Nikita Gaevoy

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Work Experience

2021 – Present	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.

Education

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

Research interests

Computational complexity, SAT solvers, lower bounds on algorithms for SAT, proof complexity (existence of optimal proof systems, simulations of proof systems), theoretical aspects of competitive programming (i.e. algorithms and data structures), algorithms for networking

Preprints

- Bochkov, I., Davydow, A., Gaevoy, N., Nikolenko, S.I.: New competitiveness bounds for the shared memory switch. CoRR **abs/1907.04399** (2019), `https://arxiv.org/abs/1907.04399`
- Gaevoy, N.: Hard satisfiable formulas for DPLL algorithms using heuristics with small memory. CoRR **abs/2101.09528** (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 Saint Petersburg campus of the National Research University "Higher School of Economics"
2021 – 2022	Teaching assistant on the course "Algorithms" for 2nd year Bachelor's students at Saint Petersburg campus of the National Research University "Higher School of Economics"
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 – Present	Guest lecturer and teaching assistant at the Mathematics Club at Physics and Mathematics Lyceum #30
2018 – Present	Guest lecturer and teaching assistant at the Programming Club at Physics and Mathematics Lyceum #30

Awards

2015, 2016	Scholarship of "Gazprom Neft" prize winner
2015	Participant of the final stage of All-Russian Mathematical Olympiad
2015	Participant of the final stage of All-Russian Programming Olympiad
2015	Awardee of the final stage of All-Russian Team Programming Olympiad
2015	Winner of School Olympiad of the Mathematics and Mechanics faculty of St. Petersburg State University.

Competitive Programming

Codeforces	*@nikgaevoy*
AtCoder	*@nikgaevoy*

Highest Achievements

- ICPC 2021 world finalist (as a member of SPb SU LOUD Enough team). The Finals has not happened yet.
- 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)

Contribution to Open Source

Open-source Rust implementation of the improved version of TrueSkill, which was used as base for other implementation for research projects.

Programming Skills

C++ (main language since 2013), Python, Java (+ Android), Rust.