

Kristina Oganessian

✉ oganchris@gmail.com

Work and Education

- 2024-pres **Postdoc fellow**, Analysys and PDE center, Ghent University, Belgium.
- 2020-2024 **Researcher**, Laboratory “High-dimensional Approximation and Applications”, Russia, [link](#).
- 2019-2024 **PhD in Mathematics**, Centre de Recerca Matemàtica and Universitat Autònoma de Barcelona, Spain. Thesis defended on March 6, 2024.
- 2019-2023 **PhD in Mathematics**, Lomonosov Moscow State University, Russia. Thesis defended on September 7, 2023 at Steklov Mathematical Institute.
- 2013-2019 **MSc in Mathematics**, Lomonosov Moscow State University, Russia.

Research Interests

Harmonic analysis, Number theory, Combinatorics

Publications and Preprints

- 2024 K. Oganessian, “Quadratic spectral concentration of characteristic functions”, [arXiv](#).
- 2024 K. Oganessian, “Bounds for the number of multidimensional partitions”, Eur. J. Comb., 120 (2024), 103982, [DOI](#), [arXiv](#).
- 2023 K. Oganessian, “Two-dimensional Hardy-Littlewood theorem for functions with general monotone Fourier coefficients”, J. Fourier Anal. Appl., 29 (2023), 60, [DOI](#), [arXiv](#).
- 2023 K. Oganessian, “Univalence of T -symmetric Suffridge type polynomials of degree $3T+1$ ”, [arXiv](#).
- 2023 M.I. Dyachenko, K.A. Oganessian, “Counterexamples to the Hardy–Littlewood theorem for generalized monotone sequences”, Math. Notes, 113(3) (2023), 458–463, [DOI](#).
- 2022 K. Oganessian, “Cosine polynomials with restrictions on their algebraic representation”, J. Approx. Theory, 281–282 (2022), 105802, [DOI](#), [arXiv](#).
- 2021 K. Oganessian, “John-Nirenberg inequality for Riemann type series”, [arXiv](#), to appear in Math. Notes.
- 2021 K. Oganessian, “Uniform convergence criterion for non-harmonic sine series”, Sb. Math., 212(1) (2021), 70–110, [DOI](#), [arXiv](#).
- 2020 K. Oganessian, “The sets of positivity of sine series with monotone coefficients”, Acta Math. Hungar., 162(2) (2020), 705–721, [DOI](#).
- 2020 K. Oganessian, “A functional inequality for sine series”, Math. Notes, 107(3) (2020), 531–533, [DOI](#).
- 2018 K. Oganessian, “The measure of the set of zeros of the sum of a nondegenerate sine series with monotone coefficients in the closed interval $[0, \pi]$ ”, Math. Notes, 103(4) (2018), 621–625, [DOI](#).
- 2018 K. Oganessian, “Generalized double Fourier sine series”, Moscow Univ. Math. Bull., 73(1) (2018), 9–16, [DOI](#).

Conference Talks

- 09/2024 **Approximation, optimization and sparse recovery**, Sirius University, Russia.
- 08/2024 **Fourth conference of international mathematical centers**, Saint Petersburg, Russia.
- 07/2024 **Multivariate approximation, discretization, and sampling recovery**, Isaac Newton Institute, United Kingdom.

- 06/2024 **Barcelona analysis conference**, Universitat de Barcelona, Spain.
- 09/2023 **Approximation, expansions and computer science**, Sirius University, Russia.
- 11/2022 **Second conference of international mathematical centers**, Lomonosov Moscow State University, Russia.
- 08/2022 **Applied functional analysis**, Banff International Research Station, Mexico.
- 08/2021 **Conference of international mathematical centers**, Sochi, Russia
- 01/2021 **Modern methods of theory of functions and related problems**, Voronezh, Russia.
- 11/2020 **Möbius Contest**, Independent University of Moscow, Russia.
- 01/2020 **Modern problems of theory of functions and their applications**, Saratov, Russia.
- 11/2019 **Möbius Contest**, Independent University of Moscow, Russia.
- 05/2019 **Modern problems of mathematics and mechanics**, Lomonosov Moscow State University, Russia.

Seminar Talks

- 10/2024 **Seminar on theory of functions of a real variable**, Lomonosov Moscow State University, Russia.
- 11/2023 **Analysis seminar**, University of Padova, Italy.
- 11/2023 **ICTP analysis seminar**, International Center for Theoretical Physics, Italy.
- 05/2023 **Seminar on complex analysis (Gonchar seminar)**, Steklov Mathematical Institute of Russian Academy of Science, Russia.
- 03/2023 **Barcelona analysis seminar**, Centre de Recerca Matemàtica, Spain.
- 11/2022 **Seminar on theory of functions of a real variable**, Lomonosov Moscow State University, Russia.
- 11/2022 **Harmonic analysis seminar**, Centre de recherches mathématiques, Canada.
- 11/2021 **Barcelona analysis seminar**, Centre de Recerca Matemàtica, Spain.
- 11/2020 **Seminar on theory of functions of a real variable**, Lomonosov Moscow State University, Russia.
- 04/2020 **Modern problems of number theory**, Steklov Mathematical Institute of Russian Academy of Science, Russia.
- 03/2020 **Seminar on theory of functions of a real variable**, Lomonosov Moscow State University, Russia.
- 03/2018 **Seminar on geometrical approximation theory**, Lomonosov Moscow State University, Russia.
- 03/2018 **Seminar on theory of orthogonal and trigonometric series**, Lomonosov Moscow State University, Russia.
- 11/2017 **Seminar on theory of functions of a real variable**, Lomonosov Moscow State University, Russia.
- 04/2017 **Seminar on theory of orthogonal and trigonometric series**, Lomonosov Moscow State University, Russia.

