

Education

- since Sep. 2021 **The second year of the Ph.D. school in Mathematics**, Lomonosov Moscow State University (MSU), Russia
- Advisor: Professor **Vladimir Protasov** (University of L'Aquila). Approximation theory: B-splines, self-affine tiles, wavelets, geometric modelling, linear algebra.
- 2015 – 2021 **Specialist degree in Mathematics**, GPA: 5.0/5.0, Lomonosov MSU, Moscow, Russia
- Sep. 2020 – June 2022 **Ozon Masters, MS level corporate program in Data Science**, Moscow
- **Courses:** Numerical Linear Algebra, Optimization, Discrete Optimization, Machine Learning, Deep Learning, Statistics, Information Theory, Big Data Engineering.

Publications

- V. Protasov, T. Zaitseva, “Tiling of polyhedral sets”, accepted to *Discrete Comp. Geom.* (2022), [arXiv](#).
- V. Protasov, T. Zaitseva, “Self-affine 2-attractors and tiles”, *Mat. Sb.*, 213:6 (2022), 71–110, [DOI](#), [arXiv](#).
- T. Zaitseva, Yu. Malykhin, K. Ryutin, “Recovery of regular ridge functions on the ball”, *Constr. Approx.* (2022), [DOI](#), [arXiv](#).
- T. Zaitseva, “Multivariate tile B-splines”, [arXiv](#), accepted to *Izv. Math.* (2022).
- D. Logofet, V. Protasov, T. Zaitseva, “Pattern-Multiplicative Average of Nonnegative Matrices: When a Constrained Minimization Problem Requires Versatile Optimization Tools”, *Mathematics*, 2022, 10(23), 4417, [DOI](#).
- V. Yu. Protasov, T.I. Zaitseva, “Self-affine tilings of polyhedra”, *Doklady Mathematics*, 500:5 (2021), 55–61.
- Yu.V. Malykhin, K.S. Rjutin, T.I. Zaitseva, “On recovery of regular ridge-functions”, *Math. Notes*, 109:2 (2021), 307–311, [DOI](#).
- T.I. Zaitseva, “Simple tiles and attractors”, *Sb. Math.*, 211:9 (2020), 1233–1266, [DOI](#).
- T. Zaitseva, “Haar wavelets and subdivision algorithms on the plane”, *Advances in Systems Science and Applications*, 17:3 (2017), 49–57, [PDF](#).

Research and work experience (recent)

- since Dec. 2019 **Laboratory “High-dimensional approximation and applications” (led by Prof. Vladimir Temlyakov)**, Moscow, Russia, [link](#)
- Summer 2022 **Internship at Snap Inc., neural rendering**, London, UK
- Optimized meshes in the pipeline of inverse rendering for 3d reconstruction from 2d.
- July 2021 **Summer school, project “Optimization methods in populational dynamics”**
- Summer 2020 **Research Intern, CGF Studio (computer graphics, character animation)**, Russia
- 3d skeleton-based action recognition, texture expansion. Literature review and tests.
- Summer 2019 **EPFL summer internship (E3 program, Laboratory of Applied Photonics Devices, led by Prof. Christophe Moser)**, Lausanne, Switzerland, [link](#)
- Optimized algorithm for volumetric 3D printing.
- Fall 2019 **Research Intern, Huawei (ML, deep learning)**, Moscow, Russia
- 2015 – 2017 **Intern, Motorica (bionic hand prostheses, sensors, 3D printing)**, Moscow, Russia

Programming skills

- **Python** (advanced in scientific libraries).
- Basic: Pytorch, Tensorflow, bash, html/css, C++, R, Matlab, Blender.

Conferences (recent)

- 2022 SIGGRAPH poster, Vancouver, Canada, [proceedings](#).
- 2022 CG Week, Young Researchers Forum, Germany.
- 2022 Curves and Surfaces, Arcachon, France.
- 2022 Conference of mathematical centres, Moscow, Russia.
- 2022 Multivariate approximation and applications, Sochi, Russia.
- 2022 Eurographics Doctoral Consortium, France.
- 2022 International Mesh Roundtable, poster, organized by SIAM.
- 2021 The conference “Approximation: theory, methods, and applications” (ATMA2021), Italy.
- 2021 The international conference “Optimization without borders”, Sochi, Russia.
- 2017-2021 The conference “Lomonosov”, Moscow, Russia.

Teaching

- since 2021 Conduct seminars on variational calculus, convex analysis and optimization at MSU.
- since 2020 Private teacher in many undergraduate courses in math and CS.

Awards (main)

- 2015, 2014 The prize winner of **Russian National olympiad** in Mathematics (top 50 in Russia).
- 2015 The prize winner of **Russian National olympiad** in Informatics (top 110 in Russia).
- 2022 **The best technical poster**, International Mesh Roundtable, SIAM.
- 2017 – 2018 **The best oral presentation & poster**, “Control, Information, and Optimization”.
- 2019 The winner of “NTI student olympiad”, robotics, Skoltech and Innopolis.

Scholarships

- since 2022 Scholarship for several students in Lomonosov MSU with achievements in science.
- since 2021 Foundation for the advancement of mathematics “BASIS” (4 PhD students).
- 2017 – 2021 Scholarship for top 10% of students in Lomonosov Moscow State University.
- 2018 – 2021 Chebyshev individual scholarship.
- 2015 – 2021 Russian Federation Presidential grant for students.
- 2018 – 2019 “Umnik”-scholarship awarded to the 10 student projects by Russian government.

Extracurricular activities

- 2021 Co-organizer of the “Workshop on Multivariate Approximation and Geometric Modeling”.
- since 2021 Web-master of our laboratory site.
- since 2016 Jury member of Moscow stage of Russian National olympiad in mathematics.
- 2017 – 2021 Head girl in the academic group at the university.

Languages

- English, German (B1), French (A2)