

# Rustem Islamov

Palaiseau, France | +33-7-67-79-62-15 | [islamov.ri@phystech.edu](mailto:islamov.ri@phystech.edu) | [rustem.islamov@ip-paris.fr](mailto:rustem.islamov@ip-paris.fr) | [rustem-islamov.github.io](https://rustem-islamov.github.io)

## EDUCATION

---

### Master of Science in Applied Mathematics and Physics

[Moscow Institute of Physics and Technology](#)

Sept. 2021 – Pres.

Dolgoprudny, Russia

### 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

Teaching, preparing schoolchildren for olympiads

## PUBLICATIONS

---

3. **X. Qian, R. Islamov, M. Safaryan, P. Richtárik. Basis Matters: Better Communication-Efficient Second Order Methods for Federated Learning**, arXiv preprint: [arXiv:2111.01847](https://arxiv.org/abs/2111.01847), 2021, accepted to AISTATS 2022.
2. **M. Safaryan, R. Islamov, X. Qian, P. Richtárik. FedNL: Making Newton-Type Methods Applicable to Federated Learning**, accepted to [FL-ICML 2021](#) and [BFOM-ICML 2021](#) workshops, arXiv preprint: [arXiv:2106.02969](https://arxiv.org/abs/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

---

|  |                        |
|--|------------------------|
| <b>Scholarship for Contribution to the Development of Numerical Optimization Methods</b><br>7 000 Russian roubles per month  | Sept. 2021 – Jan. 2022 |
| <b>Forecsys Research Scholarship</b><br>20 000 Russian roubles per month   | Sept. 2021 – Jan 2022  |
| <b>Increased State Academic Schholarship</b><br>16 000 Russian roubles per month   | Sept. 2021 – Jan. 2022 |
| <b>PhD Track Excellence Scholarship</b><br>The Institut Polytechnique de Paris awards merit-based excellence scholarships for students enrolled in PhD tracks<br>1000 Euro per month | Sept. 2021 – Pres.     |
| <b>Increased State Academic Scholarship</b><br>Given for 4 year Bachelor and Master students at MIPT with scientific achievements<br>11 000 Russian rubles per month                 | Sept. 2020 – June 2021 |
| <b>Prizewinner of Student Olympiad in Maths</b><br>“I am professional” Student Olympiad organized by Yandex and MIPT   | Apr. 2020              |
| <b>Abramov scholarship</b><br>Given for 1-3 year Bachelor students with the best grades at MIPT<br>12 000 Russian rubles per month   | Sept. 2017 – June 2020 |
| <b>Prizewinner of Final Round of All-Russian Physics Olympiad</b>  | Apr. 2016              |
| <b>Participant of Final Round of All-Russian Physics Olympiad</b>  | 2015, 2017             |

## TALKS AND POSTERS

---

|   |                |
|---|----------------|
| <b>Prerecorded talk</b> at <a href="#">Beyond first-order methods in ML systems workshop</a> ,<br>Links: <a href="#">video</a>                                | 24 July, 2021  |
| <b>Poster</b> at <a href="#">International Workshop on Federated Learning for User Privacy and Data Confidentiality</a> , Links: <a href="#">poster</a>       | 24 July, 2021  |
| <b>Poster and Prerecorded Talk</b> at <a href="#">International Conference on Machine Learning</a> ,<br>Links: <a href="#">video</a> , <a href="#">poster</a> | 22 July, 2021  |
| <b>Poster</b> at <a href="#">PRAIRIE/MIAI AI Summer School</a> , Links: <a href="#">poster</a>  | 6 July, 2021   |
| <b>Talk</b> at <a href="#">Maths &amp; AI: MIPT-UGA young researchers workshop</a> , Links: <a href="#">video</a> , <a href="#">slides</a>                    | 1 July, 2021   |
| <b>Prerecorded talk</b> at <a href="#">KAUST Conference on Artificial Intelligence</a> , Links: <a href="#">video</a>   | 28 April, 2021 |
| <b>Poster</b> at <a href="#">NSF-TRIPODS Workshop on Communication Efficient Distributed Optimization</a> , Links: <a href="#">poster</a>                     | 9 April, 2021  |

## RESEARCH VISITS AND INTERNSHIPS

---

|   |   |
|---|---|
| <b>Internship at Machine Learning and Optimization Lab</b><br><a href="#">KAUST</a> , Supervisor: <a href="#">Peter Richtárik</a> | Jul. 2020 – Dec. 2020<br>Thuwal, Saudi Arabia |
| <b>Internship at Machine Learning and Optimization Lab</b><br><a href="#">KAUST</a> , Supervisor: <a href="#">Peter Richtárik</a> | Mar. 2020 – Aug. 2020<br>Thuwal, Saudi Arabia |

Last updated on April 4<sup>th</sup> 2021