Nikita Gaevoy

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Education

2023 – Present	PhD at the Technion – Israel Institute of Technology, Israel
2021 – 2025	PhD in Mathematics at Saint Petersburg University, Russia, program "Advanced Mathematics"
2019 – 2021	MSc in Mathematics at Saint Petersburg University, Russia, program "Advanced Mathematics", diploma with distinction
2015 – 2019	BSc in Mathematics at Saint Petersburg University, Russia, program "Mathematics"

School Education

2011 – 2015	Saint Petersburg Physics and Mathematics Lyceum #30

Work Experience

2021 – 2022	Junior Researcher at the Euler International Mathematical Institute.
2018 – 2021	Junior Researcher at St. Petersburg Department of Steklov Mathematical Institute of Russian Academy of Sciences. Participant of the Russian Science Foundation grant no. 17-11-01276 "Networking and distributed systems and algorithms and related fundamental problems", head: S. I. Nikolenko.

Research Interests

SAT solvers, running time bounds for SAT algorithms, proof complexity, computational complexity, theoretical aspects of competitive programming (algorithms and data structures), algorithms for networking

Papers and Preprints

- Alekseev, Y., Gaevoy, N.: New polynomial-depth res(+) lower bounds. Electron. Colloquium Comput. Complex. (2026), `https://eccc.weizmann.ac.il/report/2026/007`
- Alekseev, Y., Gaevoy, N.: Intersection theorems: A potential approach to proof complexity lower bounds. LIPIcs, Volume 362, ITCS 2026 pp. 8:1–8:18 (2026). doi: 10.4230/LIPICS.ITCS.2026.8, `https://drops.dagstuhl.de/entities/document/10.4230/LIPIcs.ITCS.2026.8`
- Gaevoy, N., Zolotov, B., Tiskin, A.: Doubly-periodic string comparison. LIPIcs, Volume 331, CPM 2025 pp. 13:1–13:19 (2025). doi: 10.4230/LIPICS.CPM.2025.13, `https://drops.dagstuhl.de/entities/document/10.4230/LIPIcs.CPM.2025.13`

- Bochkov, I., Davydow, A., Gaevoy, N., Nikolenko, S.I.: New competitiveness bounds for the shared memory switch. CoRR (2019), `https://arxiv.org/abs/1907.04399`
- Gaevoy, N.: Hard satisfiable formulas for DPLL algorithms using heuristics with small memory. CoRR (2021), `https://arxiv.org/abs/2101.09528` (based on Bachelor's thesis)

Master Thesis

Title	Simulations between proof systems
Supervisor	Prof. Edward A. Hirsch
Grade	Excellent

Bachelor Thesis

Title	The complexity of SAT algorithms
Supervisor	Prof. Edward A. Hirsch
Grade	Excellent

Teaching Experience

2021 – 2022	Teaching assistant on the course "Algorithms" for Master's students at the National Research University "Higher School of Economics", St.Petersburg
2021 – 2022	Teaching assistant on the course "Algorithms" for 2nd year Bachelor's students at the National Research University "Higher School of Economics", St.Petersburg
2020 – 2022	Teaching assistant on the course "Mathematical foundations of algorithms" for Bachelor's students of program "Mathematics" at Saint Petersburg State University
2017 – Present	Jury of St. Petersburg State University Cup
2015 – 2022	Guest lecturer and teaching assistant at the Mathematics Club at Physics and Mathematics Lyceum #30
2018 – 2022	Guest lecturer and teaching assistant at the Programming Club at Physics and Mathematics Lyceum #30

Awards and Achievements

- ICPC 2021 World Finals bronze medalist (as a member of SPb SU LOUD Enough team).
- Google HashCode 2022 finalist, 16th place.
- RuCode Festival, April 2022, Champions (as a member of SPb SU LOUD Enough team).
- RuCode Festival, April 2021, 2nd place (as a member of SPb SU LOUD Enough team).
- RuCode Festival, April 2020, 2nd place (as a member of SPb SU LOUD Enough team).
- VK Cup 2017, 5th place (jointly with Ivan Bochkov).
- Three-time St. Petersburg State University Champion (XLVIII, LIII and LVI).
- Scholarship of "Gazprom Neft" prize winner in 2015, and then in 2016.

- Participant of the final stage of All-Russian Mathematical Olympiad in 2015.
- Participant of the final stage of All-Russian Programming Olympiad in 2015.
- Awardee of the final stage of All-Russian Team Programming Olympiad in 2015.
- Winner of School Olympiad of the Mathematics and Mechanics faculty of St. Petersburg State University in 2015.

Competitive Programming

Codeforces	*@nikgaevoy*
AtCoder	*@nikgaevoy*
CPHoF	*Nikita Gaevoy*

Contribution to Open Source

- Rust library of algorithms on strings using sticky braids. Implements the doubly-periodic string comparison algorithm and others.
- Rust implementation of the improved version of TrueSkill, which was used as base for other implementation for research projects.

Programming Skills

Rust, C++, Python, Java (+ Android), Lean 4.