

ELNUR GASANOV

elnur.gasanov@kaust.edu.sa \diamond <https://elnurgasanov.com>

EDUCATION

Ph.D. in Machine Learning and Optimization

Jan. 2020 - Present

King Abdullah University of Science and Technology
Supervised by Peter Richtárik

Master of Science in Computer Science

Sep. 2018 - Dec. 2019

King Abdullah University of Science and Technology
GPA: 3.67/4.00

Bachelor of Science in Applied Mathematics and Physics

Sep. 2014 - Jun. 2018

Moscow Institute of Physics and Technology (State University)
Average Grade: 8.66/10.00

PUBLICATIONS

3PC: Three Point Compressors for Communication-Efficient Distributed Training and a Better Theory for Lazy Aggregation

Peter Richtárik, Igor Sokolov, Ilyas Fatkhullin, [Elnur Gasanov](#), Zhize Li, Eduard Gorbunov

- Proceedings of the 39th International Conference on Machine Learning (ICML 2022)
- <https://arxiv.org/abs/2202.00998>

FLIX: A Simple and Communication-Efficient Alternative to Local Methods in Federated Learning

[Elnur Gasanov](#), Ahmed Khaled, Samuel Horvath, Peter Richtárik

- Proceedings of the 25th International Conference on Artificial Intelligence and Statistics (AISTATS 2022)
- <https://arxiv.org/abs/2111.11556>

Lower Bounds and Optimal Algorithms for Smooth and Strongly Convex Decentralized Optimization Over Time-Varying Networks

Dmitry Kovalev, [Elnur Gasanov](#), Alexander Gasnikov, Peter Richtárik

- Proceedings of the 35th Conference on Neural Information Processing Systems (NeurIPS 2021)
- <https://arxiv.org/abs/2106.04469>

From Local SGD to Local Fixed-Point Methods for Federated Learning

Grigory Malinovsky, Dmitry Kovalev, [Elnur Gasanov](#), Laurent Condat, Peter Richtárik

- Proceedings of the 37th International Conference on Machine Learning (ICML 2020)
- <https://arxiv.org/abs/2004.01442>

Stochastic Spectral and Conjugate Descent Methods

Dmitry Kovalev, Eduard Gorbunov, [Elnur Gasanov](#), Peter Richtárik

- Proceedings of the 32th Conference on Neural Information Processing Systems (NeurIPS 2018)
- <https://arxiv.org/abs/1802.03703>

Creation of approximating scalogram description in a problem of movement prediction

[Elnur Gasanov](#), Anastasia Motrenko

- "Machine Learning and Data Analysis", Vol. 3, #2, 2017
- <http://jmla.org/papers/doc/2017/no2/Gasanov2017ECoGAnalysis.pdf> (in russian)

HONORS AND REWARDS

2022	CEMSE Dean's List Award (Top 20%)	Saudi Arabia
2022	Progress towards Ph.D. rated as "Outstanding"	Saudi Arabia
2022	Best Reviewer Award (Top 10%) at ICML 2022	USA
2019	DS3 Summer School Acceptance	France
2018	KAUST Fellowship for MS/PhD students	Saudi Arabia
2017	Enlarged state academic scholarship	Russia
2014-2017	Abramov fund excellence scholarship	Russia
2014	Prize-winner of competition "Future Scientists"	Russia
2013	Prize-winner of All-Russia Economics Olympiad, Regional step	Russia
2012-2014	Governor's award	Russia
2012-2014	Prize-winner of All-Russia Physics Olympiad, Regional step	Russia
2012, 2014	Prize-winner of All-Russia Math Olympiad, Regional step	Russia

PROFESSIONAL EXPERIENCE

Research Science Intern

06/2019 - 07/2019

University of Grenoble-Alpes, Laboratory Jean Kuntzmann

I worked on an asynchronous lock-free algorithm and derived convergence rates for full and stochastic gradient cases. For the stochastic case, I analyzed the algorithm for both constant and diminishing stepsizes.

CO-CURRICULAR COURSES AND ACTIVITIES

Deep Learning Nanodegree, Udacity, 2019

- The program aimed to introduce Computer Vision and Natural Language Processing paradigms
- Topics covered: PyTorch, Convolutional and Recurrent Neural Networks, Generative Adversarial Networks, Deployment using Amazon Web Services;
- Taught by Ian Goodfellow, Mat Leonard, Cezanne Comacho;

Scientific Seminar Co-organizer, All hands meetings on Big Data Optimization, 09/2019 - 12/2019

- Co-organized group meetings led by Peter Richtárik;

SKILLS

Mathematics	Linear Algebra, Theory of Algorithms, Machine Learning, Deep Learning
Programming	C++, Python (PyTorch, FedJAX), Matlab, Golang
Tools	MS Office, LaTeX, SQL Server
Languages	Russian C2, English C1

EXTRA CURRICULARS AND HOBBIES

Hobbies: Fitness, Volleyball

Volunteer: National Park Hunsrueck II, Deuselbach, Germany, 2017

Volunteer: Environment and Legality at Vesuvio National Park, Ottaviano, Italy, 2016

Volunteer: University "5top100" conference, 2016

Volunteer: Promoting Biodiversity in Neckertal, Brunnadern SG, Switzerland, 2015