

Kliment Semushev

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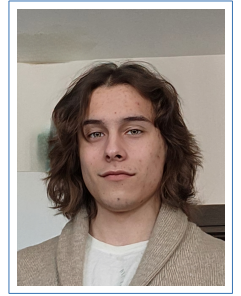
Curriculum Vitae

School of Physics and Engineering
ITMO University, Saint Petersburg, Russia
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Education

- 2018–2021 **High School**, *The Presidential Physics and Mathematics Lyceum 239, Saint Petersburg, Russia.*
2021–present **Undergraduate, Theoretical and Applied Physics**, *ITMO University, Saint Petersburg, Russia.*

Work Experience

- 2021–present **Research Assistant**, *ITMO University, Saint Petersburg, Russia.*
- Quasicrystals
 - Bound States in the Continuum
 - Bloch waves

Language skills

Russian (native),
English (advanced),
Spanish (intermediate).

Publications

Proceedings

- 2021 **K. V. Semushev**, M. V. Rybin, and Maslova E. E. Quasicrystal With Octagonal Symmetry. *International Congress on Artificial Materials for Novel Wave Phenomena (Metamaterials)*, volume 15, page 254. IEEE, 2021.

Conferences

- 2021 **XXXI Sakharov's readings**, Octagonal quasicrystals in metamaterial regime, *May 15-16, 2021, Saint Petersburg, Russia (online).*
- 2024 **LIII Scientific and Educational Methodological Conference (ITMO Univesity)**, Impact of material losses on the Quality factor of Bound States in the Continuum in a low-index system, *29 January - 2 February, Saint Petersburg, Russia.*
- 2024 **Youth Conference on Semiconductor Physics "Winter School 2024"**, Impact of material losses on the Quality factor of Bound States in the Continuum in a bilayer dielectric structure, *29 February - 3 March, Zelenogorsk, Russia.*
- 2024 **Congress of Young Scientists (ITMO Univesity)**, Impact of material losses on the Quality factor of Bound States in the Continuum, *8-11 April, Saint Petersburg, Russia.*

Awards

- 2021 **Personal Scholarship** of the government of St.Petersburg
2022 **Grant** for Research Activity for students of universities located on the territory of St.Petersburg
2023 **Contest** of Scientific Research Activities of Master and Postgraduate students of ITMO University

Schools

2024 **Global Summer School**, Advanced Optoelectronic Devices and Materials, Harbin Institute of Technology, Harbin, China.

Skills

Applied Thin-film fabrication, Slot-Die Coating, Blade Coating, Atomic-Force Microscopy, Chemical Vapor Deposition

Modelling COMSOL Multiphysics, CST Studio

Programming Matlab, Python, C++, Java

Illustrations Adobe Illustrator, Adobe Photoshop, Inkscape, Blender

Other Origin, Microsoft Office, LaTeX

Research interests

Experience in Wave optics, Quasicrystals, Metamaterials, Bound States in the Continuum (BIC), Mie-resonance, Bragg diffraction, Photonic crystals, Bloch waves, Fano resonances, Optical vortices, Huygens metasurfaces, Coupled mode theory and Perturbation theory

also during the Students' Project Programme at *the School of Physics and Engineering (ITMO University)* had an experience to study the perovskite-based materials (*more information upon request*)