

# Sergey Spiridonov

+79218739741 • sergey.spiridonov@metalab.ifmo.ru



## Education

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### ITMO University

*Master of Science in Technical Physics*  
Specialization in Quantum Materials

**Saint-Petersburg (Russia)**

2021 – present

### ITMO University

*Bachelor of Science in Technical Physics, GPA 4.68/5*  
Specialization in Nanophotonics and Quantum Optics

**Saint-Petersburg (Russia)**

2017 – 2021

**Thesis:** "Fourier Modal Method with the basis supplemented with discontinuous functions"

#### Main courses:

General physics, Electrodynamics, Quantum mechanics, Quantum electrodynamics, Solid-state physics, Nonlinear physics, Mathematical analysis, Linear algebra, Group theory, Computational methods, Python

### Academic lyceum "Physical-Technical High School"

*General Certificate of Secondary Education*  
Specialization in physics and mathematics

**Saint-Petersburg (Russia)**

2014–2017

## Work Experience

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### The Department of Physics and Engineering of ITMO University Saint Petersburg (Russia)

*Laboratory assistant*

2019 – 2021

### The Department of Physics and Engineering of ITMO University Saint-Petersburg (Russia)

*Engineer*

2021 – present

## Conferences

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"Congress of Young Scientists"-2021, presentation competition winner

## Skills

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**Languages:** Russian(mother tongue), English(Intermediate), French(Elementary)

**Programs:** MATLAB, COMSOL, LTspice

**Computer languages:** Python, MATLAB

## University projects

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- 2020-2021 - Fourier Modal Method with the basis supplemented with discontinuous functions (bachelor thesis)
- 2021-present - Optimization of metasurfaces with modern computational methods (collaboration with CORNING company)

## **Publications**

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Reformulated Fourier Modal Method with improved near field convergence, S.Spiridonov, A. Scherbakov, IEEE Transactions on Antennas and Propagation (under review)