Ludmila Glinskih

PhD Candidate at Boston University, graduating in May 2024
lglinskih@gmail.com, https://lglinskih.com

Education

Boston University	2019 – 2024

PhD (in progress), *Computer Science*
M.Sc., *Computer Science*
Advisors: Dr. Mark Bun and Dr. Sofya Raskhodnikova

St. Petersburg Academic University RAS	2015 – 2017

M.Sc., *Theoretical Computer Science*

Peter the Great Saint-Petersburg Polytechnic University	2009 – 2014

B.Sc., *Applied Mathematics and Computer Science*

Research Interests

Differential privacy, algorithms, computational complexity.

Publications

MCSP is Hard for Read-Once Nondeterministic Branching Programs, Ludmila Glinskih and Artur Riazanov, LATIN 2022

The Complexity of Verifying Boolean Programs as Differentially Private, Mark Bun, Marco Gaboardi, Ludmila Glinskih, IEEE CSF 2022

On Tseitin Formulas, Read-Once Branching Programs and Treewidth, Ludmila Glinskih, Dmitry Itsykson CSR 2019, **Best Paper Award winner**, invited to special issue of Theory of Computing Systems

Satisfiable Tseitin formulas are hard for nondeterministic read-once branching programs, Ludmila Glinskih and Dmitry Itsykson, MFCS 2017

Employment

Tumult Labs	May 2023 – Aug 2023

Scientist Intern
Conducted research on automatic sensitivity bounding and differentially private algorithms.

Simons Institute for the Theory of Computing	Jan 2023 – May 2023

Visiting Researcher
Conducted research on circuit and structural complexity. Participated in a research program on Meta-Complexity (https://simons.berkeley.edu/programs/Meta-Complexity2023).

Google Sunnyvale	May 2022 – Aug 2022

Software Engineering Intern (*Anonymization Team)*
Conducted research and ran analysis of efficiency and accuracy of the various algorithms for sensitivity bounding of differentially private queries in ZetaSQL (https://github.com/google/zetasql).
Used C++.

Google San Francisco	May 2021 – Aug 2021

Software Engineering Intern (*Cobalt*)
Added a Golang library for optimal computations of privacy encoding parameters in Cobalt – a framework for differentially private telemetry collection (https://fuchsia.googlesource.com/cobalt).
Implemented a Golang library for fast computations of privacy loss distribution.

Google Zurich   Apr 2019 – Jul 2019
Site Reliability Engineering Intern (*Serving Backend SRE Team*)
Added support of integration testing and multiple integration tests for an internal load testing tool
used for testing Google Search. Used internal configuration languages and Python.

St. Petersburg Department of V.A. Steklov Institute of Mathematics RAS   Oct 2017 – Sep 2019
Graduate Researcher (Laboratory of Mathematical Logic)
Conducted research in circuit and proof complexity.

Google London   Jun 2017 – Sep 2017
Site Reliability Engineering Intern (*SRE Traffic Team*)
Added dynamical status updates to the internal code review tool from the tool that automatically
rebuilds configuration files. Used Golang.

Google Zurich   Jul 2016 – Oct 2016
Site Reliability Engineering Intern (*YouTube Core SRE Team*)
Added support of refined estimations of load on YouTube backends to improve resistance of
YouTube internal services from overloading by requests from internal users. Used Python, C++, and
JavaScript.

FFmpeg   May 2015 – Aug 2015
Software Engineering Intern
Built [a suite of tests](#) in C for [FFmpeg](#) API.

Yandex   Oct 2012 – May 2015
Quality Assurance Engineer (*Yandex.Maps Team*)
Took a leading role in quality assurance of a cartographical project similar to OpenStreetMap and
ArcGIC (https://n.maps.yandex.ru)

Technical Skills:

C, C++, Python, Golang, JavaScript

Teaching

Teaching Fellow for CS530: *Graduate Advanced Algorithm*   Fall 2022
Taught by Steven Homer

Grader for CS537: *Graduate Randomness in Computing*   Fall 2021
Taught by Sofya Raskhodnikova

Teaching Fellow for CS535: *Graduate Complexity Theory*   Fall 2020
Taught by Mark Bun

Teaching Assistant for *Complexity Theory and Randomized Algorithms*   Spring 2018
Taught by Ivan Bliznets

Scholarships and Awards

TCS for All Travel Scholarship   May 2023
To participate in the ACM STOC 2023

Invited participant of the Jane Street Graduate Fellowship Workshop	April 2023

Early-Career AMS-NSF-Simons-ICM Travel Grant	July 2022

To participate in the International Congress of Mathematicians

Dean's Fellowship	Fall 2019

Awarded to PhD students at Boston University

CSR 2019 **Best Paper Award**	July 2019

Paper: *On Tseitin Formulas, Read-Once Branching Programs and Treewidth*
Ludmila Glinskih, Dmitry Itsykson

TCS Women Travel Scholarship	June 2018

To participate in the ACM STOC 2018

Yandex Research Fellowship	Fall 2015 – Spring 2017

Awarded to Master's students successful in their research at St. Petersburg Academic
University RAS

Advising

Maksim Lonishin and Ilya Kleopatrov	Sep 2021 – May 2022

Project: Complexity of Representing Boolean Functions via Branching Programs
A year-long research project of high school students at Lyceum "Physical-Technical High
School" (http://www.school.ioffe.ru/)

Academic Service

Program Committee Member for AAAI PPAI 2024

Reviewer for CSR 2019, ACM STOC 2020, ICALP 2022, AAAI PPAI 2024

Key Graduate Coursework

CS591: Privacy in Statistics and Machine Learning	Spring 2021

Taught by Adam Smith and Jonathan Ullman

CS538: Graduate Cryptography	Spring 2021

Taught by Leonid Reyzin

CS591: Formal Methods in Security and Privacy	Spring 2020

Taught by Marco Gaboardi and Alley Stoughton

CS591: Sublinear Algorithms	Fall 2020

Taught by Sofya Raskhodnikova

CS791: Law for Algorithms	Fall 2019

Taught by Ran Canetti, Stacey Dogan, Aloni Cohen, Shafi Goldwasser, and
Frank Partnoy

Machine Learning	Fall 2016, Spring 2017

Taught by Sergey Nikolenko