

Nikita Gaevoy

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Work Experience

2018 – Present 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

Fall 2020 Teaching assistant on the course “Mathematical foundations of algorithms”
for Bachelor’s students of program “Mathematics” at Saint Petersburg State
University
Spring 2017 – Present Jury of St. Petersburg State University Cup
Fall 2015 – Present Guest lecturer and teaching assistant at the Mathematics Club at Physics
and Mathematics Lyceum #30
Fall 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.
- 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.