



# Ellina Pilshchikova

Bachelor Student

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## Details

Date / Place of birth

18.02.2004  
Minsk, Belarus

Nationality

Polish

## Languages

### English

Learning right now at university at level C1

### French

B2

### Russian

Native speaker

### Belarusian

Native speaker

### Polish

A1-A2, successfully passed an exam on polish card exam.

## Skills

LaTeX



Microsoft Office Word



Microsoft Excel



Python



Matlab



LabPlot



Microsoft PowerPoint



Writing research articles



Fast Learner



Adaptability



Ability to Work in a Team



Ability to Work Under Pressure



## Education

Sep 2021 — Present

Saint Petersburg

### ITMO University

Applied and theoretical physics

Currently studying on the specialty technical physics on the faculty of physics and engineering.

Head - Prof. Dr. Pavel Belov.

Sep 2010 — Jun 2021

Minsk

### Gymnasium 8

High School

School with an in-depth study of the French language, finished last year with average score 9.7 (max 10), passed final exams with high score. Participated in school olympics on the domain of physics, french etc. Participated in school scientific-practical conference on astronomy with the topic of studying black holes.

## Research background (semesters projects ect)

Sep 2022 — Present

Saint Petersburg

## Research on band structure and surface waves of photonic crystals

T-matrix formalism for band-structure analysis of photonic crystal and calculation of the reflection coefficients. Theoretical analysis for the directional excitation of the surface waves via near fields of the dipole.

Jan 2022 — Jun 2022

Saint Petersburg

## Research on cloud chamber

Thermodynamic conditions of the chamber operation were found and a sample of the Wilson chamber was built.

Jan 2022 — Jun 2022

Saint Petersburg

## Generator of QR-codes

Making generator of QR-codes in team, using HTML, CSS, JavaScript, python (flask, flask-bootstrap, CairoSVG), learning how to make a telegram-bot in python

<https://github.com/semyonbo/Phystech-QR>

Sep 2021 — Jan 2022

Saint Petersburg

## Research on metamaterial auxetics

Learning on metamaterials and their properties. We made an origami-maket that have the function of auxetics and make an experiment to prove that.

## Internships

Sep 2022 — Present

Saint Petersburg

## Studying the optical properties of three-dimensional photonic crystals fabricated on the basis of halide perovskites at International Research Center for Nanophotonics and Metamaterials.

Fabrication of polymer matrices by the method of two-photon polymerization. Research of optical properties of structures by optical microspectroscopy with angular resolution.

Working on titanium sapphire laser TiF100.

## Courses

Sep 2021 — Present

## Introduction to Digital Culture at ITMO University

Feb 2021 — Present

## Data storage and processing

Sep 2022 — Present

## Applied statistics

Sep 2021 – Present	Course of mathematical analysis
Sep 2021 – Jun 2022	Linear algebra course
Feb 2022 – Jun 2022	Physical chemistry course
Feb 2022 – Jun 2022	Statistical physics in thermodynamics
Sep 2021 – Jan 2022	Basic mechanics course
Sep 2018 – Sep 2018	31st Planetary Congress of the Association of Space Explorers at National Academy of Sciences of Belarus

## Personal traits

Dedicated student with the ability to multitask and work well with others. Bringing forth a motivated attitude and a variety of powerful skills. Ambitious and ready to work to achieve goals. Easily learns something new and wants to gain an professional experience.

## References

### Friedrich Schiller University Jena

Dr. Artem Sinelnik, PostDoc, internship supervisor

artem.sinelnik@uni-jena.de

### ITMO University

Dr. Natalia Kostina, PostDoc, scientific supervisor of research on band structure and surface waves of photonic crystals and research on cloud chamber.

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### ITMO University

Prof. Dr. Pavel Belov - The head of the School of physics and engineering

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