

MOLOZHAVENKO ALEXANDER | Curriculum Vitae

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🐙 GitHub

• 📝 Blog

SUMMARY

Third-year student of MIPT, focused on optimization, machine learning and theoretical computer science

EDUCATION

MIPT

Phystech School of Applied Mathematics and Informatics

GPA: 8.57

9/2019 - To date

SKILLS

PROGRAMMING LANGUAGE

Experienced: C/C++, Python, ASM (Latex, HTML, markdown)

Familiar: Javascript | bash | CMake | SQL

FRAMEWORKS & TOOLS

numpy | matplotlib | pytorch | Git | Windows | Linux | Origin | Jupyter | VSCode | Vim | IDA | MPI

MATHEMATICS AND COMPUTER SCIENCE

Algorithms and computational models | Linear Programming | Reverse engineering | PDE and ODE | Operational Systems | Combinatorics | Mathematical and complex analysis | Linear Algebra | Probability Theory | Applied optimization | Stochastic optimization |

Discrete optimization | Computational math | Stochastic processes

LANGUAGES

Native: Russian | **Fluent:** English (Advanced C1)

MISC

General and applied physics | Theoretical mechanics | Quantum mechanics | Teaching | Return oriented programming

HONORS & AWARDS

INCREASED SCHOLARSHIPS

2021 & 2022

MIPT

Among the best students in the 2020/21 and 2021/22 academic year in list of [Phystech Foundation](#)

EXTRACURRICULAR ACTIVITIES

ACTIVISM

2021/22

MIPT

Provided organization of an open day at MIPT, shooting and video editing MIPT lectures

TEACHING EXPERIENCE

MATH TEACHER

2021/22

Arranging individual mathematical analysis classes

PROFESSIONAL ACTIVITIES

CMU COURSE

02/2021 - 05/2021

MIPT

Finished Carnegie Mellon University course for information security (buffer overflow, ROP)

RSA ALGORITHM

02/2021 - 05/2021

MIPT

Realization of RSA Algorithm C++

CRYPTO SYSTEM ATTACK

02/2021 - 05/2021

MIPT

Attack on a crypto system C++

IT PROJECT

03/2021 - 04/2021

MIPT

Double pendulum modeling C++

IT PROJECT FOR ACRONIS

04/2021 - 05/2021

MIPT

Symbolic differentiator pure C with integrated PDF output

STOCHASTIC OPTIMIZATION RESEARCH

03/2022 - Till now

MIPT

Application of the stochastic smoothing method for solving problems with a zero-order oracle together with Alexander Vladimirovich Gasnikov, work is still in progress, future development described