

Positions

- 2025–present **Researcher**, Chebyshev Laboratory at St. Petersburg University
- 2023–2024 **Postdoctoral researcher**, Leonhard Euler International Mathematical Institute, St. Petersburg
- 2022–2023 **Junior researcher**, Chebyshev Laboratory at St. Petersburg University
- 2019–2022 **Research assistant**, St. Petersburg Department of Steklov Mathematical Institute of The Russian Academy of Sciences, St. Petersburg
- 2017–2020 **Research assistant**, Mathematics and Mechanics Department, St. Petersburg University

Education

- 2017–2021 **Ph.D. in Mathematics and Physics**, St. Petersburg Department of Steklov Mathematical Institute of The Russian Academy of Sciences
Advisors: Nikolai Vavilov & Victor Petrov *Overgroups of The Elementary Subgroups of Reductive Groups in Irreducible Representations*
- 2015–2017 **M.Sc. in Mathematics**, St. Petersburg University, Diploma Summa Cum Laude
Advisor: Nikolai Vavilov *Overgroups of Exterior Powers of an Elementary Group*
- 2011–2015 **B.Sc. in Mathematics**, St. Petersburg University, Diploma Summa Cum Laude
Advisor: Nikolai Vavilov *Overgroups of Exterior Square of an Elementary Group*

Research Interests

- Algebraic groups: structure theory over rings (Chevalley groups, Steinberg groups, and their relatives; representation theory of such groups)
- Invariant theory: geometry and structure problems defining algebraic groups via invariants; algebro-geometric [Grothendieck] aspects
- Non-associative algebras: Jordan algebras and superalgebras, Poisson algebras and superalgebras and their generalizations, deformations and degenerations

Funding and research groups

- RSF: [Russia] Russian Scientific Foundation
- RFBR: [Russia] Russian Foundation for Basic Research
- 2023–2025 **Leader**, *Groups and non-associative algebras*, RSF No 22-71-10001, 133.000 US\$
Collective research grant (participants: I. Kaygorodov, A. Generalov, A. Petukhov, I. Karimjanov, V. Lopatkin, K. Vyatkina, M. Venchakov), [Link](#)
- 2023–2024 **Participant**, *Non-associative algebraic structures*, RSF No 22-11-00081, head: Ilya Gorshkov, [Link](#)
- 2019–2022 **Co-coordinator**, *Decomposition of unipotents in polyvector representations and applications*, RFBR, individual grant for doctoral students No 19-31-90072, 17.000 US\$, head: Victor Petrov, [Link \(in Russian\)](#)
- 2017–2019 **Participant**, *Split reductive groups over rings and their relatives*, RSF No 17-11-01261, head: Alexei Stepanov, [Link](#)

Awards and scholarships

- 2023 **The “School” competition of Theoretical Physics and Mathematics Advancement Foundation “BASIS”**, junior postdoctoral award, [Link \(in Russian\)](#)

- 2022 **Scholarship of the program “Home towns”, Gazprom Neft PJCS, junior postdoctoral award, [Link \(in Russian\)](#)**
- 2021 **Fellowship of the Leonhard Euler International Mathematical Institute, doctoral student award**
- 2018 **Rokhlin Stipends for Young Mathematicians, graduate student award, [Link \(in Russian\)](#)**
- 2013 **Scholarship of Chebyshev Laboratory at St. Petersburg University, undergraduate student award**
- 1999–2011 Multiple winner and prize winner in chess

Visits

- 2024 **Short-term visit of Peking University via Sino–Russian Mathematics Center, September 1 – 22, Beijing, China**
- 2024 **Mathematics Summer School “Algebraic Transformation Groups III”, August 5 – 10, Pyalovo, Moscow**
lecturer of the mini-course “Why do we need geometry of schemes?”
- 2015 **Scuola Matematica Interuniversitaria (Mathematics Summer School), August, Perugia, Italy**
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| | Jürgen Appell & | <i>Analisi Funzionale</i> |
| Completed courses: | Martin Văth | |
| | Nikolai Vavilov | <i>Algebra</i> |
- 2015 **Short-term visit of Bielefeld University via Leonhard Euler DAAD program, April, Bielefeld, Germany, research advisor: Anthony Bak**

