

Mikhail Tikhonov

Lomonosov Moscow State University
Faculty of Physics
Department of Quantum Statistics and Field Theory

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Education

Lomonosov Moscow State University

Bachelor's degree, 2015 – present
Major: Physics
GPA: 4.7(out of 5)

Research interests

exact solutions, analytical methods, integrable probability, random matrices
statistical physics, Ising and Potts models, random field effects, quantum spin systems
rarefied gas dynamics, lattice-like methods

Research

2019 – present **Project:** Exponential jumps of perturbed GUE corners process
Supervisor: prof. L. Petrov
2018 – present **Bachelor's thesis:**
Exact solution for a spin chain with quenched disorder
Supervisor: prof. G.V. Koval
2017 – present **Project:** Lattice Boltzmann Method in rarefied gas dynamics
Supervisor: prof. M. Timokhin
2018 **Project:** Simple non-linear problems based on Boltzmann equation
Supervisor: prof. M. Torrilhon
2017 **Term project:** Light scattering on nanoparticles
Supervisor: Dr. Yu. V. Vladimirova
Grade: A

Languages and Skills

English (fluent), Russian (native)
Python 3 (including basic data analysis tools), Wolfram Mathematica
L^AT_EX, C and C++ with CUDA

Publications

Exact solution for a spin chain with quenched disorder.
Mikhail Tikhonov and Gennadiy Koval. *in preparation*
Shock-wave Thickness Influence to the Light Diffraction on a Plane Shock Wave.
Maxim Timokhin, Mikhail Tikhonov, Irina Mursenkova and Irina Znamenskaya. *in preparation*
Parameter symmetry in perturbed GUE corners process and reflected drifted Brownian motions
Leonid Petrov and Mikhail Tikhonov. arXiv:1912.08671
Numerical simulations of micro-channel devices with Lattice Boltzmann method.
Maxim Timokhin and Mikhail Tikhonov. AIP Conference Proceedings.
Vol. 2132. No. 1. AIP Publishing, 2019.

Conferences, visits

Scientific visit at University of Virginia
January - February 2020, Charlottesville, VA, USA
Workshop on Classical and Quantum Integrable Systems
July 22-26, 2019, Saint-Peterburg, Russia
31st International Symposium on Rarefied Gas Dynamics
23-27 July 2018, Glasgow, UK
International scientific conference of students and young scientists "Lomonosov"
9-13 April 2018, Moscow, Russia
Internship at mathCCES RWTH
25 Jan – 31 Mar 2018, Aachen, Germany

Teaching experience

Assistant Lecturer
AESC MSU, 2018 – present
Lab Assistant
Faculty of physics, 2018 – 2019