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h-index (google scholar): [21](#)

h10-index (google scholar): [53](#)

Work Address: Moscow, Russia

Date of Birth: September 2, 1983

Graduated: [Moscow Institute of Physics and Technology \(MIPT\)](#), 2006.



EDUCATION:

2000 – 2006 Moscow Institute of Physics and Technology, Department of Control and Applied Mathematics, Moscow, Russia.

2007 PhD in Partial Differential Equations

“[Asymptotic in time behavior of solution of Cauchy problem for conservation law with nonlinear divergent viscosity](#)”, supervisor prof [A.A. Shaninin](#). Moscow Institute of Physics and Technology. Moscow, Russia.

2016 Doctoral Thesis (Habilitation)

(in Mathematical Modelling and Numerical methods of Convex Optimization)

“[Searching equilibriums in large transport networks](#)”.

RESEARCH INTERESTS:

- Mathematical Modeling of Traffic Flows
- Optimization (Huge-Scale, Distributed and Parallel, Stochastic, Online)
- Learning from optimization point of view

CURRENT POSITIONS:

Since **2011** [Associate professor](#) at MIPT (Moscow Institute of Physics and Technology). Department of Control and Applied Mathematics. Russia, Moscow

Since **2015** [Associate professor](#) at the HSE (High School Economics). Computer Science Department. Russia, Moscow

Since **2015** [Lead researcher](#) at IITP RAS (Institute for Information Transmission Problems of Russian Academy of Science). Russia, Moscow.

Since **2017** **Member of Editorial Board:** Siberian journal of Computational Mathematics (WoS, Scopus)

Since **2019** Head of the group at Huawei. Russia, Moscow

CURRENT TEACHING (at MIPT):

Spring Terms Lecturer in [Stochastic Process](#), [Optimization](#)

Fall Terms Lecturer in [Mathematical Modelling of Traffic flows](#)

PROFESSIONAL EXPERIENCE:

2005 – 2007 Engineer at Computational Center of Russian Academy of Science. Russia, Moscow.

2005 – 2009 Teacher at MIPT (tutorials on Probability theory, Stochastic processes, Mathematical statistics, Mathematical modelling of traffic flows). Russia, Moscow

2009 – 2013 Deputy Dean, Department of Applied Mathematics and Control MIPT. Russia, Moscow

2011 – 2014 Executive of the Laboratory of structural Methods of Data Analysis in Predictive Modeling (PreMoLab) at MIPT. Russia, Moscow

2011 – 2015 Lecturer at the Independent State University (Stochastic analysis, Mathematical modelling of traffic flows). Russia, Moscow

2014 Deputy Dean of the Department of Control and Applied Mathematics at MIPT, Russia, Moscow

2014 – 2016 Lead Researcher at the Laboratory of structural Methods of Data Analysis in Predictive Modeling (PreMoLab), MIPT. Russia, Moscow

2015 – 2016 Senior researcher at Keldysh Institute of Applied Mathematics, Russia, Moscow

2017 – 2019 Senior Researcher at [BIOCAD](#). Russia, Saint-Petersburg

LECTURES:

2015 Invited Professor at Immanuel Kant Baltic Federal University, Russia, Kaliningrad.

2016 Invited Professor at Innopolis University, Russia, Kazan.

INDUSTRIAL CONSULTING:

- 2014 – 2015** Member of Yu. Nesterov's group at [Yandex](#) (Leading Russian search engine). Russia, Moscow
- 2014 – 2015** Member of prof. V. Spokoiny's group at Huawei. Russia, Moscow
- 2014 – 2015** Head of the group at Genplan Institute of Moscow. Russia, Moscow

CURRENT GRANTS (head of the grant):

- [Yahoo Faculty Research and Engagement Program, 2019](#)
- Russian Found of Basic Research 10-01-00454 A (Mathematical modeling of traffic flows), 12-01-33007, 15-31-20571 mol-a-ved (Conception of equilibrium of Macrosystem; Algebra on numerical methods of Convex optimization), 14-01-00722 A (Huge-scale optimization); 15-31-7001 mol-a-mos (Searching of traffic assignment); 18-31-20005 mol_a_ved (Conception of a model of a function in convex optimization);
- Grants of President of Russian Federation № MK-5285.2013.9; № MD-1320.2018.1.

SCIENTIFIC TRAINEESHIP:

December **2012**, November **2014**, June **2018**

CORE UCL (Center for Operations Research and Econometrics), cooperation with prof. Yu. Nesterov. Belgium, Louvain la Neuve

May **2013**, May **2015**, October **2018**, January **2019**

WIAS (Weierstrass Institute for Applied Analysis and Stochastics), cooperation with prof. V. Spokoiny's group. Germany, Berlin

CURRENT SUPERVISION:

12 Bachelor/Master students ([Eduard Gorbunov](#)) and 5 PhD students.

PUBLICATIONS (more than 80 papers):

[ArXiv](#) (since 2014), [ResearchGate](#), [additional information](#) (Math-Net).

Recent publications

A. Gasnikov, P. Dvurechensky, E. Gorbunov, E. Vorontsova, Daniil Selikhanovych and Cesar A. Uribe Optimal Tensor Methods in Smooth Convex and Uniformly Convex Optimization. **Conference on Learning Theory**. P. 1374–1391, 2019.

A. Kroshnin, D. Dvinskikh, P. Dvurechensky, A. Gasnikov, N. Tupitsa and C. A. Uribe. On the Complexity of Approximating Wasserstein Barycenter. **Proceedings of the 36th International Conference on Machine Learning**, PMLR 97:3530-3540, 2019.

P. Dvurechenskii, D. Dvinskikh, A. Gasnikov, C. Uribe and A. Nedich. Decentralize and randomize: Faster algorithm for Wasserstein barycenters. **In Advances in Neural Information Processing Systems**. P. 10760–10770, 2018.

P. Dvurechensky, A. Gasnikov and A. Kroshnin. Computational Optimal Transport: Complexity by Accelerated Gradient Descent Is Better Than by Sinkhorn’s Algorithm. **Proceedings of the 35th International Conference on Machine Learning**, PMLR 80:1367–1376, 2018.

C.A. Uribe, D. Dvinskikh, P. Dvurechensky, A. Gasnikov, A. Nedić. Distributed computation of Wasserstein barycenters over networks. **In 2018 IEEE Conference on Decision and Control (CDC)** (pp. 6544-6549). IEEE, December, 2018.

Guminov, S., Gasnikov, A., Anikin, A., Gornov, A. A universal modification of the linear coupling method. **Optimization Methods and Software**, 2019, V. 34(3), P. 560-577.

F. Stonyakin, D. Dvinskikh, P. Dvurechensky, A. Kroshnin, O. Kuznetsova, A. Agafonov, S. Artamonov. Gradient methods for problems with inexact model of the objective. **In International Conference on Mathematical Optimization Theory and Operations Research** (pp. 97-114). Springer, Cham, 2019.

A. Titov, F. Stonyakin, A. Gasnikov, M. Alkousa. Mirror Descent and Constrained Online Optimization Problems. **In International Conference on Optimization and Applications** (pp. 64-78). Springer, Cham, 2018.

A. Bayandina, P. Dvurechensky, A. Gasnikov, F. Stonyakin, A. Titov. Mirror descent and convex optimization problems with non-smooth inequality constraints. **In Large-Scale and Distributed Optimization** (pp. 181-213). Springer, Cham, 2018.