Ernesto JuliÃ¡n Goldberg Birgin

List of Publications by Year
in descending order

102 papers	10,395 citations	159585 30 h-index	39675 94 g-index
104 all docs	104 docs citations	104 times ranked	9228 citing authors

#	Article	IF	Citations
1	Accelerated derivative-free nonlinear least-squares applied to the estimation of Manning coefficients. Computational Optimization and Applications, 2022, 81, 689.	1.6	2
2	A Shape-Newton Approach to the Problem of Covering with Identical Balls. SIAM Journal of Scientific Computing, 2022, 44, A798-A824.	2.8	3
3	Inexact restoration for derivative-free expensive function minimization and applications. Journal of Computational and Applied Mathematics, 2022, 410, 114193.	2.0	3
4	On complexity and convergence of high-order coordinate descent algorithms for smooth nonconvex box-constrained minimization. Journal of Global Optimization, 2022, 84, 527-561.	1.8	1
5	Block coordinate descent for smooth nonconvex constrained minimization. Computational Optimization and Applications, 2022, 83, 1-27.	1.6	3
6	On constrained optimization with nonconvex regularization. Numerical Algorithms, 2021, 86, 1165-1188.	1.9	1
7	On the solution of linearly constrained optimization problems by means of barrier algorithms. Top, 2021, 29, 417-441.	1.6	0
8	Metaheuristics for the online printing shop scheduling problem. European Journal of Operational Research, 2021, 293, 419-441.	5.7	14
9	A Shape Optimization Approach to the Problem of Covering a Two-Dimensional Region with Minimum-Radius Identical Balls. SIAM Journal of Scientific Computing, 2021, 43, A2047-A2078.	2.8	4
10	On the use of third-order models with fourth-order regularization for unconstrained optimization. Optimization Letters, 2020, 14, 815-838.	1.6	9
11	The multiperiod twoâ€dimensional nonâ€guillotine cutting stock problem with usable leftovers. International Transactions in Operational Research, 2020, 27, 1392-1418.	2.7	14
12	A filtered beam search method for the m-machine permutation flowshop scheduling problem minimizing the earliness and tardiness penalties and the waiting time of the jobs. Computers and Operations Research, 2020, 114, 104824.	4.0	15
13	Models for the twoâ€dimensional rectangular single large placement problem with guillotine cuts and constrained pattern. International Transactions in Operational Research, 2020, 27, 767-793.	2.7	17
14	An Augmented Lagrangian algorithm for nonlinear semidefinite programming applied to the covering problem. Computational and Applied Mathematics, 2020, 39, 1.	2.2	6
15	On the complexity of solving feasibility problems with regularized models. Optimization Methods and Software, 2020, , 1-20.	2.4	1
16	Mixed Integer linear programming and constraint programming models for the online printing shop scheduling problem. Computers and Operations Research, 2020, 123, 105020.	4.0	33
17	Preface of the special issue dedicated to the XII Brazilian workshop on continuous optimization. Computational Optimization and Applications, 2020, 76, 615-619.	1.6	0
18	Complexity and performance of an Augmented Lagrangian algorithm. Optimization Methods and Software, 2020, 35, 885-920.	2.4	25

