

Nikolai Chukhin
buyolitsez1951@gmail.com
Saint Petersburg State University &
Neapolis University Pafos
Paphos, Cyprus
[Google Scholar](#)
IELTS: 7.5/9 (2024)

Education

2021–2025 **B.Sc.** in Math and Computer Science, Saint Petersburg State University
GPA: 3.94/4

2022–2025 **B.Sc.** in Computer Science, Neapolis University Pafos
GPA: 87/100

Relevant Advanced Courses:

- Fine-Grained Complexity
- Algorithms for NP-hard Problems
- Advanced Algorithms
- Parameterized Algorithms
- Information Theory
- Complexity of Boolean Functions
- Computational Geometry
- Theoretical Computer Science
- Automata Theory & Formal Grammars
- Probabilistic Algorithms and Hashing
- Graph Theory, Connectivity, Colourings
- Cryptography
- Algorithms on Strings

Research Experience

Aug. 2023– Research Assistant, [Algorithms and Complexity Theory Lab](#), JetBrains Research,
Now (Advisor: [Alexander S. Kulikov](#)).

Apr. 2022– Researcher, Quantori, Substructural molecular database search.
Jun. 2022

Publications

Conference Publications

- 1 **Nikolai Chukhin**, Kulikov AS, and Mihajlin I. Toward Better Depth Lower Bounds: Strong Composition of XOR and a Random Function. In: *STACS*. Vol. 327. LIPIcs. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2025:26:1–26:15.
- 2 Belova T, **Nikolai Chukhin**, Kulikov AS, and Mihajlin I. Improved Space Bounds for Subset Sum. In: *ESA*. Vol. 308. LIPIcs. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2024:21:1–21:17.

Papers in Progress

- 1 **Nikolai Chukhin**, Kulikov AS, Mihajlin I, and Smirnova A. Conditional Complexity Hardness: Monotone Circuit Size, Matrix Rigidity, and Tensor Rank Under NSETH and Beyond. [arXiv](#). 2025.

Selected Talks

- Belova T, **Nikolai Chukhin**, Kulikov AS, and Mihajlin I. Improved Space Bounds for Subset Sum. European Symposium on Algorithms (ESA). [Presentation](#). 2024.
- Murray CD and Williams RR. Circuit Lower Bounds for Nondeterministic Quasi-polytime from a New Easy Witness Lemma. NUP algorithms and complexity workshop. 2024.
- **Nikolai Chukhin**. Fine-Grained Complexity of Hadwiger Number. SPbU semester project. [Presentation](#). 2024.
- **Nikolai Chukhin**. Short Overview of results in Circuits Depth Lower Bounds. Report within the course on actual problems in informatics. [Presentation](#). 2024.
- **Nikolai Chukhin**, Kulikov AS, and Mihajlin I. Toward Better Depth Lower Bounds: Strong Composition of XOR and a Random Function. NUP algorithms and complexity workshop. 2024.
- Abboud A, Backurs A, and Vassilevska Williams V. Tight Hardness Results for LCS and Other Sequence Similarity Measures. Report within the string algorithms course. 2023.
- Akmal S, Chen L, Jin C, et al. Improved Merlin-Arthur Protocols for Central Problems in Fine-Grained Complexity. NUP algorithms and complexity workshop. [Presentation](#). 2023.
- Cygan M, Fomin FV, Kowalik L, et al. $2k$ kernel for Vertex Cover and Imbalance problem from the Book "Parametrized Algorithms". Report within the course on FPT algorithms. [Presentation](#). 2023.
- **Nikolai Chukhin**. Nondeterministic algorithms for k -SUM. SPbU semester project. [Presentation](#). 2023.

Awards

- 47th International Collegiate Programming Contest (ICPC). [Honorable](#). 2024.
- All-Russian HSE University Olympiad in Informatics. [Winner](#). 2021.
- All-Russian National Olympiad in Programming. [Prize Winner](#). 2021.
- All-Russian Olympiad in Informatics "TechnoCup". [Winner](#). 2021.
- International Zhautykov Olympiad in Computer Science. [Silver Medal](#). 2021.
- All-Russian Team Olympiad in Programming. [Prize Winner](#). 2020.
- All-Russian Team Olympiad in Programming. [Prize Winner](#). 2019.

Teaching

Aut. 2024	Discrete Math, Neapolis University Pafos. Teaching assistant.
Aut. 2024	Graph Theory Extra Course, Neapolis University Pafos & JetBrains, Lecturer, Web-page .
Aut. 2023– Spr. 2023	Discrete Math, Neapolis University Pafos. Teaching assistant.
Oct. 2021– Nov. 2021	NLogN School, Algorithms Instructor.

Other Experience

Jul. 2022– STEP SWE Intern, Google, Netherlands.
Sep. 2022
