

# CURRICULUM VITAE

Nikolay Konovalov

## Contact information

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## Personal information

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Born:       August 13, 1994, Perm, Russian Federation  
Citizenship: Russia (Russian Federation)

## Academic position

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09.2024–08.2027   Dickson Instructor in the *Department of Mathematics at the University of Chicago*, Chicago, USA.  
09.2023–08.2024   Postdoctoral Fellow in *Max Planck Institute for Mathematics*, Bonn, Germany.

## Education

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**University of Notre Dame**, Notre Dame, USA  
Ph.D. in Mathematics, Graduation Date: May 2023  
Thesis: Algebraic Goodwillie spectral sequence  
Advisor: Mark Behrens

**Higher School of Economics**, Moscow, Russia  
M.S. in Mathematics, Graduation Date: June 2018  
Advisor: Alexey Gorinov

**Higher School of Economics**, Moscow, Russia  
B.S. in Mathematics, Graduation Date: June 2016  
Advisor: Alexey Gorinov

## Research interests

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Algebraic topology: unstable homotopy theory, Adams spectral sequence, Goodwillie calculus, algebra of secondary cohomological operations.

Algebraic geometry: discriminant complements, mixed Hodge structures, automorphism groups.

## Fellowships and awards

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- 2023 Richard Sady Dissertation Prize, University of Notre Dame, Department of Mathematics
- 2017–2018 HSE academic scholarship for M.S. students in Mathematics
- 2017 Simons stipends for students and graduate students, awarded jointly by the Simons Foundation and Independent University of Moscow

## Papers

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1. *A Division Theorem for Nodal Projective Hypersurfaces* (2022), *Math. Z.*, **302(3)**, pp. 1585–1592, available at arXiv:2202.07507.
2. *Koszul duality for simplicial restricted Lie algebras* (2024), *High. Struct.*, **8(2)**, pp. 248–331, available at arXiv:2209.03312.

## Preprints and submitted papers

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1. *On the automorphism groups of smooth Fano threefolds* (2024), preprint, available at arXiv:2406.03584v2.
2. *Algebraic Goodwillie spectral sequence* (2023), preprint, available at arXiv:2303.06240. Submitted to *Memoirs of the AMS*.
3. *Goodwillie tower of the norm functor* (2020), preprint, available at arXiv:2010.09097. Submitted to *J. Homotopy Relat. Struct.*
4. *Topology of spaces of regular sections and applications to automorphism groups* (2020), preprint, joint with Alexey Gorinov, available at arXiv:1712.02578. Submitted to *Adv. Math.*

## Invited talks

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- November 2024 *Algebraic Goodwillie spectral sequence*, Topology seminar, New Mexico State University
- November 2024 *Algebraic Goodwillie spectral sequence*, Workshop on “Unstable Homotopy Theory”, MPIM Bonn
- October 2024 *Algebraic Goodwillie spectral sequence*, Topology seminar, Indiana University Bloomington
- September 2024 *Algebraic Goodwillie spectral sequence*, eCHT Research Seminar (online)
- March 2024 *Algebraic Goodwillie spectral sequence*, Topology seminar, University of Haifa (online)
- March 2024 *Algebraic Goodwillie spectral sequence*, TopICS seminar, Utrecht University
- January 2024 *Tempered sheaves*, Oberseminar, MPIM, Bonn

December 2023	<i>Algebraic Goodwillie spectral sequence</i> , Topology seminar, University of Bonn
November 2023	<i>Algebraic Goodwillie spectral sequence</i> , Topology seminar, Ruhr University, Bochum
July 2023	<i>Unstable homotopy theory and Goodwillie calculus</i> , two lectures in Russian, XIII summer school “Algebra and Geometry”, Suzdal
May 2023	<i>Algebraic Goodwillie spectral sequence</i> , Topology seminar, MIT
February 2023	<i>Algebraic Goodwillie spectral sequence</i> , Topology seminar, Johns Hopkins University
December 2022	<i>Koszul duality for simplicial restricted Lie algebras</i> , Algebra/Topology seminar, University of Copenhagen
December 2022	<i>Algebraic Goodwillie spectral sequence</i> , Topology seminar, University of Chicago

### **Teaching experience**

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#### Instructor:

Autumn 2024 *Honors Calculus I (IBL)*, University of Chicago

#### Teaching Assistant:

Spring 2022 *Calculus I*, University of Notre Dame

Fall 2021 *Calculus III*, University of Notre Dame

Spring 2021 *Honors Calculus II*, University of Notre Dame. Lecturer: Andy Putman

Fall 2020 *Honors Calculus I*, University of Notre Dame. Lecturer: Andy Putman

Spring 2020 *Calculus B*, University of Notre Dame

Fall 2019 *Calculus A*, University of Notre Dame

Fall 2016 *Basics of Smooth Manifolds*, Higher School of Economics. Lecturer: Sergey Natanzon

### **Languages**

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Russian (native speaker), English (advanced), Komi-Zyryan (beginner).