# Viktoriia Borovik

Master Degree in Mathematics

Born in Ukraine

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Currently in Moscow, Russia

### Languages

English: fluentRussian: nativeUkrainian: fluent

#### Skills

Computer Knowledge
 Python
 SQL (Oracle)
 Spark, Hadoop
 GIT
 Dash framework
 Latex

Mathematica

Soft skills
 Teamwork
 Desire to learn
 Adaptability

### Education

○ 2016 — 2022, *Moscow* 

#### **Moscow State University**

Master degree,

Department of Mechanics and Mathematics,

Specialization: Higher Algebra,

Diploma with honours.

#### Master Thesis

Themes: Projective hypersurfaces that admit additive actions with finite number of orbits

Supervisor: Prof. S. Gaifullin

Abstract: An additive action on a hypersurface X in  $\mathbb{P}^{n+1}$  is an effective action of a commutative unipotent group on  $\mathbb{P}^{n+1}$  which leaves X invariant and acts on X with an open orbit. In this work, I classified all additive actions on hypersurfaces with finite number of orbits up to equivalence and described projective hypersurfaces admitting additive actions with finite number of orbits in recursive form.

### Work experience

Research assistant

Oct 2020 — current

**Higher School of Economics University** (Moscow, Russia)

Laboratory on Algebraic Transformation Groups (Personal page)

• Research in affine algebraic geometry, group actions on algebraic varieties, varieties with torus actions and graded algebras.

Junior python developer

VTB & Innotech (Moscow, Russia)

Mar 2022 — current

One of the largest banks in Russia.

 Worked on modern platform for monitoring scoring models on Python (Dash framework) to replace old monitoring process based on excel files.

#### Editor

Moscow center for continuous math education (Moscow, Russia)

Jul 2021 — Jan 2022

Worked on an electronic math book for secondary school.

### Grants and funding

Scholarship for students, Basis Foundation, winner

Jul 2021 — Jan 2022

• Russian Science Foundation, Conducting fundamental scientific research and exploratory scientific research by individual scientific groups

Jul 2021 — Jan 2022

### Achievements

Prize winner of Moscow Math Olympiad, Kurchatov Olympiad, MIPT Olympiad.

## Publications and preprints

#### • In preparation:

Projective hypersurfaces that admit additive actions with finite number of orbits.

#### Preprints:

- V. Borovik, S. Gaifullin, m-suspensions over rigid varieties.
- V. Borovik, S. Gaifullin, A. Shafarevich, On orbits of automorphism groups on horospherical varieties.

#### Accepted for publication:

V. Borovik, S. Gaifullin, A. Trushin, Commutative actions on smooth projective quadrics, accepted for publication in the Communications in Algebra, 2022.

### Volunteering

Assisted in checking Olympiads for schoolchildren.

Assisted in taking an intermediate exam for undergraduate students.

### **Talks**

The eighth school-conference on Lie Algebras, Algebraic groups and Invariant Theory, January 2020

- Commutative actions on smooth projective quadrics (Poster)