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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, *Proceedings of the ACM International Symposium on Symbolic and Algebraic Computation (ISSAC 2022)*, 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 the American Mathematical Society*, `https://doi.org/10.1090/proc/16065`, 2022.

Presentations

9 Mar 2023 **What is a Gibbs manifold?**, *Algebra, Geometry and Computation, CWI Amsterdam*.

1 Mar 2023 **What is a Gibbs manifold?**, *Nonlinear Algebra Seminar, MPI MiS*.

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 (C1/C2), French (B2), German (A2/B1)

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*.