Conference Talks

- 2024 **Clear about the benefits of schemes for algebraic groups, Lie algebras, algebraic groups, and invariant theory, August 19–24, Samara University, Samara, Russia**
- 2023 **Invariants of polyvector representations of $GL_n(R)$, Lie algebras, algebraic groups, and invariant theory, January 28 – February 2, National Research University Higher School of Economics and Steklov Mathematical Institute, Moscow**
- 2022 **Plücker polynomials and their applications (poster), Random Point Processes, November 1–5, Suzdal, Russia**
- 2020 **Variation of the inverse decomposition of unipotents for exterior square, Lie algebras, algebraic groups, and invariant theory, January 27 – February 1, Moscow State University and Steklov Mathematical Institute, Moscow**
- 2018 **Overgroups of exterior powers of elementary groups (poster), Modern Algebraic Geometry, July 21–25, Silkroad Mathematics Center, Beijing**
- 2017 **Overgroups of exterior powers of an elementary group, St. Petersburg Algebraic D. K. Faddeev Seminar, May 8, St. Petersburg Department of Steklov Mathematical Institute**
- **Overgroups of exterior squares of an elementary group, Lie algebras, algebraic groups, and invariant theory, January 31 — February 5, Moscow State University and Independent University of Moscow**

Teaching Experience

- MM SPbU: [Russia] Mathematics and Mechanics Department, St. Petersburg University
MCS SPbU: [Russia] Mathematics and Computer Science Department, St. Petersburg University
- 2024 Fall **Algebraic groups over rings, MCS SPbU, organizer of a seminar for PhD students, [Link \(in Russian\)](#)**
- 2024–present **Lie algebras, MCS SPbU, organizer of a seminar for undergraduate students, [Link \(in Russian\)](#)**
- 2023–present **Abstract algebra, undergraduate course at MCS SPbU, 3 full semesters**

2014 and 2016, **Abstract algebra**, undergraduate course at MM SPbU
Fall

Teaching Experience: Mentoring and Service

MM SPbU: [Russia] Mathematics and Mechanics Department, St. Petersburg University

2015–2017 **Headman of group (25–35 master students)**, MM SPbU

2014 **Coordinator of group (15–25 students)**, MM SPbU

2011–2015 **Headman of group (50+ bachelor students)**, MM SPbU

Personal data

Date and place of birth: March 07, 1994, Pechora, Russia

Languages: Russian (Native), English, German

I have good skills in programming in Maple, Mathematica, C++, and \LaTeX .

Other scientific activities

since 2024 Referee for Theoretical Physics and Mathematics Advancement Foundation “BASIS”, Russia

since 2023 Referee for Student Research Paper Competition, National Research University Higher School of Economics, Moscow

Publications and Preprints

- **Subgroups of general linear groups, containing the exterior square of the elementary subgroup**, *work in progress with A. Stepanov*
- **The algebraic and geometric classification of Jordan superalgebras**, *with K. Abdurasulov and A. Saydaliyev*
Sib. Elektron. Mat. Izv., accepted for publication, 2025, [Arxiv](#)
- **The algebraic and geometric classification of right alternative and semi-alternative algebras**, *work in progress with H. Abdelwahab and I. Kaygorodov*
- **The algebraic and geometric classification of derived Jordan and bicommutative algebras**, *work in progress with H. Abdelwahab and I. Kaygorodov*
- 2024 **Overgroups of elementary groups in polyvector representations**
J. Math. Sci., vol. 531, pp. 101–116.
- **Overgroups of exterior powers of an elementary group. Normalizers**, *with I. Nekrasov*
Doc. Math., 29(5), pp. 1243–1268, DOI: [10.4171/DM/956](#), [Arxiv](#).
- 2022 **The reverse decomposition of unipotents in polyvector representation**
J. Math. Sci., vol. 513, pp. 120–138, DOI: [10.1007/s10958-025-07703-6](#)
- **Overgroups of exterior powers of an elementary group. Levels**, *with I. Nekrasov*
Linear Multilinear Algebr., vol. 72, no. 4, pp. 563–584, DOI: [10.1080/03081087.2022.2160422](#), [Arxiv](#).
- 2021 **The reverse decomposition of unipotents for bivectors**
Commun. Algebr., 49(10):4546–4556, DOI: [10.1080/00927872.2021.1924183](#), [Arxiv](#).
- **Subgroups of Chevalley Groups Over Rings**, *with A. Stepanov*
J. Math. Sci. (N.Y.), 252(6):829–840, DOI: [10.1007/s10958-021-05203-x](#).
- 2019 **Explicit Equations for Exterior Square of the General Linear Group**, *with I. Nekrasov*
J. Math. Sci. (N.Y.), 243(4):583–594, DOI: [10.1007/s10958-019-04559-5](#), [Arxiv](#).