

# Anton Rodomanov

## Contact details

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## Research interests

Optimization, Machine Learning, Bayesian Statistics.

## Education

2015–2017 **MSc in Computer Science**, [National Research University Higher School of Economics](#)  
2011–2015 **BSc in Computer Science**, [Lomonosov Moscow State University](#)

## Publications

- 2016 **A Superlinearly-Convergent Proximal Newton-Type Method for the Optimization of Finite Sums**  
A. Rodomanov, D. Kropotov  
Proceedings of the 33rd International Conference on Machine Learning (ICML)  
[\[pdf\]](#) [\[supplementary\]](#) [\[poster\]](#) [\[slides\]](#) [\[code\]](#)
- 2016 **Primal-Dual Method for Searching Equilibrium in Hierarchical Congestion Population Games**  
P. Dvurechensky, A. Gasnikov, E. Gasnikova, S. Matsievsky, A. Rodomanov, I. Usik  
Proceedings of the 9th International Conference on Discrete Optimization and Operations Research and Scientific School (DOOR)  
[\[pdf\]](#)
- 2015 **A Newton-type Incremental Method with a Superlinear Convergence Rate**  
A. Rodomanov, D. Kropotov  
NIPS Workshop on Optimization for Machine Learning (Optimization@NIPS)  
[\[pdf\]](#) [\[poster\]](#)
- 2014 **Putting MRFs on a Tensor Train**  
A. Novikov, A. Rodomanov, A. Osokin, D. Vetrov  
Proceedings of the 31st International Conference on Machine Learning (ICML)  
[\[pdf\]](#) [\[supplementary\]](#) [\[poster\]](#) [\[slides\]](#) [\[code\]](#)

## Talks

- 10/2016 **Incremental Newton Method for Big Sums of Functions**  
Seminar on Stochastic Analysis in Problems, IUM, Moscow, Russia  
[\[slides \(in Russian\)\]](#) [\[video \(in Russian\)\]](#)

06/2016	<b>A Superlinearly-Convergent Proximal Newton-Type Method for the Optimization of Finite Sums</b> International Conference on Machine Learning (ICML), New York, USA [ <a href="#">slides</a> ] [ <a href="#">video</a> ]
06/2016	<b>Optimization Methods for Big Sums of Functions</b> Deep Machine Intelligence Workshop, Skoltech, Moscow, Russia [ <a href="#">slides</a> ]
05/2016	<b>Incremental Newton Method for Minimizing Big Sums of Functions</b> HSE off-site seminar on Machine Learning, Voronovo, Russia [ <a href="#">slides</a> ]
03/2016	<b>Introduction to the Tensor Train Decomposition and Its Applications in Machine Learning</b> Seminar on Applied Linear Algebra, HSE, Moscow, Russia [ <a href="#">slides</a> ]
02/2016	<b>Proximal Incremental Newton Method</b> Seminar on Bayesian Methods in Machine Learning, MSU, Moscow [ <a href="#">slides</a> ]
08/2015	<b>Probabilistic Graphical Models: a Tensorial Perspective</b> International Conference on Matrix Methods in Mathematics and Applications (MMA), Skoltech, Moscow, Russia [ <a href="#">slides</a> ]
06/2015	<b>A Fast Incremental Optimization Method with a Superlinear Rate of Convergence</b> Summer School on Control, Information and Optimization, Solnechnogorsk, Russia [ <a href="#">slides</a> ]
10/2014	<b>Markov Chains and Spectral Theory</b> Seminar on Bayesian Methods in Machine Learning, MSU, Moscow, Russia [ <a href="#">slides (in Russian)</a> ]
05/2014	<b>Low-Rank Representation of MRF Energy by means of the TT-Format</b> SIAM Conference in Imaging Science (SIAM-IS), Hong-Kong, China [ <a href="#">slides</a> ]
04/2014	<b>Fast Gradient Method</b> Seminar on Bayesian Methods in Machine Learning, MSU, Moscow, Russia [ <a href="#">slides (in Russian)</a> ]
10/2013	<b>TT-Decomposition for Compact Representation of Tensors</b> Seminar on Bayesian Methods in Machine Learning, MSU, Moscow, Russia [ <a href="#">slides (in Russian)</a> ]

## Posters

06/2016	<b>A Superlinearly-Convergent Proximal Newton-Type Method for the Optimization of Finite Sums</b> International Conference on Machine Learning (ICML), New York, USA [ <a href="#">poster</a> ]
12/2015	<b>A Newton-type Incremental Method with a Superlinear Convergence Rate</b> NIPS Workshop on Optimization for Machine Learning (Optimization@NIPS), Montreal, Canada [ <a href="#">poster</a> ]
07/2015	<b>A Fast Incremental Optimization Method with a Superlinear Rate of Convergence</b> Microsoft Research PhD Summer School, Cambridge, United Kingdom [ <a href="#">poster</a> ]
06/2014	<b>Putting MRFs on a Tensor Train</b> International Conference on Machine Learning (ICML), Beijing, China [ <a href="#">poster</a> ]

## Awards

2016	Winner of the <a href="#">Golden HSE Award</a> in the <a href="#">Silver Nestling</a> nomination
2016	Winner of the personal <a href="#">Scholarship of the Lukoil Fund</a>
2016	Winner of the <a href="#">Ilya Segalovich Scholarship</a> (from Yandex)
2015	Winner (1st place) of a faculty-wide competition of theses at the <a href="#">Lomonosov Moscow State University</a>

## Teaching experience

{01–03}/2017	<b>Optimization Methods</b> at the <a href="#">Faculty of Computer Science, Higher School of Economics</a> Seminars and practical sessions. Lecturer: Dmitry Kropotov.
{09–12}/2016	<b>Optimization Methods in Machine Learning</b> at the <a href="#">Faculty of Computational Mathematics and Cybernetics, Moscow State University</a>

{02–05}/2016	Seminars and practical sessions. Lecturer: Dmitry Kropotov.
	<b>Optimization Methods in Machine Learning</b> at the <a href="#">Yandex School of Data Analysis</a>
{11–12}/2015	Seminars and practical sessions. Lecturer: Dmitry Kropotov.
	<b>Machine Learning</b> at the <a href="#">Skolkovo Institute of Science and Technology</a>
{02–05}/2015	Seminars and practical sessions. Lecturer: Victor Kitov.
	<b>Optimization Methods in Machine Learning</b> at the <a href="#">Yandex School of Data Analysis</a>
	Seminars and practical sessions. Lecturer: Dmitry Kropotov.

## Computer skills

Languages	<b>Python, C/C++, MATLAB</b>
Version control	<b>Git, GitHub, Bitbucket, SVN</b>
OSs	<b>Linux, Windows, Mac OS X</b>
Other	<b>Amazon EC2, L<sup>A</sup>T<sub>E</sub>X</b>

## Languages

Russian	<b>Native</b>
English	<b>Advanced</b>