

# Ilya Losev

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Website: <https://ilya-losev.github.io>

## Education

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<b>University of Cambridge</b> PhD in Mathematics of Information	Oct. 2021 – Present <i>Supervisor:</i> James Norris
<b>St. Petersburg University</b> Master in Mathematics; GPA: 5/5	Sept. 2019 – June 2021 <i>Supervisor:</i> Yurii Belov
<b>University of Geneva, SwissMAP Master Class</b> Master in Mathematical Physics; GPA: 5.9/6	Sept. 2019 – Aug. 2020 <i>Supervisor:</i> Stanislav Smirnov
<b>St. Petersburg University</b> Bachelor in Mathematics; GPA: 5/5	Sept. 2015 – June 2019 <i>Supervisor:</i> Yurii Belov

## Job experience

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<b>Research Assistant</b> Chebyshev Laboratory, St. Petersburg University	Nov. 2017 – Sept. 2021
<b>Organizer of St. Petersburg Math Olympiad</b> Mathematics Olympiad Committee, St. Petersburg	Sept. 2016 – May 2018
<b>Teaching Assistant</b> Physics and Mathematics Lyceum 239, St. Petersburg	Sept. 2015 – Aug. 2019

## Research interests

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My research is mainly focused on problems related to probability theory, statistical physics and quantum field theories. I am studying probabilistic models that come from mathematical physics, and I am interested in questions related to the description of their large-scale or large-time (for stochastic processes) behaviour.

## Research papers

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- Large Deviations of the Schwarzian Field Theory; *arXiv:2406.17069*, 2024;
- Probabilistic derivation of the correlation functions of the Schwarzian Field Theory; *arXiv:2406.17071*, 2024;
- Probabilistic Definition of the Schwarzian Field Theory; (with R. Bauerschmidt and P. Wildemann), *arXiv:2406.17068*, 2024;
- How long are the arms in DBM?; (with S. Smirnov), *arXiv:2307.14931*, 2023;
- Jacobi matrices with lacunary spectrum; *Journal of Mathematical Analysis and Applications*, Volume 503, Issue 1, 2021.

## Awards

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<b>Edouard Gans Prize</b> Best Master's Thesis in Mathematics, University of Geneva	2020
<b>International Mathematics Competition, Gold Medal</b> University Level Competition	2017

## Research talks and posters

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<b>Sapienza Probability Seminar</b> How long are the arms in DBM?	Rome, Italy; March 2024 <i>Seminar Talk</i>
<b>Cambridge Probability Seminar</b> How long are the arms in DBM?	Cambridge, UK; Oct. 2023 <i>Seminar Talk</i>
<b>Phase Transitions and Correlated Random Processes</b> Schwarzian Field Theory	Cambridge, UK; May 2023 <i>Short Talk</i>
<b>Probability and Mathematical Physics Conference</b> How long are the arms in DBM?	Helsinki, Finland; July 2022 <i>Poster</i>
<b>7th SwissMAP General Meeting</b> How long are the arms in DBM?	Gstaad, Switzerland; Aug. 2020 <i>Poster</i>
<b>SwissMAP Site Visit</b> How long are the arms in DBM?	Online; June 2020 <i>Poster</i>
<b>Emergent Trends in Complex Function Theory Workshop</b> Jacobi matrices with lacunary spectrum	Barcelona, Spain; Oct. 2019 <i>Short Talk</i>

**Spectral Function Theory**  
**International Spring School**  
Jacobi matrices with lacunary spectrum

St. Petersburg, Russia; April 2019  
*Short Talk*

## Other research visits

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**Oberwolfach Arbeitsgemeinschaft**  
QFT and Stochastic PDEs

Oberwolfach, Germany; Dec. 2023  
*Reading Group*

**SwissMAP Research Station**  
Short Research Stay

Les Diablerets, Switzerland; Aug. 2023  
*Research Visit*

## Teaching

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**Probability and Measure Preparatory Workshop**  
Preparatory course for Part III (Master's) students

University of Cambridge; Fall 2024

**Stochastic Calculus**  
Example classes for Part III (Master's) students

University of Cambridge; Spring 2024  
*Teaching Assistant*

**Advanced Probability**  
Example classes for Part III (Master's) students

University of Cambridge; Fall 2023  
*Teaching Assistant*

**Mathematical Analysis**  
Example classes for 1st year undergraduate students

SPbU; Fall 2020  
*Teaching Assistant*

**Mathematical Analysis**  
Grading solutions of undergraduate students

SPbU; Fall 2016 – Spring 2019  
*Grading Assistant*

**Advanced Mathematics**  
Advanced course for high- and middle-school students

Lyceum 239; Fall 2015 – Summer 2019  
*Teaching Assistant*