

# Rustem Islamov

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## EDUCATION

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<b>Master of Science in Applied Mathematics and Physics</b> <a href="#">Moscow Institute of Physics and Technology</a>	Sept. 2021 – Pres. Dolgoprudny, Russia
<b>Master of Science in Applied Mathematics</b> <a href="#">Institut Polytechnique de Paris</a>	Sept. 2021 – Pres. Palaiseau, France
<b>Bachelor of Science in Applied Mathematics and Physics</b> <a href="#">Moscow Institute of Physics and Technology</a> GPA: 4.96/5 (9.27/10), Top 3 at the department	Sept. 2017 – July 2021 Dolgoprudny, Russia

## RESEARCH INTERESTS

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Machine Learning, Optimization, Distributed Optimization

## PROJECTS AND EXTRA ACTIVITIES

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<b>Introduction to Scientific work</b> • Course name: My First Scientific Paper • Supervisor: <a href="#">Vadim Strijov</a> • Brief Description: Learned how to write scientific papers, organize work within a group • Analysis of the ensemble of local models, <a href="#">paper on Github</a> (in Russian)	Feb. 2020 - May 2020
<b>Project on Optimization Methods</b> • Brief Description: Implemented different Optimization methods for improving the quality of classification models (Logistic Regression, SVM), methods for Trend Filtering • <a href="#">Project on Github</a>	Apr. 2020
<b>Mathematics and Python for Data Analysis in Coursera</b> • Brief Description: Learned Mathematics for Data Analysis and how to use it in Python • <a href="#">Certificate</a>	Feb. 2020
<b>Introduction to Programming (C++)</b> • Brief Description: Learned C++ for solving different mathematical and programming problems • <a href="#">Certificate</a>	Jul. 2016

## LANGUAGES

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**Russian:** Native  
**English:** Advanced (C1)  
**French:** Elementary (A1)

## TECHNICAL SKILLS

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**Operating Systems:** Microsoft Windows, Linux  
**Programming Languages:** Python, C/C++  
**Professional Software:** Git, LaTeX, SQL

## HOBBIES AND INTERESTS

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Football, member of student football team  
Basketball  
Travelling, hiking, photo shooting

## PUBLICATIONS

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4. R. Islamov, X. Qian, S. Hanzely, M. Safaryan, P. Richtárik. **Distributed Newton-Type Methods with Communication Compression and Bernoulli Aggregation**, [arXiv:2206.03588](#), 2022.
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 [39th International Conference on Machine Learning](#), [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

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<b>Scholarship in Belotserkovsky O. M. name</b> 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
<b>Increased State Academic Scholarship</b> 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
<b>Scholarship for Contribution to the Development of Numerical Optimization Methods</b> 8 000 Russian roubles per month	Feb. 2022 – June 2022 Sept. 2021 – Jan. 2022
<b>Forecsys Research Scholarship</b> 20 000 Russian roubles per month	Sept. 2021 – Jan 2022
<b>PhD Track Excellence Scholarship</b> The Institut Polytechnique de Paris awards merit-based excellence scholarships for students enrolled in PhD tracks; 1000 Euro per month	Sept. 2021 – Mar. 2022
<b>Prizewinner of Student Olympiad in Maths</b> “I am professional” Student Olympiad organized by Yandex and MIPT	Apr. 2020
<b>Abramov scholarship</b> Given for 1-3 year Bachelor students with the best grades at MIPT; 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

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<b>Poster</b> at <a href="#">International Conference on Artificial Intelligence and Statistics</a> , Links: <a href="#">poster</a>	29 March, 2022
<b>Prerecorded Talk</b> at <a href="#">Beyond first-order methods in ML systems workshop</a> , 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> , 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

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**Internship at Machine Learning and Optimization Lab**

EPFL, Supervisors: [Hadrien Hendrikx](#), [Martin Jaggi](#)

Apr. 2022 – Pres.

Lausanne, Switzerland

**Internship at Optimization and Machine Learning Lab**

KAUST, Supervisor: [Peter Richtárik](#)

Mar. 2021 – Aug. 2021

Thuwal, Saudi Arabia

**Internship at Optimization and Machine Learning Lab**

KAUST, Supervisor: [Peter Richtárik](#)

Jul. 2020 – Dec. 2020

Thuwal, Saudi Arabia

## SUMMER SCHOOLS

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[PRAIRIE/MIAI AI Summer School](#), Links: [certificate](#)

5-9 July, 2021

Last updated on May 23<sup>rd</sup> 2022