
- Ingenjör Ernst Johnson Scholarship for outstanding academic achievements; KTH, 2020, 2021
- Henrik Göransson Sandviken Scholarship for outstanding academic achievements; KTH, 2018
- University Merit Scholarship for outstanding academic achievements; KTH, 2018, 2019, 2020, 2021

Work Experience

AP3 Third National Swedish Pension Fund	Stockholm, Sweden
ILS Intern	2019-2021
Quantitative analysis of Insurance Linked Securities (ILS).	

Teaching Experience

Lund University

- EDAN55 Advanced Algorithms, 2023
- EDAN01 Constraint Programming, 2022
- EDAA40/75 Discrete Structures in Computer Science, 2021

KTH Royal Institute of Technology

- SF1661 Perspectives on Mathematics, 2018
- SF1624 Algebra and Geometry, 2017

Technical Skills

Programming: Python, Go, \LaTeX , Julia, MATLAB
Software: RMS Miu