
Education

- 2020 - 2026 (expected) **PhD in Mathematics**, *University of Virginia*, Charlottesville, VA
Advisor: L. Petrov
- 2015 - 2020 **BA in Physics**, *Lomonosov Moscow State University*, Moscow, Russia, 4.75 out of 5
Advisor: G. V. Koval
BA thesis: **"Exact solution of a spin chain in quenched disorder"**

Keywords

integrable probability, statistical mechanics, interlacing particle systems
vertex models, symmetric functions, representation theory, algebraic combinatorics

Publications

- 2025 Mikhail Tikhonov. **"Random permutations and stochastic Demazure product"**. *In preparation*.
- 2023 Leonid Petrov and Mikhail Tikhonov. **Asymptotics of noncolliding q -exchangeable random walks**. In: *Journal of Physics A: Mathematical and Theoretical* 56. arXiv: 2303.02380 [math.PR].
- 2021 I. Mursenkova, M. Timokhin, M. Tikhonov, A. Militsina, and A. Kuznetsov. **Digital processing of shadowgraph images taking into account the diffraction of light at a shock front**. In: *Journal of Physics: Conference Series* 2127 Issue 1.
- 2020 Leonid Petrov and Mikhail Tikhonov. **Parameter symmetry in perturbed GUE corners process and reflected drifted Brownian motions**. In: *Journal of Statistical Physics* 181. arXiv: 1912.08671 [math.PR].
- M. Yu. Timokhin, M. Tikhonov, I. V. Mursenkova, and I. A. Znamenskaya. **Shock-wave thickness influence to the light diffraction on a plane shock wave**. In: *Physics of Fluids* 32 Issue 11.
- 2019 Maksim Timokhin and Mikhail Tikhonov. **Numerical simulations of micro-channel devices with Lattice Boltzmann method**. In: *AIP Conference Proceedings* 2132 Issue 1.

Talks, posters

- Dec 2025 **Random Permutations from q -Demazure product**, *Geometry, Statistical Mechanics, and Integrability Reunion conference*, Lake Arrowhead, CA
- Aug 2025 **Writing Effective Letters of Recommendation**, *Annual Teaching Workshop at University of Virginia*, Charlottesville, VA
- Oct 2024 **Noncolliding q -exchangeable random walks**, *Ohio State University Probability Seminar*, Columbus, OH
- Apr 2024 **Asymptotics of Noncolliding q -exchangeable random walks and lozenge tilings**, *Southern California Discrete Mathematics Symposium at UCLA*, Los Angeles, CA
- Nov 2023 **Noncolliding q -exchangeable random walks and lozenge tilings**, *UVA Probability Seminar*, Charlottesville, VA
- Jul 2023 **Noncolliding q -exchangeable random walks**, *Probability and Algebra: New Expressions In Mathematics*, College Station, TX

- Sep 2022 **Markov jumps for GUE corner process**, *Graduate Student Probability Conference at University of Wisconsin - Madison*, Madison, WI
- Apr 2022 **Parameter symmetry in the perturbed GUE corners eigenvalues**, *Graduate Student Seminar at UVA*, Charlottesville, VA
- Nov 2021 **Markov jumps for GUE corner process**, *Integrable Probability and Related Fields from a Safe Distance*, online talk
- Feb 2021 **Permuting the GUE corners eigenvalues**, *UVA Probability Seminar*, online talk
- Dec 2020 **Parameter symmetry in perturbed GUE corners process**, *XVI Brunel – Bielefeld Workshop on RMT*, London, UK, online poster talk
- Jul 2018 **Numerical Simulations of MicroChannel Devices with Lattice Boltzmann Method**, *31st International Symposium on Rarefied Gas Dynamics*, Glasgow, UK, poster
- Apr 2018 **Exact solution of a spin chain in quenched disorder**, *Lomonosov Conference*, Moscow, Russia

Extended Visits and appointments

- Mar - Jun 2024 **Core Participant**, *Long program "Geometry, Statistical Mechanics, and Integrability" at IPAM*
- Jan 2020 **Visitor**, *University of Virginia*, Project: "Parameter symmetry in perturbed GUE corners process", Supervisor: L. Petrov
- Spring 2018 **Research Intern**, *mathCCES RWTH*, Project: "Nonlinear problems based on Boltzmann equation", Supervisor: M. Torrilhon

Summer schools, short visits

- Jul 2024 **Virginia Integrable Probability Summer School 2024**, *University of Virginia*
- Jun 2022 **Random Matrix Theory Summer School**, *University of Michigan*
- Jun 2022 **Summer school on Free Probability, Random Matrices, and Applications**, *University of Wyoming*
- Nov 2021 **Collaboration visit**, *MSRI (now SLMATH)*, Supervisor: L. Petrov, Project: "Asymptotics of noncolliding q-exchangeable random walks"

Service

- Sep 2025 - present **Directed Reading Program committee member**, *University of Virginia*
- Sep 2025 - present **Speaker at Summer MATH Teaching Workshop**, *University of Virginia*
- Jan - May 2025 **Directed Reading Program Mentor**, *University of Virginia*
- Mar, Sep 2025 **Manuscript Reviewer**, *Annales Henri Poincaré*
- Apr 2025 **Manuscript Reviewer**, *Electronic Journal of Probability*
- Sep 2024 **Manuscript Reviewer**, *Journal of Statistical Physics*
- Jul 2024 **Organizer**, *Virginia Integrable Probability Summer School 2024*, <https://lpetrov.cc/vipss2024/>
- Apr 2020 **Organizer**, *Online conference on Statistical Mechanics, Integrable Systems and Probability*, <http://mtikhonov.com/smisp/>

Teaching

- Spring 2026 **Calculus III**, *Instructor*, University of Virginia, in person
- F25, F23, S22 **Survey of Calculus I**, *Instructor*, University of Virginia, flipped classroom, in person
- Spring 2025 **Calculus II**, *Instructor*, University of Virginia, flipped classroom, in person
- Fall 2022 **Calculus I**, *Instructor*, University of Virginia, flipped classroom, in person
- Fall 2021 **Ordinary Differential Equations**, *TA, Discussion hours*, University of Virginia, in person
- Summer 2021 **Calculus III**, *TA, Discussion hours*, University of Virginia, online
- Fall 2020 **Ordinary Differential Equations**, *TA, Discussion hours*, University of Virginia, online

- F19,S20 **Symmetries and Group theory**, *TA, Discussion hours*, Lomonosov Moscow State University, flipped classroom, in person
- Fall 2019 **Relativity Theory for Pedestrians**, *Instructor and Course Author*, Lomonosov Moscow State University, engagement course for high school students
- Fall 2019 **General Physics**, *Teaching Assistant*, Lomonosov Moscow State University