

# Ludmila Glinskih

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## Education

- Boston University 2019 – present  
**PhD** (in progress), *Theoretical Computer Science*  
Advisors: Dr. Sofya Raskhodnikova and Dr. Mark Bun  
GPA: 3.96
- St. Petersburg Department of Steklov Institute of Mathematics of Russian Academy of Sciences 2017 – 2019  
*Research and graduate coursework on Theoretical Computer Science*  
Advisor: Dr. Dmitry Itsykson
- St. Petersburg Academic University of Russian Academy of Sciences 2015 – 2017  
**M.Sc.**, *Theoretical Computer Science*  
Thesis: “Satisfiable Tseitin formulas are hard for nondeterministic read-once branching programs”  
Advisor: Dr. Dmitry Itsykson
- Peter the Great Saint-Petersburg Polytechnic University 2009 – 2014  
**B.Sc.**, *Applied Mathematics and Computer Science*

## Publications

- MCSP is Hard for Read-Once Nondeterministic Branching Programs*  
Ludmila Glinskih and Artur Riazanov  
In submission
- The Complexity of Verifying Boolean Programs as Differentially Private*  
Mark Bun, Marco Gaboardi, Ludmila Glinskih  
To appear in proceedings of 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

## Talks

- The Complexity of Verifying Boolean Programs as Differentially Private* Feb 28, 2022  
Theory Seminar, Boston University, Virtual
- The Complexity of Verifying Boolean Programs as Differentially Private* Nov 22, 2021  
Seminar of the Privacy Tools Project, Harvard University, Virtual
- The Complexity of Verifying Boolean Programs as Differentially Private* Apr 24, 2021  
CRA-WP Grad Cohort for Women, Virtual

<i>Circuit Lower Bounds from NP-Hardness of MCSP Under Turing Reductions</i> MCSP reading group, Boston University, Boston, USA	Feb 22, 2021
<i>Relations and Equivalences Between Circuit Lower Bounds and Karp-Lipton Theorems</i> MCSP reading group, Boston University, Boston, USA	Nov 2, 2020
<i>Lower bounds for MCSP for restricted circuit models</i> MCSP reading group, Boston University, Boston, USA	Aug 6, 2020
<i>A survey on the Minimum Circuit Size Problem</i> MCSP reading group, Boston University, Boston, USA	Jun 12, 2020
<i>Lower bounds for Read-Once Branching Programs for Tseitin formulas</i> Theory Seminar, Boston University, Boston, USA	Oct 28, 2019
<i>On branching programs, Tseitin formulas and tree-width</i> 24th Estonian Winter School in Computer Science, Palmse, Estonia	Mar 7, 2019
<i>Lower bounds for Branching Program and Formula for Orthogonal Vectors</i> Seminar of the Laboratory of Algorithmic Methods, PDMI RAS, St. Petersburg, Russia	Nov 16, 2018
<i>Lower bound for read-once nondeterministic branching program for satisfiable Tseitin formula using tree-width</i> Workshop of Summer School on Algorithms and Lower Bounds, Satellite workshop of ICALP, Prague, Czech Republic	Jul 9, 2018
<i>On branching programs, Tseitin formulas and tree-width</i> Poster at ACM STOC, Los Angeles, USA	Jun 26, 2018
<i>Lower Bounds for Nondeterministic Semantic Read-Once Branching Programs</i> Complexity Seminar, PDMI RAS, St. Petersburg Russia	May 4, 2018
<i>Satisfiable Tseitin formulas are hard for nondeterministic read-once branching programs</i> Joint Estonian–Latvian Theory Days, Tartu, Estonia	Nov 24, 2017
<i>Satisfiable Tseitin formulas are hard for nondeterministic read-once branching programs</i> MFCS, Aalborg, Denmark	Aug 25, 2017
<i>Techniques of proving lower bounds on Query Complexity</i> Seminar on Sublinear Algorithms, Computer Science Club, St. Petersburg, Russia	Oct 14, 2016

