

Vasiliy Neckrasov

PhD student at Brandeis University
PhD in Mathematics, expected May 2027
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[Papers on arXiv](#)

[ORCID profile](#)

[Google Scholar profile](#)

Education

- 2022 – present Brandeis University
Department of Mathematics
PhD in Mathematics, expected May 2027
Advisor — Dmitry Kleinbock.
- 2016 – 2022 Lomonosov Moscow State University, Faculty of Mechanics and Mathematics,
Department of Number Theory
Specialist degree in Mathematics, conferred June 2022
Advisor — Nikolay Moshchevitin.
- 2015 – 2016 AESC MSU — Kolmogorov’s boarding school of Moscow State University

Mathematical interests

Diophantine approximation; homogeneous dynamics and ergodic theory; Schmidt’s games and variations; parametric geometry of numbers

Publications/preprints

- 2026 Taehyeong Kim, Vasiliy Neckrasov, Twisted Diophantine Approximation II: Uniform Theory, [preprint on arXiv](#).
- 2026 Taehyeong Kim, Vasiliy Neckrasov, Twisted Diophantine Approximation I: Asymptotic Theory, [preprint on arXiv](#).
- 2026 Vasiliy Neckrasov, Chengyang Wu, Bohan Yang, Winning property of counterexamples to Uniform Littlewood’s Conjecture, [preprint on arXiv](#), submitted.
- 2026 Dmitry Kleinbock, Vasiliy Neckrasov, Bounded trajectories of quasi-rays on homogeneous spaces and Diophantine approximation with weight functions, [preprint on arXiv](#), submitted.
- 2026 Leo Hong, Dmitry Kleinbock, Vasiliy Neckrasov, Uniform Diophantine approximation with restrictions via total density of collections of subspaces, [preprint on arXiv](#), submitted.
- 2026 Vasiliy Neckrasov, Khintchine-type theorems for weighted uniform inhomogeneous approximations via transference principle, [Mathematika](#), 72: e70089 (2026).
- 2025 Nikolay Moshchevitin, Vasiliy Neckrasov, Metric theory of inhomogeneous Diophantine approximations with a fixed matrix, [preprint on arXiv](#), submitted.
- 2025 Vasiliy Neckrasov, Eric Zhan, On Nontrivial Winning and Losing Parameters of Schmidt Games, [Results Math](#) 80, 236 (2025).
- 2022 Vasiliy Neckrasov, On some properties of irrational subspaces, [Uniform Distribution Theory Journal](#), Volume 17 (2022), no. 1, pp. 89-104. DOI: [10.2478/udt-2022-0002](https://doi.org/10.2478/udt-2022-0002).

Work in preparation

- 2026 Reynold Fregoli, Taehyeong Kim, Dmitry Kleinbock, Vasiliy Neckrasov, Anurag Rao, *Well approximable Dirichlet spectrum and full Hausdorff dimension of the folklore set*, manuscript in preparation.

Talks

- 10/20/2026 *Bounded trajectories on homogeneous spaces for subsets without semigroup structure*, [Tufts Ergodic Theory and Dynamical Systems Seminar](#).
- 10/08/2026 *Metric theory of twisted uniform Diophantine approximation*, [Online Seminar in Diophantine Approximation and Related Topics](#).
- 10/03/2026 *Bounded trajectories on homogeneous spaces for subsets without semigroup structure*, [AMS Fall Eastern Sectional Meeting](#), George Washington University.
- 10/01/2026 *Bounded trajectories on homogeneous spaces for subsets without semigroup structure*, [Dynamics Seminar, University of Maryland](#).
- 09/22/2026 *Counterexamples to the uniform Littlewood conjecture form a winning set*, [Brandeis Everytopic Seminar](#).
- 07/28/2026 *Inhomogeneous Diophantine Approximations: Some Recent Advances*, [ICM 2026](#) (short communication).
- 02/15/2026 *How (not) to cut squares into triangles?*, [Harvard-MIT Math Tournament](#) (talk targeted at high school students).
- 09/30/2025 *Zero-one laws for uniform inhomogeneous Diophantine approximations*, [New England Dynamics and Number Theory seminar](#).
- 06/05/2025 *Metric Diophantine approximations with a fixed matrix*, [Online Seminar in Diophantine Approximation and Related Topics](#).
- 11/10/2024 *Geometry and Dynamics of Continued Fractions*, [Harvard-MIT Math Tournament](#) (talk targeted at high school students).
- 02/02/2023 *Completely irrational subspaces and their Diophantine properties*, [New England Dynamics and Number Theory seminar](#).
- 04/13/2020 *Multidimensional p -adic approximations*, Research seminar of the Number Theory Department, MSU.

Conferences

- October 2026 [AMS Fall Eastern Sectional Meeting](#), George Washington University
- July 2026 [ICM 2026](#), Philadelphia
- April 2024 [Workshop on Dynamical Systems and Related Topics](#), University of Maryland
- February 2023 [Diophantine Analysis, Dynamics and Related Topics](#), Technion, Haifa (Israel)
- August 2019 [Baikal Number Theory](#), Olkhon island (Russia)
- April 2017 Mini-conference "Diophantine problems" on the occasion of Prof. Nikolay Moshchevitin's 50th birthday, MIPT, Dolgoprudny (Russia)

Mentoring

- 2025 MIT PRIMES — Mentor (project "Totally dense collections of subspaces" with Leo Hong), [paper](#)
- 2023 MIT PRIMES — Mentor (project "Schmidt Diagrams" with Eric Zhan), [paper](#)
- 2019 – 2022 AESC MSU — Team coach, Tournaments of Young Mathematicians.
Saint Petersburg: joint first place (2019), Diploma II (2020), second place (2022).
Minsk: fourth place (2019).

Educational work

- 2025 Instructor — reading course "Ergodic theory and Number theory" for undergraduate students, Brandeis University
- 2023-present Instructor — undergraduate Calculus, Multivariable calculus, Differential equations classes, Brandeis University
- 2024 Instructor — Number theory, Awesomemath summer olympiad program
- 2022-present Teaching assistant/Grader/Math tutor, Brandeis university
- 2017 – 2022 Instructor at AESC MSU — Kolmogorov's boarding school of Moscow State University
- 2020 – 2021 Teaching assistant/team coach, Lyceum "Second school"
- 2017 – 2018 Instructor, Association of Olympiad Winners