Konstantin Mishchenko

konstantin.mishchenko@kaust.edu.sa
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Education

2017-2020	KAUST, PhD in Computer Science, Adviser: Peter Richtárik
2016–2017	ENS Cachan and Paris-Dauphine, MSc in Machine Learning
2012–2016	Moscow Institute of Physics and Technology BSc in Computer Science and Physics

Conferences

2019	International Conference on Continuous Optimization, Invited talk, Organizer of 3 sessions
2019	International Conference on Machine Learning, Time Series Workshop, Poster
2018	Conference on Neural Information Processing Systems, Poster
2018	International Conference on Machine Learning, Oral
2018	International Symposium on Mathematical Programming, Invited talk
2018	Informs Optimization Society Meeting, Invited Talk, Organizer of a session

Internships and projects

2019	Frontiers of Deep Learning Workshop at Simons Institute for the Theory of Computing
2018	Applied Scientist Intern at Amazon
2017	Pre-Doc Summer School, ETH Zurich
2017	Machine Learning Summer School (Acceptance rate 15%, the only accepted undergrad student), MPI Tübingen
2017	Google Machine Learning Summit, Zurich, Poster
2016	C++ development summer intern, AIM High Tech (High Frequency Trading), Moscow

Achievements and awards

2019	NeurIPS 2019 Best Reviewer Award
2018	IEEEXtreme team programming competition, 71st place worldwide
2017	1st place in the Plume Labs competition on air pollution prediction
2017	IEEEXtreme team programming competition, 123rd place worldwide
2016-2017	Paris Graduate School of Mathematics fellowship (highly competitive scholarship with about 20 laureates every year)
2015	Higher School of Economics Olympiad on Applied Math and Informatics, 1st prize
2014	Abramov-Frolov scholarship for excellence in study
2012	Top-1 (max score) at the National Exam in math (only 54 participants out of >800k scored max)
2012	Moscow Mathematical Olympiad, 1st prize
2012	Phystech International, Mathematics, 1st prize

Research interests

- Nonconvex Optimization
- Stochastic and Distributed Algorithms
- Deep Learning

Papers

- A Self-supervised Approach to Hierarchical Forecasting with Applications to Groupwise Synthetic Controls, Proceeding of the Time Series workshop at International Conference on Machine Learning (**ICML, poster**), 2019
- MISO is Making a Comeback With Better Proofs and Rates
- DAve-QN: A Distributed Averaged Quasi-Newton Method with Local Superlinear Convergence Rate
- A Stochastic Decoupling Method for Minimizing the Sum of Smooth and Non-Smooth Functions
- Revisiting Stochastic Extragradient
- Stochastic Distributed Learning with Gradient Quantization and Variance Reduction
- 99% of Parallel Optimization is Inevitably a Waste of Time
- Distributed Learning with Compressed Gradient Differences
- SEGA: Variance Reduction via Gradient Sketching, Published in proceeding of the Conference on Neural Information Processing Systems (**NeurIPS, Poster**), 2018
- A Stochastic Penalty Model for Convex and Nonconvex Optimization with Big Constraints
- A Distributed Flexible Delay-tolerant Proximal Gradient Algorithm
- A Delay-Tolerant Proximal-Gradient Algorithm for Distributed Learning, Published in proceedings of the International Conference on Machine Learning (**ICML, Oral**), 2018

Reviewing and serving as Program Committee Member

2019	Conference on Neural Information Processing Systems, Program Committee Member
2019	Mathematical Programming Journal, Reviewer
2019	Conference on Uncertainty in Artificial Intelligence, Program Committee Member
2019	International Conference on Machine Learning, Program Committee Member

Languages

Russian	Native
English	Fluent
French	Intermediate