Yurii Nesterov

List of Publications by Year
in descending order

97 papers	12,139 citations	147566 31 h-index	42291 92 g-index
101 all docs	101 docs citations	101 times ranked	6380 citing authors

#	Article	IF	Citations
1	Inexact accelerated high-order proximal-point methods. Mathematical Programming, 2023, 197, 1-26.	1.6	17
2	Affine-invariant contracting-point methods for Convex Optimization. Mathematical Programming, 2023, 198, 115-137.	1.6	2
3	Tensor methods for finding approximate stationary points of convex functions. Optimization Methods and Software, 2022, 37, 605-638.	1.6	8
4	Inexact basic tensor methods for some classes of convex optimization problems. Optimization Methods and Software, 2022, 37, 878-906.	1.6	9
5	Local convergence of tensor methods. Mathematical Programming, 2022, 193, 315-336.	1.6	4
6	Rates of superlinear convergence for classical quasi-Newton methods. Mathematical Programming, 2022, 194, 159-190.	1.6	11
7	Discrete Choice Prox-Functions on the Simplex. Mathematics of Operations Research, 2022, 47, 485-507.	0.8	2
8	Gradient methods with memory. Optimization Methods and Software, 2022, 37, 936-953.	1.6	3
9	Efficient numerical methods to solve sparse linear equations with application to PageRank. Optimization Methods and Software, 2022, 37, 907-935.	1.6	1
10	Primalâ€“dual accelerated gradient methods with small-dimensional relaxation oracle. Optimization Methods and Software, 2021, 36, 773-810.	1.6	16
11	On inexact solution of auxiliary problems in tensor methods for convex optimization. Optimization Methods and Software, 2021, 36, 145-170.	1.6	10
12	Implementable tensor methods in unconstrained convex optimization. Mathematical Programming, 2021, 186, 157-183.	1.6	40
13	New Results on Superlinear Convergence of Classical Quasi-Newton Methods. Journal of Optimization Theory and Applications, 2021, 188, 744-769.	0.8	10
14	Greedy Quasi-Newton Methods with Explicit Superlinear Convergence. SIAM Journal on Optimization, 2021, 31, 785-811.	1.2	10
15	Minimizing Uniformly Convex Functions by Cubic Regularization of Newton Method. Journal of Optimization Theory and Applications, 2021, 189, 317-339.	0.8	9
16	Superfast Second-Order Methods for Unconstrained Convex Optimization. Journal of Optimization Theory and Applications, 2021, 191, 1-30.	0.8	16
17	Inexact High-Order Proximal-Point Methods with Auxiliary Search Procedure. SIAM Journal on Optimization, 2021, 31, 2807-2828.	1.2	10
18	Computing Closest Stable Nonnegative Matrix. SIAM Journal on Matrix Analysis and Applications, 2020, 41, 1-28.	0.7	7

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19	Contracting Proximal Methods for Smooth Convex Optimization. SIAM Journal on Optimization, 2020, 30, 3146-3169.	1.2	11
20	Computation of the Analytic Center of the Solution Set of the Linear Matrix Inequality Arising in Continuous- and Discrete-Time Passivity Analysis. Vietnam Journal of Mathematics, 2020, 48, 633-659.	0.4	1
21	Soft clustering by convex electoral model. Soft Computing, 2020, 24, 17609-17620.	2.1	2
22	Tensor Methods for Minimizing Convex Functions with HÃ¶lder Continuous Higher-Order Derivatives. SIAM Journal on Optimization, 2020, 30, 2750-2779.	1.2	13
23	Smoothness Parameter of Power of Euclidean Norm. Journal of Optimization Theory and Applications, 2020, 185, 303-326.	0.8	4
24	On the Quality of First-Order Approximation of Functions with HÃ¶lder Continuous Gradient. Journal of Optimization Theory and Applications, 2020, 185, 17-33.	0.8	1
25	Computational Methods for the Stable Dynamic Model. Communications in Computer and Information Science, 2020, , 280-294.	0.4	1
26	Accelerated Regularized Newton Methods for Minimizing Composite Convex Functions. SIAM Journal on Optimization, 2019, 29, 77-99.	1.2	18
27	Linear convergence of first order methods for non-strongly convex optimization. Mathematical Programming, 2019, 175, 69-107.	1.6	98
28	Universal Method for Stochastic Composite Optimization Problems. Computational Mathematics and Mathematical Physics, 2018, 58, 48-64.	0.2	32
29	Relatively Smooth Convex Optimization by First-Order Methods, and Applications. SIAM Journal on Optimization, 2018, 28, 333-354.	1.2	119
30	Power method tÃ¢tonnements for Cobbâ€“Douglas economies. Journal of Mathematical Economics, 2018, 75, 84-92.	0.4	2
31	Computation of Fisherâ€“Gale Equilibrium by Auction. Journal of the Operations Research Society of China, 2018, 6, 349-389.	0.9	7
32	Dual subgradient method with averaging for optimal resource allocation. European Journal of Operational Research, 2018, 270, 907-916.	3.5	18
33	Complexity bounds for primal-dual methods minimizing the model of objective function. Mathematical Programming, 2018, 171, 311-330.	1.6	36
34	Lectures on Convex Optimization. Springer Optimization and Its Applications, 2018, , .	0.6	434
35	Dual Methods for Finding Equilibriums in Mixed Models of Flow Distribution in Large Transportation Networks. Computational Mathematics and Mathematical Physics, 2018, 58, 1395-1403.	0.2	0
36	Random Gradient-Free Minimization of Convex Functions. Foundations of Computational Mathematics, 2017, 17, 527-566.	1.5	350