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19	A matheuristic approach with nonlinear subproblems for large-scale packing of ellipsoids. European Journal of Operational Research, 2019, 272, 447-464.	5.7	14
20	Iteration and evaluation complexity for the minimization of functions whose computation is intrinsically inexact. Mathematics of Computation, 2019, 89, 253-278.	2.1	9
21	A Newton-like method with mixed factorizations and cubic regularization for unconstrained minimization. Computational Optimization and Applications, 2019, 73, 707-753.	1.6	12
22	Augmented Lagrangians with constrained subproblems and convergence to second-order stationary points. Computational Optimization and Applications, 2018, 69, 51-75.	1.6	28
23	On Regularization and Active-set Methods with Complexity for Constrained Optimization. SIAM Journal on Optimization, 2018, 28, 1367-1395.	2.0	16
24	The Use of Quadratic Regularization with a Cubic Descent Condition for Unconstrained Optimization. SIAM Journal on Optimization, 2017, 27, 1049-1074.	2.0	30
25	A nonlinear programming model with implicit variables for packing ellipsoids. Journal of Global Optimization, 2017, 68, 467-499.	1.8	16
26	On the minimization of possibly discontinuous functions by means of pointwise approximations. Optimization Letters, 2017, 11, 1623-1637.	1.6	5
27	Worst-case evaluation complexity for unconstrained nonlinear optimization using high-order regularized models. Mathematical Programming, 2017, 163, 359-368.	2.4	84
28	On the employment of inexact restoration for the minimization of functions whose evaluation is subject to errors. Mathematics of Computation, 2017, 87, 1307-1326.	2.1	14
29	CeMEAI: The Brazilian Center and Its Mathematics Research for Industry. Notices of the American Mathematical Society, 2017, 64, 450-454.	0.2	0
30	Twoâ€stage twoâ€dimensional guillotine cutting stock problems with usable leftover. International Transactions in Operational Research, 2016, 23, 121-145.	2.7	32
31	Sequential equality-constrained optimization for nonlinear programming. Computational Optimization and Applications, 2016, 65, 699-721.	1.6	10
32	Evaluation Complexity for Nonlinear Constrained Optimization Using Unscaled KKT Conditions and High-Order Models. SIAM Journal on Optimization, 2016, 26, 951-967.	2.0	26
33	Packing ellipsoids by nonlinear optimization. Journal of Global Optimization, 2016, 65, 709-743.	1.8	33
34	On the application of an augmented Lagrangian algorithm to some portfolio problems. EURO Journal on Computational Optimization, 2016, 4, 79-92.	2.4	5
35	An innerâ€"outer nonlinear programming approach for constrained quadratic matrix model updating. Mechanical Systems and Signal Processing, 2016, 66-67, 78-88.	8.0	2
36	Applications of Nonlinear Programming to Packing Problems. Mathematics for Industry, 2016, , 31-39.	0.4	1

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37	Optimality properties of an Augmented Lagrangian method on infeasible problems. Computational Optimization and Applications, 2015, 60, 609-631.	1.6	12
38	Metaheuristics for large-scale instances of the linear ordering problem. Expert Systems With Applications, 2015, 42, 4432-4442.	7.6	9
39	Assessing the reliability of general-purpose Inexact Restoration methods. Journal of Computational and Applied Mathematics, 2015, 282, 1-16.	2.0	14
40	List scheduling and beam search methods for the flexible job shop scheduling problem with sequencing flexibility. European Journal of Operational Research, 2015, 247, 421-440.	5.7	44
41	MIP models for two-dimensional non-guillotine cutting problems with usable leftovers. Journal of the Operational Research Society, 2014, 65, 1649-1663.	3.4	19
42	Augmented Lagrangians with possible infeasibility and finite termination for global nonlinear programming. Journal of Global Optimization, 2014, 58, 207-242.	1.8	11
43	A MILP model for an extended version of the Flexible Job Shop Problem. Optimization Letters, 2014, 8, 1417-1431.	1.6	48
44	Spectral Projected Gradient Methods: Review and Perspectives. Journal of Statistical Software, 2014, 60, .	3.7	103
45	FOREWORD SPECIAL ISSUE DEDICATED TO SELECTED SURVEYS IN NONLINEAR PROGRAMMING. Pesquisa Operacional, 2014, 34, 371-372.	0.4	0
46	Sparse Projected-Gradient Method As a Linear-Scaling Low-Memory Alternative to Diagonalization in Self-Consistent Field Electronic Structure Calculations. Journal of Chemical Theory and Computation, 2013, 9, 1043-1051.	5.3	11
47	Symmetry-breaking constraints for packing identical rectangles within polyhedra. Optimization Letters, 2013, 7, 375-405.	1.6	9
48	Deterministic and stochastic global optimization techniques for planar covering with ellipses problems. European Journal of Operational Research, 2013, 224, 23-40.	5.7	4
49	Packing circles within ellipses. International Transactions in Operational Research, 2013, 20, 365-389.	2.7	25
50	The boundedness of penalty parameters in an augmented Lagrangian method with constrained subproblems. Optimization Methods and Software, 2012, 27, 1001-1024.	2.4	24
51	Generating unconstrained two-dimensional non-guillotine cutting patterns by a Recursive Partitioning Algorithm. Journal of the Operational Research Society, 2012, 63, 183-200.	3.4	25
52	Evaluating bound-constrained minimization software. Computational Optimization and Applications, 2012, 53, 347-373.	1.6	18
53	Heuristic methods for the single machine scheduling problem with different ready times and a common due date. Engineering Optimization, 2012, 44, 1197-1208.	2.6	10
54	Mixed-Integer Programming Models for Flowshop Scheduling Problems Minimizing the Total Earliness and Tardiness. Springer Optimization and Its Applications, 2012, , 91-105.	0.9	19

