



# Anastasiia Nikitina

Research assistant

- January 31<sup>th</sup>, 2001
- St. Petersburg, Russia
- +7 921 352 4789
- anastasia.nikitina@metalab.ifmo.ru

## Social Network

- ORCID
- Google Scholar
- Scopus
- ResearchGate

## Languages

- Russian (mother) ●●●●●
- English (C2) ●●●●●
- German (C1) ●●●●●

## Hard Skills

- Numerical:** Comsol (Acoustics module, Wave Optics module);
- Visual:** Adobe Illustrator, Inkscape;
- Programming:**  $\LaTeX$ , Wolfram Mathematica

## Soft Skills

- Completed courses:** communication and teambuilding, public speaking and presentation techniques, storytelling

## Research area

- Acoustics and optics:** symmetry and group analysis of eigenmodes of resonators and nonlinear circular dichroism in nanostructures;
- Mathematical physics:** Lie algebras, conformal field theory

## Hobbies

- Sport:** ice hockey, figure skating, swimming, badminton

## Working Experience

### Research

2021 – present **Research assistant** ITMO University  
*Faculty of Physics, Dr. Mihail Petrov Group*

### Participation in Conferences

July.2024 **Resonant Nanophotonics Educational Workshop 2024** Russia  
 Oct.2022 **XV Russian Conference on Physics of Semiconductors** Russia  
 May.2022 **Saint-Petersburg OPEN 2022** Russia

## Education

2023–present **Master** ITMO University  
*Advanced Quantum and Nanophotonic Systems*  
 Supervisor: Kristina Frizyuk, PHD student, Faculty of Physics

2019 – 2023 **Bachelor** ITMO University  
*Applied and Theoretical Physics*  
 Thesis title: “Circular dichroism in the second-harmonic signal of single dielectric nanostructures”  
 Supervisor: Kristina Frizyuk, PHD student, Faculty of Physics  
 GPA: 4.87/5.0

2017 – 2019 High school Presidential Physics and Mathematics Lyceum No.239 student

## Publications

### Journal Articles

- 2024 **Achiral Nanostructures: Perturbative Harmonic Generation and Dichroism Under Vortex and Vector Beams Illumination**  
**Nikitina A. and Frizyuk K.**  
*Adv. Opt. Mater.* n/a, 2400732
- 2024 **Exceptional points in single open acoustic resonator due to the symmetry breaking**  
*Igoshin V., Tsimokha M., Nikitina A., Petrov M., Toftul I., and Frizyuk K.*  
*Phys. Rev. B* 109, 144102
- 2023 **Nonlinear circular dichroism in achiral dielectric nanoparticles**  
**Nikitina A., Nikolaeva A., and Frizyuk K.**  
*Phys. Rev. B* 107, L041405
- 2022 **Acoustic resonators: Symmetry classification and multipolar content of the eigenmodes**  
*Tsimokha M., Igoshin V., Nikitina A., Toftul I., Frizyuk K., and Petrov M.*  
*Phys. Rev. B* 105, 165311

### Conference Proceedings

- 2023 **Nonlinear circular dichroism in dielectric nanoparticle dimers and trimers**  
**Nikitina A., Nikolaeva A., Petrov M., and Frizyuk K.**  
*St. Petersburg Polytechnic University Journal: Physics and Mathematics.* 2022 Vol. 15, No. 3.2
- 2021 **High-Q states in acoustic apple-shaped resonators**  
*Igoshin V., Nikitina A., Tsimokha M., Toftul I., Petrov M., and Frizyuk K.*  
*J. Phys.: Conf. Ser.* 2015 012040

## Awards

2022-2023	<b>Enhanced State Academic Scholarship</b> for achievements in the research field	ITMO University
2020	<b>X YOUTH AWARD</b> competition finale	National University of Science and Technology MISiS