Leo Liberti

List of Publications by Year in descending order

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186 papers 4,014 citations

168829 31 h-index 54 g-index

208 all docs

208 docs citations

times ranked

208

2508 citing authors

#	Article	IF	CITATIONS
1	Unassigned distance geometry and molecular conformation problems. Journal of Global Optimization, 2022, 83, 73-82.	1.1	1
2	Side-constrained minimum sum-of-squares clustering: mathematical programming and random projections. Journal of Global Optimization, 2022, 83, 83-118.	1.1	5
3	Mathematical programming formulations for the alternating current optimal power flow problem. Annals of Operations Research, 2022, 314, 277-315.	2.6	4
4	Certified and accurate SDP bounds for the ACOPF problem. Electric Power Systems Research, 2022, 212, 108278.	2.1	0
5	Exploiting symmetries in mathematical programming via orbital independence. Annals of Operations Research, 2021, 298, 149-182.	2.6	3
6	Detecting and solving aircraft conflicts using bilevel programming. Journal of Global Optimization, 2021, 81, 529-557.	1.1	7
7	A New Algorithm for the \$\$^K\$\$DMDGP Subclass of Distance Geometry Problems with Exact Distances. Algorithmica, 2021, 83, 2400-2426.	1.0	4
8	Polynomial programming prevents aircraft (and other) conflicts. Operations Research Letters, 2021, 49, 447-451.	0.5	1
9	Random projections for conic programs. Linear Algebra and Its Applications, 2021, 626, 204-220.	0.4	4
10	Secondary structure assignment of proteins in the absence of sequence information. Bioinformatics Advances, 2021, 1, .	0.9	1
11	On an SDP relaxation for kissing number. Optimization Letters, 2020, 14, 417-422.	0.9	1
12	Algorithms and applications for a class of bilevel MILPs. Discrete Applied Mathematics, 2020, 272, 75-89.	0.5	5
13	The K-discretization and K-incident graphs for discretizable Distance Geometry. Optimization Letters, 2020, 14, 469-482.	0.9	2
14	Mathematical programming formulations for the alternating current optimal power flow problem. 4or, 2020, 18, 249-292.	1.0	19
15	Rejoinder on: Distance geometry and data science. Top, 2020, 28, 350-357.	1.1	0
16	Distance geometry and data science. Top, 2020, 28, 271-339.	1.1	19
17	Random projections for quadratic programs. Mathematical Programming, 2020, 183, 619-647.	1.6	8
18	Learning to Configure Mathematical Programming Solvers by Mathematical Programming. Lecture Notes in Computer Science, 2020, , 377-389.	1.0	2

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19	On the Observability of Smart Grids and Related Optimization Methods. Operations Research Proceedings: Papers of the Annual Meeting = VortrAge Der Jahrestagung / DGOR, 2020, , 281-287.	0.1	o
20	Realizing Euclidean distance matrices by sphere intersection. Discrete Applied Mathematics, 2019, 256, 5-10.	0.5	10
21	On the polynomiality of finding KDMDGP re-orders. Discrete Applied Mathematics, 2019, 267, 190-194.	0.5	11
22	Systematic Exploration of Protein Conformational Space Using a Distance Geometry Approach. Journal of Chemical Information and Modeling, 2019, 59, 4486-4503.	2.5	25
23	Random Projections for Quadratic Programs over a Euclidean Ball. Lecture Notes in Computer Science, 2019, , 442-452.	1.0	4
24	A mathematical programming formulation for the Hartree–Fock problem on open-shell systems. Optimization Letters, 2019, 13, 429-437.	0.9	1
25	Undecidability and hardness in mixed-integer nonlinear programming. RAIRO - Operations Research, 2019, 53, 81-109.	1.0	18
26	Gaussian random projections for Euclidean membership problems. Discrete Applied Mathematics, 2019, 253, 93-102.	0.5	8
27	Extrapolating curvature lines in rough concept sketches using mixed-integer nonlinear optimization. Optimization and Engineering, 2019, 20, 337-347.	1.3	1
28	QPLIB: a library of quadratic programming instances. Mathematical Programming Computation, 2019, 11, 237-265.	3.2	38
29	Minimal NMR distance information for rigidity of protein graphs. Discrete Applied Mathematics, 2019, 256, 91-104.	0.5	26
30	Geometry and Analogies: A Study and Propagation Method for Word Representations. Lecture Notes in Computer Science, 2019 , , $100-111$.	1.0	2
31	Flying Safely by Bilevel Programming. AIRO Springer Series, 2019, , 197-206.	0.4	1
32	A symmetry-based splitting strategy for discretizable distance geometry problems. Journal of Global Optimization, 2018, 71, 717-733.	1.1	8
33	Complexity and inapproximability results for the Power Edge Set problem. Journal of Combinatorial Optimization, 2018, 35, 895-905.	0.8	3
34	Tuning interval Branch-and-Prune for protein structure determination. Journal of Global Optimization, 2018, 72, 109-127.	1.1	19
35	Preface: Special issue dedicated to Distance Geometry. Journal of Global Optimization, 2018, 72, 1-4.	1.1	0
36	Barvinok's naive algorithm in Distance Geometry. Operations Research Letters, 2018, 46, 476-481.	0.5	8

