Antti Roeyskoe

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Zurich, Switzerland

EDUCATION

ETH Zurich April 2023 - Present
PhD in Theoretical Computer Science *Expected Graduation: December 2026*
Advised by Bernhard Haeupler

ETH Zurich September 2020 - March 2023
Master of Science in Computer Science
Major: Theoretical Computer Science

University of Helsinki August 2017 - August 2020
Bachelor of Science in Computer Science

COMPETITIVE PROGRAMMING

ICPC World Finals 2021
Silver Medal, 5th Place, Europe Champion (with Yuhao Yao and Marcel Bezdrighin)

Codeforces
Peak rating 3089 (Legendary Grandmaster)

International Olympiad in Informatics 2017
Bronze Medal

PUBLICATIONS (ALPHABETICAL OR Ⓡ RANDOM AUTHOR ORDER)

Venues: 3 STOC, 1 SODA, 1 ICALP, 1 PODC, 1 NeurIPS, 1 SOSA, 1 SWAT.

[1] Petr Chmel, Bernhard Haeupler, Richard Hladík, Michal Koucký, **Antti Roeyskoe**, Václav Rozhon, Ondrej Sladký, and Robert E. Tarjan. "Splay trees are almost dynamically optimal".
Preprint 2026.

[2] Ioannis Dorkofikis, Bernhard Haeupler, Maximilian Probst Gutenberg, **Antti Roeyskoe**, Aurelio Sulser, and Gernot Zöcklein. "Low-Stretch Spanning Trees via Smoothed Analysis of Dijkstra's Algorithm".
SODA 2027 (to appear).

[3] Bernhard Haeupler, **Antti Roeyskoe**, and Zhijun Zhang. "Better Diameter Bounds for Efficient Shortcuts and a Structural Criterion for Constructiveness".
ICALP 2026.

[4] Bernhard Haeupler, Yaowei Long, **Antti Roeyskoe**, and Thatchaphol Saranurak. "A Constant-Approximation Distance Labeling Scheme under Polynomially Many Edge Failures".
STOC 2026.

[5] Nick Fischer, Bernhard Haeupler, Rustam Latypov, **Antti Roeyskoe**, and Aurelio L. Sulser. "A Simple Parallel Algorithm with Near-Linear Work for Negative-Weight Single-Source Shortest Path".
SOSA 2025.

[6] Bernhard Haeupler and **Antti Roeyskoe**. "Maintaining Routing Structures under Deletions via Self-Pruning".
Preprint 2025.

[7] Bernhard Haeupler, D. Ellis Hershkowitz, Jason Li, **Antti Roeyskoe**, and Thatchaphol Saranurak. "Low-Step Multi-commodity Flow Emulators".
STOC 2024.

[8] Bernhard Haeupler, Shyamal Patel, **Antti Roeyskoe**, Cliff Stein, and Goran Zuzic. "Polylog-Competitive Deterministic Local Routing and Scheduling".
STOC 2024.

[9] Goran Zuzic ⓡ Bernhard Haeupler ⓡ **Antti Roeyskoe**. "Sparse Semi-Oblivious Routing: Few Random Paths Suffice".
PODC 2023.

[10] Juha Harviainen ⓡ **Antti Röyskö** ⓡ Mikko Koivisto. "Approximating the Permanent with Deep Rejection Sampling".
NeurIPS 2021.

[11] Mikko Koivisto and **Antti Röyskö**. "Fast Multi-Subset Transform and Weighted Sums over Acyclic Digraphs".
SWAT 2020.

SKILLS

Programming	C++ (More than 10 years of competitive programming experience) Python (Good), Java (Basic)
Languages	English (C2), Finnish (Native)

TEACHING

Advanced Algorithms (ETH Graduate Course) 2023, 2024, 2025
Head Teaching Assistant

Algorithms Lab (ETH Graduate Course) 2025, 2026
Teaching Assistant

SERVICE

Conference Reviewing
ITCS 2026, SODA 2026, ICALP 2026, STOC 2026, ESA 2025, PODC 2025, ICALP 2025

European Girls Olympiad in Informatics 2021
Scientific Committee Member