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55	Augmented Lagrangian method with nonmonotone penalty parameters for constrained optimization. Computational Optimization and Applications, 2012, 51, 941-965.	1.6	41
56	Low order-value approach for solving VaR-constrained optimization problems. Journal of Global Optimization, 2011, 51, 715-742.	1.8	9
57	Outer Trust-Region Method for Constrained Optimization. Journal of Optimization Theory and Applications, 2011, 150, 142-155.	1.5	10
58	Special Issue on Nonlinear Programming dedicated to the ALIO-INFORMS Joint International Meeting 2010. Computational and Applied Mathematics, 2011, , .	2.2	0
59	Orthogonal packing of identical rectangles within isotropic convex regions. Computers and Industrial Engineering, 2010, 59, 595-602.	6.3	26
60	Global minimization using an Augmented Lagrangian method with variable lower-level constraints. Mathematical Programming, 2010, 125, 139-162.	2.4	95
61	Continuous GRASP with a local active-set method for bound-constrained global optimization. Journal of Global Optimization, 2010, 48, 289-310.	1.8	5
62	Second-order negative-curvature methods forÂbox-constrained and general constrained optimization. Computational Optimization and Applications, 2010, 45, 209-236.	1.6	32
63	Partial spectral projected gradient method with active-set strategy for linearly constrained optimization. Numerical Algorithms, 2010, 53, 23-52.	1.9	11
64	New and improved results for packing identical unitary radius circles within triangles, rectangles and strips. Computers and Operations Research, 2010, 37, 1318-1327.	4.0	50
65	An effective recursive partitioning approach for the packing of identical rectangles in a rectangle. Journal of the Operational Research Society, 2010, 61, 306-320.	3.4	36
66	Using sentinels to detect intersections of convex and nonconvex polygons. Computational and Applied Mathematics, 2010, 29, .	2.2	6
67	P<scp>ACKMOL</scp>: A package for building initial configurations for molecular dynamics simulations. Journal of Computational Chemistry, 2009, 30, 2157-2164.	3.3	5,831
68	Structured minimal-memory inexact quasi-Newton method and secant preconditioners for augmented Lagrangian optimization. Computational Optimization and Applications, 2008, 39, 1-16.	1.6	27
69	Minimizing the object dimensions in circle and sphere packing problems. Computers and Operations Research, 2008, 35, 2357-2375.	4.0	98
70	Estimation of the thickness and the optical parameters of several stacked thin films using optimization. Applied Optics, 2008, 47, 5208.	2.1	13
71	On Augmented Lagrangian Methods with General Lower-Level Constraints. SIAM Journal on Optimization, 2008, 18, 1286-1309.	2.0	280
72	Improving ultimate convergence of an augmented Lagrangian method. Optimization Methods and Software, 2008, 23, 177-195.	2.4	108

