

# Eduard GORBUNOV

## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Rybinsk, Russia | 22 November 1996

EMAIL: [ed-gorbunov@yandex.ru](mailto:ed-gorbunov@yandex.ru)

WEBSITE: [eduardgorbunov.github.io](http://eduardgorbunov.github.io)

## RESEARCH INTERESTS

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Optimization, Randomized Algorithms, Machine Learning

## EDUCATION

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PRESENT Master of Science in APPLIED MATHEMATICS  
**Moscow Institute of Physics and Technology**, Moscow

JUNE 2018 Bachelor of Science in APPLIED MATHEMATICS  
**Moscow Institute of Physics and Technology**, Moscow  
Thesis: "[Accelerated Directional Searches and Gradient-Free Methods with non-Euclidean prox-structure](#)" | Advisor: [Alexander GASNIKOV](#)  
GPA: 8.8/10

## PUBLICATIONS

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- [K. Mishchenko](#), [E. Gorbunov](#), [M. Takác](#) and [P. Richtárik](#). **Distributed Learning with Compressed Gradient Differences**, arXiv preprint [arXiv:1901.09269](#) (January 2019)
- [A. Gasnikov](#), [E. Gorbunov](#), D. Kovalev, A. Mohammed, E. Chernousova. **The global rate of convergence for optimal tensor methods in smooth convex optimization**, [Computer Research and Modeling](#), 2018, Vol. 10:6, [arXiv:1809.00382](#) (September 2018)
- [E. Gorbunov](#), [E. Vorontsova](#) and [A. Gasnikov](#). **On the upper bound for the mathematical expectation of the norm of a vector uniformly distributed on the sphere and the phenomenon of concentration of uniform measure on the sphere**, arXiv preprint [arXiv:1804.03722](#) (April 2018); to appear in *Mathematical Notes* (accepted)
- [P. Dvurechensky](#), [A. Gasnikov](#) and [E. Gorbunov](#). **An Accelerated Directional Derivative Method for Smooth Stochastic Convex Optimization**, arXiv preprint [arXiv:1804.02394](#) (April 2018)
- [P. Dvurechensky](#), [A. Gasnikov](#) and [E. Gorbunov](#). **An Accelerated Method for Derivative-Free Smooth Stochastic Convex Optimization**, arXiv preprint [arXiv:1802.09022](#) (February 2018)
- D. Kovalev, [E. Gorbunov](#), E. Gasanov and [P. Richtárik](#) **Stochastic Spectral and Conjugate Descent Methods**, [Advances in Neural Information Processing Systems](#) 31, [arXiv:1802.03703](#) (February 2018)
- [E. Vorontsova](#), [A. Gasnikov](#) and [E. Gorbunov](#). **Accelerated Directional Search with non-Euclidean prox-structure**, arXiv preprint [arXiv:1710.00162](#) (September 2017); to appear in *Automation and Remote Control* (accepted)

## CONFERENCE TALKS AND POSTERS

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- 1-6 July 2018, [23rd International Symposium on Mathematical Programming](#), Bordeaux, France. [Talk](#) "An Accelerated Directional Derivative Method for Smooth Stochastic Convex Optimization"
- 10-15 June 2018, Traditional Youth School "Control, Information and Optimization" organized by [Boris Polyak](#) and [Elena Gryazina](#), Voronovo, Russia. [Poster](#) and [Talk](#) "An Accelerated Directional Derivative Method for Smooth Stochastic Convex Optimization"
- 14 April 2018, Workshop "Optimization at Work", MIPT, Dolgoprudny, Russia. [Talk](#) "An Accelerated Method for Derivative-Free Smooth Stochastic Convex Optimization"
- 5-7 February 2018, [KAUST Research Workshop on Optimization and Big Data](#), KAUST, Thuwal, Saudi Arabia. Joint [Poster](#) "Stochastic Spectral Descent Methods" with D. Kovalev and E. Gasanov.
- 25 November 2017, 60th Scientific Conference of MIPT, Section of Information Transmission Problems, Data Analysis and Optimization, IITP, Moscow, Russia. [Talk](#) "About accelerated Directional Search with non-Euclidean prox-structure".
- 27 October 2017, Workshop "Optimization at Work", MIPT, Dolgoprudny, Russia. [Talk](#) "Accelerated Directional Search with non-Euclidean prox-structure".

## RESEARCH VISITS

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- 13 January – 24 February 2019, Visual Computing Center, KAUST, Thuwal, Saudi Arabia (Dr. [P. Richtárik](#))
- 14 January – 8 February 2018, Visual Computing Center, KAUST, Thuwal, Saudi Arabia (Dr. [P. Richtárik](#))

## TEACHING

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### Tutor for the courses

- Spring 2019: [Algorithms and Models of Computation](#)
- Fall 2018: [Probability Theory](#)
- Spring 2018: [Algorithms and Models of Computation](#)

## LANGUAGES

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RUSSIAN: Mother tongue

ENGLISH: Advanced

## COMPUTER SKILLS

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Operating Systems: MICROSOFT WINDOWS, LINUX, MAC OSX  
Programming Languages: PYTHON,  $\text{\LaTeX}$ , C, C++

## INTERESTS

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- Football: 9 years in football school in Rybinsk, Russia. Now I am playing for an [amateur team](#) and a [student team](#).
- Table Tennis, Fitness

## SCHOLARSHIPS, HONORS AND AWARDS

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- **September 2018 - January 2019.** Increased State Academic Scholarship for 4 year bachelor and master students at MIPT for scientific achievements (10,000 Russian rubles per month in addition to the regular scholarship)
- **February 2018 - June 2018.** Increased State Academic Scholarship for 4 year bachelor and master students at MIPT for scientific achievements (10,000 Russian rubles per month in addition to the regular scholarship)
- **September 2017 - January 2018.** Increased State Academic Scholarship for 4 year bachelor and master students at MIPT for scientific achievements (10,000 Russian rubles per month in addition to the regular scholarship)
- **November 2017.** Diploma of winner of the Section of Information Transmission Problems, Data Analysis and Optimization at 60th Scientific Conference of MIPT
- **May 2017.** [Third Prize at MIPT's Student Olympiad in Mathematics](#)
- **March 2017.** First Prize at MIPT's Team Mathematical Tournament
- **September 2016 - June 2017.** Abramov scholarship for 1-3 year bachelor students with the best grades at MIPT (12,000 Russian rubles per month)
- **December 2015.** [Third Prize at MIPT's Student Olympiad in Mathematics](#)
- **February 2015 - June 2015.** Abramov scholarship for 1-3 year bachelor students with the best grades at MIPT (12,000 Russian rubles per month)
- **April 2014.** Participant of Final Round of All-Russian Mathematical Olympiad ([scored points: 28 out of 56, 59th place](#))

## SUMMER SCHOOLS

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- **June 2018.** Participant of Traditional Youth School "Control, Information and Optimization"
- **June 2017.** Participant of Traditional Youth School "Control, Information and Optimization"
- **July 2015.** [Participant](#) of Summer School "Contemporary Mathematics" in Dubna
- **July 2014.** [Participant](#) of Summer School "Contemporary Mathematics" in Dubna

Last Updated on February 7, 2019