

## EDUCATION

**Moscow Institute Of Physics And Technology** GPA: 9.39/10; in the top 5% of the department  
*Bachelor of Science, Applied Mathematics & Computer Science* 08.2016 — 08.2020  
Department of Discrete Mathematics  
**Relevant courses:** applied statistics, optimization, advanced combinatorics, algorithms and data structures  
(3 terms), concurrent programming, distributed programming, practical in mathematical research

## RESEARCH EXPERIENCE

**Mutual analysis of interaction networks and quantitative trait loci for yeast, 2018-present:**  
**Supervisor:** [Yuri Pritykin](#), PhD (Princeton), Research Scholar at [MKSCC](#)  
Detailed project description is available [on GitHub](#).

- Implemented different approaches to QTL mapping in yeast, from [basic](#) to [state-of-the-art](#)
- Integrated PPINs into QTL analysis. Implemented statistical tests using [igraph](#) package.
- Carried out GWAS on NGS expression data. Learned how to tackle domain-specific difficulties arising from large-scale hypothesis testing using FDR-correction techniques (especially [qvalue](#)).
- Learned how to write fast and memory-efficient scientific code using numpy, scipy and pandas.
- Practiced parallel programming, interprocess communication and data persistency in Python.
- Utilized MIPT supercomputing capabilities, learned how to use SLURM.
- Worked with GeneOntology and KEGG API and related Python/R tools.

This project will eventually evolve into my bachelor's thesis.  
We plan to submit the paper for publication this spring.

## HONORS

- [Abramov Scholarship For Academic Excellence](#) 2nd term — present  
Earned by top 10% students by average GPA in their academic program.
- [Russian Government Scholarship For International Students](#) 2016 — 2020  
Was selected to become one of 3 Ukrainians to receive the full-coverage scholarship to study CS at the best Russian universities and got enrolled to MIPT directly, without entrance examination.
- [Governor of the Moscow Region Scholarship For Academic Excellence](#) Autumn 2017  
Awarded termly to excellent students for promising achievements in scientific activities.
- [Summer School in Bioinformatics](#) by Russian Bioinformatics Institute Summer 2017  
Became one of 50 CS majors selected to participate. Was a member of a hackathon-winning team.
- [ACM ICPC Moscow Subregional Contest \(1/4 World Finals\)](#) Autumn 2017  
Our team ranked 17 among 301 participating teams and 7th at home university.
- [All-Ukrainian Chemistry Olympiad](#) — double awardee, triple winner of regional stage
- [All-Ukrainian Tournament of Young Chemists](#) — 2nd place

## SKILLS

**Programming languages:** Python3, R, L<sup>A</sup>T<sub>E</sub>X, Wolfram Mathematica  
bash, C++ (STL, C++11), C

**Bioinformatics-related:** **R:** [igraph](#), [qvalue](#), [MatrixEQTL](#), [GFLASSO](#)  
**Python:** NumPy, SciPy, Pandas, Seaborn, joblib, GEOparse  
**Other:** Jupyter Notebook, Git, Unix utilities, SLURM

**Other:** solid knowledge of algorithms and data structures  
strong mathematical background

## LANGUAGES

English (advanced), German (A2), Russian (native), Ukrainian (native)

## REFERENCES

**Dr. Yuri Pritykin** (thesis supervisor), research scholar at MKSCC [yuri.pritykin@gmail.com](mailto:yuri.pritykin@gmail.com)  
**Prof. Andrei Raygorodsky**, head of department at MIPT [mraigor@yandex.ru](mailto:mraigor@yandex.ru)