

**Curriculum Vitae**  
**Aleksandr Zakharov**

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**Education:**

*2009-2014* HSE, math department; bachelor's degree. Adviser: Boris Feigin

*2020-2022*, HSE math department; master's degree with honors. Adviser: Alexey Gorinov

*2022-*, HSE math department; PhD program. Adviser: Alexey Gorinov

*2023-*, Sorbonne University IMJ-PRG; continuation of PhD in France with the help of PAUSE program provided by Collège de France. Under the supervision by Alexey Gorinov and Julien Marché.

**Research domains:** algebraic topology, algebraic and complex geometry

**(Pre)publications:**

1. Rational Homotopy Type Of Complements Of Submanifold Arrangements, 2022  
<https://arxiv.org/abs/2211.05033>.  
Revised and Submitted in 2024
2. Derived Binomial Algebras I, 2023  
<https://arxiv.org/abs/2308.01110>.  
Joint work with Dmitry Kubrak and Georgii Shuklin.  
Submitted

**Awards:**

1. First place in Student Research Papers Competition held by HSE, 2022

**Expository and Seminar Talks 2020-2022:**

1. The h-cobordism theorem
2. The boundary of instanton moduli space in Donaldson theory
3. Hurewicz-Milnor-Moore isogenies and exponents of stable homotopy groups of spheres (following A. Mathew)
4. On operads and May's delooping machine
5. Whitehead torsion and the s-cobordism theorem

**Research Talks:**

1. A curious equivalence of derived exponential functors, HSE Laboratory of Algebraic Geometry and Its Applications, 2023
2. Rational homotopy type of arrangements of algebraic varieties, Jussieu Laboratory of Complex Geometry and Topology, 2024

**Teaching experience:**

*2014-2023* Private tutor on probability theory, abstract algebra and topology. Preparing students for math exams to master's and graduate schools.

*2021* Organization of an online course on elementary number theory.

*2020-2021* Assistant at linear algebra classes of HSE and IUM

*2021-2022* Research-intern at Laboratory of Algebraic Geometry And Its Applications, HSE