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37	Distributed Price Adjustment Based on Convex Analysis. Journal of Optimization Theory and Applications, 2017, 172, 594-622.	0.8	3
38	Random Block Coordinate Descent Methods for Linearly Constrained Optimization over Networks. Journal of Optimization Theory and Applications, 2017, 173, 227-254.	0.8	33
39	Efficiency of the Accelerated Coordinate Descent Method on Structured Optimization Problems. SIAM Journal on Optimization, 2017, 27, 110-123.	1.2	46
40	Preface to the Special Issue â€œOptimization, Control and Applicationsâ€•in Honor of Boris T. Polyakâ€™s 80th Birthday. Journal of Optimization Theory and Applications, 2017, 172, 349-350.	0.8	0
41	Regularized Newton Methods for Minimizing Functions with HÃ¶lder Continuous Hessians. SIAM Journal on Optimization, 2017, 27, 478-506.	1.2	34
42	A Subgradient Method for Free Material Design. SIAM Journal on Optimization, 2016, 26, 2314-2354.	1.2	1
43	Local Superlinear Convergence of Polynomial-Time Interior-Point Methods for Hyperbolicity Cone Optimization Problems. SIAM Journal on Optimization, 2016, 26, 139-170.	1.2	10
44	Algorithmic Principle of Least Revenue for Finding Market Equilibria. Springer Optimization and Its Applications, 2016, , 381-435.	0.6	0
45	Primal-Dual Methods for Solving Infinite-Dimensional Games. Journal of Optimization Theory and Applications, 2015, 166, 23-51.	0.8	4
46	On the efficiency of a randomized mirror descent algorithm in online optimization problems. Computational Mathematics and Mathematical Physics, 2015, 55, 580-596.	0.2	8
47	Finding the stationary states of Markov chains by iterative methods. Applied Mathematics and Computation, 2015, 255, 58-65.	1.4	14
48	Quasi-monotone Subgradient Methods for Nonsmooth Convex Minimization. Journal of Optimization Theory and Applications, 2015, 165, 917-940.	0.8	38
49	Universal gradient methods for convex optimization problems. Mathematical Programming, 2015, 152, 381-404.	1.6	124
50	Brief Announcement: Computation of Fisher-Gale Equilibrium by Auction. Lecture Notes in Computer Science, 2015, , 312-313.	1.0	3
51	Primal-Dual Subgradient Method for Huge-Scale Linear Conic Problems. SIAM Journal on Optimization, 2014, 24, 1444-1457.	1.2	11
52	First-order methods of smooth convex optimization with inexact oracle. Mathematical Programming, 2014, 146, 37-75.	1.6	228
53	Subgradient methods for huge-scale optimization problems. Mathematical Programming, 2014, 146, 275-297.	1.6	41
54	On first-order algorithms for<i>l</i>₁/nuclear norm minimization. Acta Numerica, 2013, 22, 509-575.	6.3	32

