

Ilya Losev

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Education

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

Job experience

Research Assistant Chebyshev Laboratory, St. Petersburg University	November 2017 – September 2021
Organizer of St. Petersburg Math Olympiad Mathematics Olympiad Committee, St. Petersburg	September 2016 – May 2018
Teaching Assistant Physics and Mathematics Lyceum 239, St. Petersburg	September 2015 – August 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 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

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

Research talks and posters

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

SwissMAP Research Station
Short Research Stay

Les Diablerets, Switzerland; August 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