Mikhail Goloshchapov

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EDUCATION

Moscow Institute of Physics and Technology(MIPT) *Expected Graduation: Jul 2024*
Department: Landau Phystech School of Physics and Research
Major: Applied Mathematics and Physics
GPA: 4.95/5.00

WORK EXPERIENCE

MSU Quantum Technology Centre & Russian Quantum Center *Sep 2022 - Present*
QOTLabs - *Neutral Atom Quantum Computing*
Optimised Raman excitation for single-qubit gates[1, 4]. Generated phase masks for SLM, stabilised lasers, worked with resonators. Currently modelling two-photon Rydberg excitation to improve two-qubit gates[2].

Russian Quantum Center - *Summer internship* *Jun-Aug 2022*
Laboratory of Ultracold Fermions
Assembled optical scheme for atomic beam spectroscopy and saturated absorption spectroscopy.
Optimised setup parameters for creating atomic beam of ^{6}Li to increase number of atoms in Zeeman slower[3].

CONFERENCES AND PUBLICATIONS

1. International Conference on Quantum Technologies 2023 - Poster *July 2023*
   "Randomised Benchmarking of Single-Qubit Gates on a Neutral Atom Quantum Processor"
2. Conference Physics of Ultracold Atoms 2023 - Thesis accepted *Upcoming*
   "Modelling of Two-Photon Rydberg Excitation of Single Atom in Optical Tweezers"
3. Abstracts on Conference on the Fundamentals of Physics of Ultracold Atoms and Ions, *May 2023*
   "Measurement of ^{6}*Li* Atomic Beam Properties via Spectroscopy"
4. Abstracts on the 65th Conference of Moscow Institute of Physics and Technology *Apr 2023*
   "Modelling of single-qubit gates error on neutral atoms due to oscillations in optical tweezers"
5. Abstracts on the 65th Conference of Moscow Institute of Physics and Technology *Apr 2023*
   "Framework for DOSY NMR Data Analysis"
6. Abstracts on the Conference Lomonosov-2023 *Apr 2023*
   "Saturated Absorption Spectroscopy of D2 Line of Rb Isotopes"

AWARDS AND SCHOLARSHIPS

Charitable Foundation for the Development of Innovation Education *Feb 2020 - Aug 2023*
- Scholarship for academic achievements

Moscow Institute of Physics and Technology
- Increased academic state scholarship for academic and scientific achievements Sep *2023 - Present*
- Winner of competition of student works by Department of General Physics *Jan 2023*
- Winner of competition of student works by Department of General Physics *Jun 2023*
- Scholarship for academic excellence Sep *2020 - Present*

WORKSHOPS AND TALKS

1. Seminar of MIPT Theoretical Physics Department "Green's Functions and Nonlinear Systems" *Jan 2023*
   Presented a talk on V-system interaction with classical electromagnetic fields.
2. MIPT Workshop "Computational Methods in Materials Science" *Sep 2023*
   Lectures and seminars on computational methods in materials design

PROJECTS

Domain structure of YiG thin films, Ising model and Magnetic memory *Jun 2023*
- Observed domain structure in YiG thin films, investigated Ising model with Monte-Carlo
- Project won competition of student works by MIPT Department of General Physics

Hackathon - Naumen IT company *Apr 2021*
- Developed telegram bot to support Naumen interns, project scored 2nd place

MORE

- Software: Python, Julia, Wolfram Mathematica, Latex, C++, SolidWorks, Git