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73	Dykstraâ€™s Algorithm and Robust Stopping Criteria. , 2008, , 828-833.		1
74	Practical Augmented Lagrangian Methods. , 2008, , 3013-3023.		5
75	Spectral Projected Gradient Methods. , 2008, , 3652-3659.		14
76	Augmented Lagrangian methods under the constant positive linear dependence constraint qualification. Mathematical Programming, 2007, 111, 5-32.	2.4	120
77	Method of sentinels for packing items within arbitrary convex regions. Journal of the Operational Research Society, 2006, 57, 735-746.	3.4	19
78	Orthogonal packing of rectangular items within arbitrary convex regions by nonlinear optimization. Computers and Operations Research, 2006, 33, 3535-3548.	4.0	40
79	A note on an L-approach for solving the manufacturer's pallet loading problem. Journal of the Operational Research Society, 2005, 56, 1448-1451.	3.4	19
80	Optimizing the packing of cylinders into a rectangular container: A nonlinear approach. European Journal of Operational Research, 2005, 160, 19-33.	5.7	109
81	Local Convergence of an Inexact-Restoration Method and Numerical Experiments. Journal of Optimization Theory and Applications, 2005, 127, 229-247.	1.5	34
82	Numerical Comparison of Augmented Lagrangian Algorithms for Nonconvex Problems. Computational Optimization and Applications, 2005, 31, 31-55.	1.6	95
83	Spectral projected gradient and variable metric methods for optimization with linear inequalities. IMA Journal of Numerical Analysis, 2005, 25, 221-252.	2.9	16
84	Robust Stopping Criteria for Dykstra's Algorithm. SIAM Journal of Scientific Computing, 2005, 26, 1405-1414.	2.8	24
85	Practical active-set Euclidian trust-region method with spectral projected gradients for bound-constrained minimization. Optimization, 2005, 54, 305-325.	1.7	27
86	Optimization techniques for the estimation of the thickness and the optical parameters of thin films using reflectance data. Journal of Applied Physics, 2005, 97, 043512.	2.5	36
87	Globally Convergent Inexact Quasi-Newton Methods for Solving Nonlinear Systems. Numerical Algorithms, 2003, 32, 249-260.	1.9	43
88	Estimation of optical parameters of very thin films. Applied Numerical Mathematics, 2003, 47, 109-119.	2.1	13
89	Optimization problems in the estimation of parameters of thin films and the elimination of the influence of the substrate. Journal of Computational and Applied Mathematics, 2003, 152, 35-50.	2.0	16
90	Minimization subproblems and heuristics for an applied clustering problem. European Journal of Operational Research, 2003, 146, 19-34.	5.7	12

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91	Inexact spectral projected gradient methods on convex sets. IMA Journal of Numerical Analysis, 2003, 23, 539-559.	2.9	136
92	Solution Of Bounded Nonlinear Systems Of Equations Using Homotopies With Inexact Restoration. International Journal of Computer Mathematics, 2003, 80, 211-222.	1.8	1
93	Optical constants and thickness determination of very thin amorphous semiconductor films. Journal of Applied Physics, 2002, 92, 3093-3102.	2.5	58
94	Large-Scale Active-Set Box-Constrained Optimization Method with Spectral Projected Gradients. Computational Optimization and Applications, 2002, 23, 101-125.	1.6	154
95	A Box-Constrained Optimization Algorithm with Negative Curvature Directions and Spectral Projected Gradients. Computing Supplementum, 2001, , 49-60.	0.1	19
96	A Spectral Conjugate Gradient Method for Unconstrained Optimization. Applied Mathematics and Optimization, 2001, 43, 117-128.	1.6	251
97	Algorithm 813. ACM Transactions on Mathematical Software, 2001, 27, 340-349.	2.9	212
98	Nonmonotone Spectral Projected Gradient Methods on Convex Sets. SIAM Journal on Optimization, 2000, 10, 1196-1211.	2.0	775
99	Determination of thickness and optical constants of amorphous silicon films from transmittance data. Applied Physics Letters, 2000, 77, 2133-2135.	3.3	85
100	Restricted optimization: a clue to a fast and accurate implementation of the Common Reflection Surface Stack method. Journal of Applied Geophysics, 1999, 42, 143-155.	2.1	28
101	Estimation of the Optical Constants and the Thickness of Thin Films Using Unconstrained Optimization. Journal of Computational Physics, 1999, 151, 862-880.	3.8	238
102	Automatic differentiation and spectral projected gradient methods for optimal control problems. Optimization Methods and Software, 1998, 10, 125-146.	2.4	26