Conferences and Research Programs

- 10/2024 **Arbeitsgemeinschaft: Quantum Signal Processing and Nonlinear Fourier Analysis**, Mathematisches Forschungsinstitut Oberwolfach, Germany.
- 09/2024 **Approximation, optimization and sparse recovery**, Sirius University, Russia.
- 08/2024 **Fourth conference of international mathematical centers**, Saint Petersburg, Russia.
- 07/2024 **Discretization and recovery in high-dimensional spaces**, Isaac Newton Institute, United Kingdom.

- 06/2024 **Summer school: Additive combinatorics**, Rényi Institute, Hungary.
- 06/2024 **Barcelona analysis conference**, Universitat de Barcelona, Spain.
- 09/2023 **Approximation, expansions and computer science**, Sirius University, Russia.
- 06/2023 **Summer school on harmonic analysis and PDEs: Sphere packing**, Basque Center for Applied Mathematics and University of Basque Country, Spain.
- 06/2023 **Hypatia graduate summer school**, Centre de Recerca Matemàtica, Barcelona, Spain.
- 11/2022 **Second conference of international mathematical centers**, Moscow, Russia.
- 07/2022 **Complex analysis, spectral theory and approximation meet in Linz**, Linz, Austria.
- 06/2022 **Hypatia graduate summer school**, Centre de Recerca Matemàtica, Barcelona, Spain.
- 06/2022 **Workshop on harmonic analysis and related topics**, Barcelona, Spain.
- 06/2022 **11th International conference on harmonic analysis and partial differential equations**, El Escorial, Spain.
- 09-12/2021 **Research in pairs program**, Centre de Recerca Matemàtica, Barcelona, Spain.
- 08/2021 **Conference of international mathematical centers**, Sochi, Russia.
- 01/2021 **Modern methods of theory of functions and related problems**, Voronezh (online), Russia.
- 01/2020 **Modern problems of theory of functions and their applications**, Saratov, Russia.
- 06/2019 **Approximation, sampling, and compression in high dimensional problems**, Cambridge, United Kingdom.
- 05/2019 **Modern problems of mathematics and mechanics**, Lomonosov Moscow State University, Russia.

Awards and Distinctions

- 2021 **Winner of the Prize for Young Mathematicians of Russia**, Sochi, Russia, [link](#).
- 2020 **Winner of the XXIV Möbius Contest**, Moscow, Russia, [link](#).
- 2019 **Second prize in the All-Russian Contest of Theses in Mathematics**, Nizhny Novgorod, Russia, [link](#).
- 2017 **First prize in the International Mathematics Competition for University Students (IMC)**, Blagoevgrad, Bulgaria.
- 2015, 2018 **Second prize in the International Mathematics Competition for University Students (IMC)**, Blagoevgrad, Bulgaria.
- 2013 **Medalist of the Russian National Olympiad in Mathematics** (top 35 in Russia), Sarov, Russia.

Grants

- 2024 Russian Science Foundation, no. 24-11-00114.
- 2022-2023 Russian Science Foundation, no. 22-21-00545.
- 2021-2023 Russian Science Foundation, no. 21-11-00131.
- 2022-2023 Russian Federation Governmental Scholarship.
- 2019-2024 Foundation for the Advancement of Theoretical Physics and Mathematics "BASIS", no. 19-8-2-28-1 (PI).
- 2021 Prize for young mathematicians of Russia (PI).
- 2021 Scholarship of Lomonosov Moscow State University for considerable achievements in science.
- 2021 Visiting grant, Centre de Recerca Matemàtica, Barcelona, Spain.
- 2020 Möbius Contest Foundation (PI).
- 2020 Shafarevich individual scholarship (PI).

- 2017-2018 Russian Foundation for Basic Research, no. 16-01-00350.
2015-2019 Scholarship for top 10% of students in Lomonosov Moscow State University.
2015 Russian Federation Presidential Prize for talented young people.
2014 Scholarship of the Governor of Moscow region.

Teaching and Related Activities

- 2018-pres Teacher of olympiad mathematics.
2014-pres Jury member of the Moscow Mathematical Olympiad.
2013-2016 Organizer of the DAFE MIPT Cup in Mathematics and the Intellectual All-around in Zhukovsky.
2013-2014 Jury member of the International Mathematical Tournament of Towns.

Languages

- Russian Native
English Fluent
Portuguese Fluent
Spanish Intermediate