

# DMITRII PIROZHKOVA

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## PERSONAL INFORMATION

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Since 2023 I am a postdoc in Steklov International Mathematical Center, part of Steklov Institute in Moscow. I am interested in algebraic geometry and homological algebra, and I mostly work with derived categories of coherent sheaves on algebraic varieties.

## EDUCATION AND PREVIOUS POSITIONS

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- Postdoc in Université Paris Cité (2021–2023, Paris, France), funded by the ERC Synergy Grant *HyperK*.
- PhD in Mathematics from Columbia University (2020, New York, USA). Doctoral thesis: *Admissible subcategories of del Pezzo surfaces*, under the direction of Aise Johan de Jong.
- MSc in Mathematics from National Research University «Higher School of Economics» (2019, Moscow, Russia).
- BSc in Mathematics from National Research University «Higher School of Economics» (2015, Moscow, Russia).

## PAPERS AND PREPRINTS

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1. Semiorthogonal decompositions on total spaces of tautological bundles, *Int. Math. Res. Not. (IMRN)*, 3 (2022), pp. 2250–2273, ISSN: 1073-7928, DOI: 10.1093/imrn/rnaa134.
2. Rouquier dimension of some blow-ups, *European Journal of Mathematics*, 9 (2023), art. 45.
3. Admissible subcategories of del Pezzo surfaces, *Advances in Mathematics*, 424 (2023), 109046.
4. Stably semiorthogonally indecomposable varieties, *Épjournal de Géométrie Algébrique*, 7 (2023), article no. 11; <https://arxiv.org/abs/2011.12743>.
5. Categorical Torelli theorems for hypersurfaces, *Bull. London Math. Soc.* (2024); <https://doi.org/10.1112/blms.13117>.
6. Towards homological projective duality for  $\text{Gr}(2, 2n)$ , *arXiv preprint* (2024), <https://arxiv.org/abs/2402.14754>.

## TEACHING

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- Spring 2024: *Derived categories of coherent sheaves*, at SIMC in Steklov Institute.
- Spring 2019: *Calculus I (UN 1101)*, at Columbia University.
- Fall 2018: *College Algebra (UN1003)*, at Columbia University.

## TALKS

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- “Semiorthogonal decompositions of  $\mathbb{P}^2$  and torsion objects”, *MIT*, Geometric Representation Theory seminar (October 16 2019)
- “Semiorthogonal decompositions for projective plane”, *UGA*, Algebraic Geometry Seminar (November 20 2019)
- “Semiorthogonal decompositions for projective plane”, *UCLA*, Algebra seminar (November 22 2019)
- “Semiorthogonal decompositions for projective plane”, *UC Berkeley*, Arithmetic Geometry seminar (November 25 2019)
- “Semiorthogonal decompositions for projective plane”, *University of Washington*, Algebraic Geometry seminar (November 26 2019)
- “Admissible subcategories in del Pezzo surfaces”, *Steklov Institute*, Shafarevich seminar (September 05 2020)
- “Admissible subcategories of  $\mathbb{P}^2$ ”, in FRG Workshop on Moduli Spaces and Stability (December 08 2020)
- “Stably semiorthogonally indecomposable varieties”, *IMJ-PRG*, Séminaire de géométrie algébrique de Jussieu (February 04 2021)
- “Stably semiorthogonally indecomposable varieties”, *online*, Derived Seminar (May 25 2021)
- “Admissible subcategories of del Pezzo surfaces”, in Primorie Mathematical Fair (July 24 2021)
- “Stably semiorthogonally indecomposable varieties”, in Algebra and Geometry (July 30 2021)
- “Refined derived Torelli theorem for hypersurfaces”, *IMJ-PRG*, Séminaire de géométrie algébrique (June 02 2022)
- “Categorical Torelli theorem for hypersurfaces”, in Complex geometry in Byurakan (June 09 2022)
- “Admissible subcategories of del Pezzo surfaces”, *HSE*, Seminar of Laboratory of Algebraic Geometry (September 16 2022)
- “Categorical Torelli theorem for hypersurfaces”, *MIPT*, Geometry, topology, and representation theory (December 30 2022)
- “Towards homological projective duality for  $\text{Gr}(2, 2n)$ ”, *HSE*, Seminar of Laboratory of Algebraic Geometry (March 10 2023)
- “Towards homological projective duality for  $\text{Gr}(2, 2n)$ ”, in SIMC Youth Race (March 14 2023)
- “Homological projective duality for  $\text{Gr}(2, 2n)$ ”, in The III Conference of Russian Mathematical Centers (October 11 2023)
- “A categorical Torelli theorem for hypersurfaces”, in The IV Conference of Russian Mathematical Centers (August 10 2024)