

# Konstantin Mishchenko

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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 Machine Learning, Program Committee Member
- 2018 Conference on Neural Information Processing Systems, Montreal, Poster
- 2018 International Conference on Machine Learning, Stockholm, Oral
- 2018 International Symposium on Mathematical Programming, Bordeaux, Invited talk
- 2018 Informs Optimization Society Meeting, Denver, Talk

## Internships and projects

- 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
- 2017 Course project on air pollution prediction for Plume Labs data challenge, **1st place** in the competition
- 2016 Course project on using dropouts for learning restricted Boltzman machines
- 2016 C++ development summer intern, AIM High Tech (High Frequency Trading), Moscow

## Achievements and awards

- 2018 IEEEExtreme team programming competition, 71st place worldwide
- 2017 IEEEExtreme 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

- Stochastic and Distributed Algorithms
- Nonconvex Optimization
- Machine learning

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## Papers

- 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.

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## Languages

Russian	Native
English	Fluent
French	Intermediate