Mikhail Tsukerman

Saint Petersburg | mikzuker@gmail.com | +7 911 165-42-52

Education

- **ITMO University**, BS in Applied and Theoretical Physics, GPA: 4.7 (out of 5.0)　　　Sept. 2022 – Now
  - **Computer science:** Machine learning and DL, Optimization methods, Probabilistic Graphical Models.
  - **Mathematics:** Calculus, Statistics, Topology, Differential equations.
  - **Physics:** Quantum mechanics, Mathematical physics, Electromagnetism.

Work experience

- **Scientific Researcher**, ITMO University, School of Physics and Engineering　　　Feb. 2024 – Now
  - Designing Neural Networks for scientific data analysis.
  - Writing optimization algorithms for electromagnetic applications.
  - Conducting computational simulations in CST Microwave Studio.
- **Computer Vision Intern**, ITMO University, Laboratory of Technical Vision　　　Feb. 2025 – March 2025
  - Marking up dataset containing of darkened factory conveyor photos.
  - Applying different CV models (pre-/untrained) to the task of objects' detection.
  - Making statistical and metrics analysis of applied methods.
- **Lecturer assistant**, Webium online school　　　Sept. 2023 – May 2024
  - Conducting physics seminars for high school students.

Scientific Projects

- **Tailor-made surface for RCS spectrum mimicking**　　　Jan. 2025 – Now
  - Designing metasurface using stohastic optimization algorithm for RCS spectrum mimicking.
- **Neural Network for object's geometry prediction**　　　Sept. 2024 – Dec. 2024
  - Preprocessing experimental data and analysis.
  - Writing Convolutional Neural Network for surveying objects' S-Parameters.
- **Evolutionary algorithm for scattering control**　　　Dec. 2023 – Jan. 2025
  - Writing evolutionary algorithm for metasurfaces optimization.
  - Conducting computational experiments based on the Method of Moments.
  - Writing scientific paper and participating in conferences.

Qualifications and Skills

- **Programming:** Python (OOP competences, Pandas, NumPy, SciPy); Docker; VCS (Git).

- **Machine Learning:** PyTorch, TensorFlow, Scikit-learn, CVAT.

- **Other:** LaTeX competences; Article figures creating skills (Inkscape, Matplotlib, Seaborn).

- **Languages:** English (Advanced); German (Intermediate).

Conferences

- **PIERS 2025**, Abu Dhabi, UAE   May 2025

  - Co-author, "Genetically Designed Metamaterials for scattering control".

- **Metamaterials 2024 Conference**, Crete, Greece   September 2024

  - Oral Talk, "Evolutionary algorithm for scattering suppression".

- **Lomonosov conference**, Moscow State University – Moscow, Russia   April 2024

  - Oral Talk, "Genetic algorithms for scattering applications".

Honors and Awards

- **Fellowship for Outstanding International Students**, Tel Aviv University   March 2025
- **Best Oral Talk**, Lomonosov conference, Moscow State University   April 2024
- **Best Oral Talk and Presentation**, Congress of Young Scientists, ITMO University   April 2024