

Ilya Losev

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Education

University of Cambridge PhD in Mathematics of Information	Since Oct. 2021 <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; (to appear in *Comm. Math. Phys.*);
- 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

University of Sussex Mathematical Physics Seminar Probabilistic Schwarzian Field Theory	Brighton, UK; Feb. 2025 <i>Seminar Talk</i>
IHES Probability and Analysis Seminar Probabilistic Schwarzian Field Theory	Paris, France; Dec. 2024 <i>Seminar Talk</i>
Invited Mini Course Probabilistic Schwarzian Field Theory	Geneva, Switzerland; Dec. 2024 <i>Mini course</i>
Oxford Stochastic Analysis Seminar Probabilistic Schwarzian Field Theory	Oxford, UK; Nov. 2024 <i>Seminar Talk</i>
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 <i>Short Talk</i>

Other research visits

Oberwolfach Arbeitsgemeinschaft QFT and Stochastic PDEs	Oberwolfach, Germany; Dec. 2023 <i>Reading Group</i>
SwissMAP Research Station Short Research Stay	Les Diablerets, Switzerland; Aug. 2023 <i>Research Visit</i>

Teaching

Random Structures in Finite-dimensional Space Example classes for Part III (Master's) students	University of Cambridge; Spring 2025 <i>Teaching Assistant</i>
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 <i>Teaching Assistant</i>
Advanced Probability Example classes for Part III (Master's) students	University of Cambridge; Fall 2023 <i>Teaching Assistant</i>
Mathematical Analysis Example classes for 1st year undergraduate students	SPbU; Fall 2020 <i>Teaching Assistant</i>
Mathematical Analysis Grading solutions of undergraduate students	SPbU; Fall 2016 – Spring 2019 <i>Grading Assistant</i>
Advanced Mathematics Advanced course for high and middle school students	Lyceum 239; Fall 2015 – Summer 2019 <i>Teaching Assistant</i>