

Ilya Losev

Email: il320@cam.ac.uk
Website: <https://ilya-losev.github.io>

Education

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

Job experience

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

Research interests

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

- Large Deviations of the Schwarzian Field Theory; *arXiv:2406.17069*, 2024;
- Probabilistic 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

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

Research talks and posters

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

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

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