

Max Planck Institute for Mathematics in the Sciences
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Dmitrii Pavlov

Education

- 2022 – **PhD Student in Mathematics**, *Max Planck Institute for Mathematics in the Sciences*, Advisors: Bernd Sturmfels and Simon Telen.
- 2016–2022 **Specialist (equivalent to Masters) in Mathematics**, *Moscow State University*, Advisors: Yu.P. Razmyslov, G.A. Pogudin.
GPA: 5.0/5.0

Employment

- 2021–2022 **Huawei Russian Research Institute, Moscow Optic Algorithm Laboratory**, *Junior research engineer*.
Research in digital signal processing, discrete optimization and numerical methods for solving Nonlinear Schrödinger equation.
- 2019–2021 **Moscow Center for Continuous Mathematical Education**, *Editor of interactive courses and textbooks in mathematics*.
- 2019–2020 **Yandex.Math**, *Consultant of interactive courses in mathematics*.
- 2018–2019 **Mathematical Circle of MSU Faculty of Mechanics and Mathematics**, *Tutor*.

Scholarships

- 2021 **Kolmogorov Scholarship for Academic Excellence**, *Moscow State University*

Publications

- Logarithmically Sparse Symmetric Matrices** D. Pavlov, <http://arxiv.org/abs/2301.10042>, 2023.
- Gibbs Manifolds** D. Pavlov, B. Sturmfels and S. Telen, <http://arxiv.org/abs/2211.15490>, 2022.
- On realizing differential-algebraic equations by rational dynamical systems** D. Pavlov and G. Pogudin, ACM International Symposium on Symbolic and Algebraic Computation (ISSAC), doi:10.1145/3476446.3535492, 2022.
- From algebra to analysis: new proofs of theorems by Ritt and Seidenberg** D. Pavlov, G. Pogudin and Yu. Razmyslov, Proceedings of American Mathematical Society, <https://doi.org/10.1090/proc/16065>, 2022.

Presentations

- 5 Oct 2022 **Realizability of algebraic differential equations by rational dynamical systems**, *Nonlinear Algebra Seminar, MPI MiS.*
- 12 Apr 2022 **Realizability of algebraic differential equations by rational dynamical systems**, *Algebra and Model Theory Seminar, Moscow State University.*
- 8 Dec 2020 **Analytic spectrum of differential \mathbb{C} -algebra with several commuting derivations**, *Algebra and Model Theory Seminar, Moscow State University.*
- 28 Mar 2020 **Differentials of morphisms of algebraic groups**, *Algebraic Transformation Groups Seminar, Moscow State University.*
- 8 May 2019 **Differentially flat systems**, *Algebra and Model Theory Seminar, Moscow State University.*
- 6 Oct 2018 **Structure theory of Lie algebras**, *Algebraic Transformation Groups Seminar, Moscow State University.*

Computer skills

Languages: Python, Sage, SQL, C/C++
Software: LaTeX, GitLab, Linux

Language proficiency

Russian (native), English (fluent), French (upper-intermediate)

Awards on math olympiads

- 2016 **MSU Olympiad in mathematics**, *First Prize.*
- 2016 **ITMO University Olympiad in mathematics and informatics**, *Second Prize.*
- 2014, 2016 **Regional stage of Russian National Olympiad in mathematics**, *Second Prize.*
- 2015, 2016 **HSE Olympiad in mathematics**, *Second Prize.*
- 2016 **MIPT Olympiad in mathematics**, *Second Prize.*