# Rustem Islamov

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#### EDUCATION

#### Master of Science in Applied Mathematics and Physics

Moscow Institute of Physics and Technology

Dolgoprudny, Russia

Sept. 2021 – Pres.

## Master of Science in Applied Mathematics

Institut Polytechnique de Paris

Sept. 2021 – Pres. Palaiseau, France

#### Bachelor of Science in Applied Mathematics and Physics

Moscow Institute of Physics and Technology

GPA: 4.96/5 (9.27/10), Top 3 at the department

Sept. 2017 – July 2021 Dolgoprudny, Russia

#### Research Interests

Machine Learning, Optimization, Distributed Optimization

#### PROJECTS AND EXTRA ACTIVITIES

#### Introduction to Scientific work

Feb. 2020 - May 2020

- Course name: My First Scientific Paper
- Supervisor: Vadim Strijov
- Brief Description: Learned how to write scientific papers, organize work within a group
- Analysis of the ensemble of local models, paper on Github (in Russian)

#### **Project on Optimization Methods**

Apr. 2020

- Brief Description: Implemented different Optimization methods for improving the quality of classification models (Logistic Regression, SVM), methods for Trend Filtering
- Project on Github

# Mathematics and Python for Data Analysis in Coursera

Feb. 2020

- Brief Description: Learned Mathematics for Data Analysis and how to use it in Python
- Certificate

#### Introduction to Programming (C++)

Jul. 2016

- Brief Description: Learned C++ for solving different mathematical and programming problems
- Certificate

#### LANGUAGES

Russian: Native

English: Advanced (C1)
French: Elementary (A1)

#### Technical skills

Operating Systems: Microsoft Windows, Linux

Programming Languages: Python, C/C++ Professional Software: Git, LaTeX, SQL

#### HOBBIES AND INTERESTS

Football, member of student football team

Basketball

Travelling, hiking, photo shooting

- 3. X. Qian, R. Islamov, M. Safaryan, P. Richtárik. Basis Matters: Better Communication-Efficient Second Order Methods for Federated Learning, in Proc. of the 25th International Conference on Artificial Intelligence and Statistics, 2021.
- 2. M. Safaryan, R. Islamov, X. Qian, P. Richtárik. FedNL: Making Newton-Type Methods Applicable to Federated Learning, accepted to accepted to 39th International Conference on Machine Learning, arXiv preprint: arXiv:2106.02969, 2021.
- 1. R. Islamov, X. Qian, P. Richtárik. Distributed Second Order Methods with Fast Rates and Compressed Communication, In Proc. of 38th International Conference on Machine Learning, 2021.

## SCHOLARSHIPS, HONORS AND AWARDS

Scholarship in Belotserkovsky O. M. name Given to support students who are actively engaged in research and Olympiad activities in the field of Computer Science; 15 000 Russian roubles per month	Feb. 2022 – June 2022
Increased State Academic Scholarship Given for 4 year Bachelor and Master students at MIPT with scientific achievements; 16 000 Russian roubles per month	Feb. 2022 – June 2022 Sept. 2021 – Jan. 2022 Feb. 2021 – June 2021 Sept. 2020 – Jan. 2021
Scholarship for Contribution to the Development of Numerical Optimization Methods 8 000 Russian roubles per month	Feb. 2022 – June 2022 Sept. 2021 – Jan. 2022
Forecsys Research Scholarship 20 000 Russian roubles per month	Sept. 2021 – Jan 2022
PhD Track Excellence Scholarship The Institut Polytechnique de Paris awards merit-based excellence scholarships for students enrolled in PhD tracks; 1000 Euro per month	Sept. 2021 – Mar. 2022
Prizewinner of Student Olympiad in Maths "I am professional" Student Olympiad organized by Yandex and MIPT	Apr. 2020
Abramov scholarship Given for 1-3 year Bachelor students with the best grades at MIPT; 12 000 Russian rubles per month	Sept. 2017 – June 2020
Prizewinner of Final Round of All-Russian Physics Olympiad	Apr. 2016
Participant of Final Round of All-Russian Physics Olympiad	2015, 2017
Talks and Posters	
Poster at International Conference on Artificial Intelligence and Statistics, Links: poster	29 March, 2022
Prerecorded talk at Beyond first-order methods in ML systems workshop, Links: video	24 July, 2021
<b>Poster</b> at International Workshop on Federated Learning for User Privacy and Data Confidentiality, Links: poster	24 July, 2021
Poster and Prerecorded Talk at International Conference on Machine Learning, Links: video, poster	22 July, 2021
Poster at PRAIRIE/MIAI AI Summer School, Links: poster	6 July, 2021
Talk at Maths & AI: MIPT-UGA young researchers workshop, Links: video, slides	1 July, 2021
Prerecorded talk at KAUST Conference on Artificial Intelligence, Links: video	28 April, 2021
<b>Poster</b> at NSF-TRIPODS Workshop on Communication Efficient Distributed Optimization, Links: poster	9 April, 2021

# RESEARCH VISITS AND INTERNSHIPS

Internship at Machine Learning and Optimization Lab	Apr. 2022 – Pres.
EPFL, Supervisors: Hadrien Hendrikx, Martin Jaggi	Lausanne, Switzerland
Internship at Optimization and Machine Learning Lab	Jul. $2020 - Dec. 2020$
KAUST, Supervisor: Peter Richtárik	Thuwal, Saudi Arabia
Internship at Optimization and Machine Learning Lab	Mar. 2020 – Aug. 2020
KAUST, Supervisor: Peter Richtárik	Thuwal, Saudi Arabia
SUMMER SCHOOLS	
PRAIRIE/MIAI AI Summer School, Links: certificate	5-9 July, 2021

Last updated on May  $21^{st}$  2022