## Scholarships and Awards

<b>Early-Career AMS-NSF-Simons-ICM Travel Grant</b> To participate in the International Congress of Mathematicians	July 2022
<b>Dean's Fellowship</b>	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 Glinskikh, 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 at St. Petersburg Academic University RAS

## Teaching

Grader

Fall 2021

CS537: *Graduate Randomness in Computing*

Taught by Sofya Raskhodnikova at Boston University

Teaching Fellow

Fall 2020

CS 535: *Graduate Complexity Theory*

Taught by Mark Bun at Boston University

Teaching Assistant

Spring 2018

*Complexity Theory and Randomized Algorithms*

Taught by Ivan Bliznets at St. Petersburg Academic University RAS

## Academic Service

Reviewer for CSR 2019, STOC 2020, ICALP 2022

Organizer of a reading group on a Minimum Circuit Size Problem (MCSP)  
at Boston University

Jun 2020 – Aug 2021

Author of a [Telegram channel](#) (in Russian) with advice for junior researchers

2018 – present

## Other Activities

Maintainer of FFmpeg, responsible for API test

2015 – present

*[FFmpeg](#) is the leading open source multimedia framework*

Member of the University Women's Soccer Team at SPbPU

2009 – 2014

## Additional Education

Hilbert–Bernays Summer School on Logic and Computation,  
Tübingen, Germany

Jul 21 – Jul 27, 2019

*Expenses covered by a scholarship from the organizers*

Caleidoscope: Complexity as a Kaleidoscope, Paris, France	Jun 17 – Jun 21, 2019
24th Estonian Winter School in Computer Science, Palmse, Estonia <i>Expenses covered by a scholarship from the organizers</i>	Mar 3 – Mar 8, 2019
PDMI RAS Computer Science Club ( <a href="https://compsciclub.ru/en/">https://compsciclub.ru/en/</a> ) St. Petersburg Russia	Sep 2013 – Feb 2019
Summer School on Algorithms and Lower Bounds, Prague, Czech Republic <i>Expenses covered by a scholarship from the organizers</i>	Jul 6 – Jul 9, 2018
Recent Advances in Algorithms, St. Petersburg, Russia	May 22 – May 26, 2018
Recent Advances in Parameterized Complexity, Tel Aviv, Israel	Dec 3 – Dec 7, 2017
Swedish Summer School in Computer Science (S3CS), Stockholm, Sweden <i>Expenses covered by a scholarship from the organizers</i>	Jul 16 – Jul 22, 2017
A Special Semester on Computational and Proof Complexity, St. Petersburg, Russia	Apr – Jun, 2016

## Industry Experience

<b>Google San Francisco</b> Software Engineering Intern ( <i>Cobalt</i> ) Added a Golang library for optimal computations of privacy encoding parameters in Cobalt – a framework for differentially private telemetry collection ( <a href="https://fuchsia.googlesource.com/cobalt">https://fuchsia.googlesource.com/cobalt</a> ). Implemented a Golang library for fast computations of privacy loss distribution.	May 2021 – Aug 2021
<b>Google Zurich</b> Site Reliability Engineering Intern ( <i>Serving Backend SRE Team</i> ) 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.	Apr 2019 – Jul 2019
<b>Google London</b> Site Reliability Engineering Intern ( <i>SRE Traffic Team</i> ) Added dynamical status updates to the internal code review tool from the tool that automatically rebuilds configuration files. Used Golang.	Jun 2017 – Sep 2017
<b>Google Zurich</b> Site Reliability Engineering Intern ( <i>YouTube Core SRE Team</i> ) 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.	Jul 2016 – Oct 2016

**FFmpeg**

Software Engineering Intern

Built a suite of tests in C for [FFmpeg](#) API.

May 2015 – Aug 2015

**Yandex**

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>)

Oct 2012 – May 2015