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55	Nearest stable system using successive convex approximations. Automatica, 2013, 49, 1195-1203.	3.0	21
56	Gradient methods for minimizing composite functions. Mathematical Programming, 2013, 140, 125-161.	1.6	766
57	Hessian distances and their applications in the complexity analysis of interior-point methods. Optimization Methods and Software, 2013, 28, 543-563.	1.6	0
58	Towards non-symmetric conic optimization. Optimization Methods and Software, 2012, 27, 893-917.	1.6	35
59	Design and Operations of Gas Transmission Networks. Operations Research, 2012, 60, 34-47.	1.2	51
60	Double Smoothing Technique for Large-Scale Linearly Constrained Convex Optimization. SIAM Journal on Optimization, 2012, 22, 702-727.	1.2	48
61	Efficiency of Coordinate Descent Methods on Huge-Scale Optimization Problems. SIAM Journal on Optimization, 2012, 22, 341-362.	1.2	619
62	Minimizing Lipschitz-continuous strongly convex functions over integer points in polytopes. Mathematical Programming, 2012, 134, 305-322.	1.6	4
63	Barrier subgradient method. Mathematical Programming, 2011, 127, 31-56.	1.6	12
64	Polynomial-Time Computation of the Joint Spectral Radius for Some Sets of Nonnegative Matrices. SIAM Journal on Matrix Analysis and Applications, 2010, 31, 865-876.	0.7	28
65	Primal-dual subgradient methods for convex problems. Mathematical Programming, 2009, 120, 221-259.	1.6	453
66	Foreword: special issue on nonsmooth optimization and applications. Mathematical Programming, 2009, 120, 1-2.	1.6	3
67	Unconstrained Convex Minimization in Relative Scale. Mathematics of Operations Research, 2009, 34, 180-193.	0.8	13
68	A gradient-type algorithm optimizing the coupling between matrices. Linear Algebra and Its Applications, 2008, 429, 1229-1242.	0.4	4
69	Confidence level solutions for stochastic programming. Automatica, 2008, 44, 1559-1568.	3.0	32
70	Parabolic target space and primalâ€“dual interior-point methods. Discrete Applied Mathematics, 2008, 156, 2079-2100.	0.5	0
71	Rounding of convex sets and efficient gradient methods for linear programming problems. Optimization Methods and Software, 2008, 23, 109-128.	1.6	17
72	Optimizing the Coupling Between Two Isometric Projections of Matrices. SIAM Journal on Matrix Analysis and Applications, 2008, 30, 324-345.	0.7	14

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73	Modified Gaussâ€“Newton scheme with worst case guarantees for global performance. Optimization Methods and Software, 2007, 22, 469-483.	1.6	51
74	Characteristic functions of directed graphs and applications to stochastic equilibrium problems. Optimization and Engineering, 2007, 8, 193-214.	1.3	5
75	Smoothing Technique and its Applications in Semidefinite Optimization. Mathematical Programming, 2007, 110, 245-259.	1.6	79
76	Dual extrapolation and its applications to solving variational inequalities and related problems. Mathematical Programming, 2007, 109, 319-344.	1.6	117
77	Accelerating the cubic regularization of Newtonâ€™s method on convex problems. Mathematical Programming, 2007, 112, 159-181.	1.6	104
78	Cubic regularization of Newton method and its global performance. Mathematical Programming, 2006, 108, 177-205.	1.6	377
79	On the accuracy of the ellipsoid norm approximation of the joint spectral radius. Linear Algebra and Its Applications, 2005, 394, 91-107.	0.4	50
80	Smooth minimization of non-smooth functions. Mathematical Programming, 2005, 103, 127-152.	1.6	1,568
81	Lexicographic differentiation of nonsmooth functions. Mathematical Programming, 2005, 104, 669-700.	1.6	60
82	Excessive Gap Technique in Nonsmooth Convex Minimization. SIAM Journal on Optimization, 2005, 16, 235-249.	1.2	123
83	Computationally Efficient Approximations of the Joint Spectral Radius. SIAM Journal on Matrix Analysis and Applications, 2005, 27, 256-272.	0.7	112
84	Introductory Lectures on Convex Optimization. Applied Optimization, 2004, , .	0.4	1,768
85	Augmented self-concordant barriers and nonlinear optimization problems with finite complexity. Mathematical Programming, 2004, 99, 149-174.	1.6	9
86	Stationary Dynamic Solutions in Congested Transportation Networks: Summary and Perspectives. Networks and Spatial Economics, 2003, 3, 371-395.	0.7	48
87	Optimization Problems over Positive Pseudopolynomial Matrices. SIAM Journal on Matrix Analysis and Applications, 2003, 25, 57-79.	0.7	61
88	Positivity and Linear Matrix Inequalities. European Journal of Control, 2002, 8, 275-298.	1.6	24
89	Homogeneous analytic center cutting plane methods with approximate centers. Optimization Methods and Software, 1999, 11, 243-273.	1.6	7
90	Homogeneous Analytic Center Cutting Plane Methods for Convex Problems and Variational Inequalities. SIAM Journal on Optimization, 1999, 9, 707-728.	1.2	32

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91	Semidefinite relaxation and nonconvex quadratic optimization. Optimization Methods and Software, 1998, 9, 141-160.	1.6	282
92	Multi-Parameter Surfaces of Analytic Centers and Long-Step Surface-Following Interior Point Methods. Mathematics of Operations Research, 1998, 23, 1-38.	0.8	10
93	METROPOLIS: Modular System for Dynamic Traffic Simulation. Transportation Research Record, 1997, 1607, 178-184.	1.0	32
94	Interior-point methods: An old and new approach to nonlinear programming. Mathematical Programming, 1997, 79, 285-297.	1.6	9
95	Long-step strategies in interior-point primal-dual methods. Mathematical Programming, 1997, 76, 47-94.	1.6	15
96	New variants of bundle methods. Mathematical Programming, 1995, 69, 111-147.	1.6	272
97	Conic formulation of a convex programming problem and duality. Optimization Methods and Software, 1992, 1, 95-115.	1.6	40