Rustem Islamov

Palaiseau, France | +33-7-67-79-62-15 | islamov.ri@phystech.edu | rustem.islamov@ip-paris.fr | rustem-islamov.github.io

EDUCATION

Master of Science in Applied Mathematics and Physics Sept. 2021 – Pres.
Moscow Institute of Physics and Technology Dolgoprudny, Russia

Master of Science in Applied Mathematics Sept. 2021 – Pres.
Insitut Polytechnique de Paris Palaiseau, France

Bachelor of Science in Applied Mathematics and Physics Sept. 2017 – July 2021
Moscow Institute of Physics and Technology Dolgoprudny, Russia
GPA: 4.96/5 (9.27/10), Top 3 at the department

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

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
Tatar: Native
English: Advanced (C1)
Spanish: 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, 2021.

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

Prerecorded talk at Beyond first-order methods in ML systems workshop, Links: video	24 July, 2021
Poster 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
Poster 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	Jul. 2020 – Dec. 2020
KAUST	Thuwal, Saudi Arabia
Supervisor: Peter Richtárik	
Internship at Machine Learning and Optimization Lab	Mar. 2020 – Aug. 2020
KAUST	Thuwal, Saudi Arabia
Supervisor: Peter Richtárik	

PRAIRIE/MIAI AI Summer School, Links: certificate   5-9 July, 2021

Last updated on November 9th 2021