

Positions

- 2023–present **Postdoctoral researcher**, Leonhard Euler International Mathematical Institute, St. Petersburg
- 2022–2023 **Research assistant**, Chebyshev Laboratory at St. Petersburg University
- 2019–2022 **Junior researcher**, St. Petersburg Department of Steklov Mathematical Institute of The Russian Academy of Sciences, St. Petersburg
- 2017–2020 **Junior researcher**, Department of Mathematics and Mechanics, 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: Prof. Nikolai Vavilov & Prof. 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: Prof. Nikolai Vavilov *Overgroups of Exterior Powers of an Elementary Group*
- 2011–2015 **B.Sc. in Mathematics**, St. Petersburg University, Diploma Summa Cum Laude
Advisor: Prof. 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

Funding and research groups

- RSF: [Russia] Russian Scientific Foundation
- RFBR: [Russia] Russian Foundation for Basic Research
- 2023–2024 **Leader**, *Groups and non-associative algebras*, RSF No 22-71-10001, 133.000 US\$
Collective research grant (participants: Professors 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: Prof. Ilya Gorchikov, [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: Prof. Victor Petrov
- 2017–2019 **Participant**, *Split reductive groups over rings and their relatives*, RSF No 17-11-01261, head: Prof. 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 “Native 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**, *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*
 - Prof. Jürgen Appell & *Analisi Funzionale*
 - Completed courses: Prof. Martin Vöth
 - Prof. Nikolai Vavilov *Algebra*
- 2015 **Short-term visit of Bielefeld University via Leonhard Euler DAAD program**, *April, Bielefeld, Germany*, research advisor: Prof. 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, HSE 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, MSU 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, POMI, St. Petersburg
 - **Overgroups of exterior squares of an elementary group**, *Lie algebras, algebraic groups, and invariant theory*, January 31 — February 5, MSU 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, Spring **Lie algebras**, *MCS SPbU*, organizer of a seminar for undergraduate students
- 2023–present **Abstract algebra**, *undergraduate course at MCS SPbU*, 2 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**

Additional skills

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

Other scientific activities

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

since 2023 Referee for Student Research Paper Competition, HSE University

Publications and Preprints

- **Subgroups of general linear groups, containing the exterior square of the elementary subgroup, work in progress with A. Stepanov**
- 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., DOI: 10.4171/DM/956, Arxiv.
- 2022 **The reverse decomposition of unipotents in polyvector representation**
J. Math. Sci., vol. 513, pp. 120–138
- **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.
- 2021 **The reverse decomposition of unipotents for bivectors**
Commun. Algebr., 49(10):4546–4556, DOI: 10.1080/00927872.2021.1924183.
- **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.