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37	Universality and prediction in business rules. Computational Intelligence, 2018, 34, 763-785.	2.1	1
38	Random Projections for Linear Programming. Mathematics of Operations Research, 2018, 43, 1051-1071.	0.8	20
39	Perspective Cuts for the ACOPF with Generators. AIRO Springer Series, 2018, , 451-461.	0.4	4
40	Open Research Areas in Distance Geometry. Springer Optimization and Its Applications, 2018, , 183-223.	0.6	13
41	Maximum Concurrent Flow with Incomplete Data. Lecture Notes in Computer Science, 2018, , 77-88.	1.0	2
42	Surrogateâ€based methods for blackâ€box optimization. International Transactions in Operational Research, 2017, 24, 393-424.	1.8	94
43	Recent advances on the interval distance geometry problem. Journal of Global Optimization, 2017, 69, 525-545.	1.1	24
44	New Error Measures and Methods for Realizing Protein Graphs from Distance Data. Discrete and Computational Geometry, 2017, 57, 371-418.	0.4	16
45	The Interval Branch-And-Prune Algorithm for the Protein Structure Determination. Biophysical Journal, 2017, 112, 56a.	0.2	0
46	Orbital shrinking: Theory and applications. Discrete Applied Mathematics, 2017, 222, 109-123.	0.5	3
47	A multiplicative weights update algorithm for MINLP. EURO Journal on Computational Optimization, 2017, 5, 31-86.	1.5	5
48	Mathematical Programming Bounds for Kissing Numbers. Springer Proceedings in Mathematics and Statistics, 2017, , 213-222.	0.1	2
49	An Introduction to Distance Geometry applied to Molecular Geometry. SpringerBriefs in Computer Science, 2017, , .	0.2	13
50	Euclidean Distance Geometry. Springer Undergraduate Texts in Mathematics and Technology, 2017, , .	0.1	36
51	Distance Geometry in Linearizable Norms. Lecture Notes in Computer Science, 2017, , 830-837.	1.0	6
52	Controlling Some Statistical Properties of Business Rules Programs. Lecture Notes in Computer Science, 2017, , 263-276.	1.0	1
53	The Discretizable Distance Geometry Problem (DDGP3). SpringerBriefs in Computer Science, 2017, , 21-29.	0.2	0
54	From Continuous to Discrete. SpringerBriefs in Computer Science, 2017, , 13-20.	0.2	0

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55	The Discretizable Molecular Distance Geometry Problem (DMDGP). SpringerBriefs in Computer Science, 2017, , 31-39.	0.2	1
56	Distance Geometry and Molecular Geometry. SpringerBriefs in Computer Science, 2017, , 41-47.	0.2	0
57	The Distance Geometry Problem (DGP). SpringerBriefs in Computer Science, 2017, , 5-12.	0.2	O
58	The power edge set problem. Networks, 2016, 68, 104-120.	1.6	14
59	Six mathematical gems from the history of distance geometry. International Transactions in Operational Research, 2016, 23, 897-920.	1.8	34
60	New methods for the Distance Geometry Problem. Electronic Notes in Discrete Mathematics, 2016, 55, 45-48.	0.4	0
61	Twelve surveys in operations research. Annals of Operations Research, 2016, 240, 3-11.	2.6	4
62	Constraint qualification failure in action. Operations Research Letters, 2016, 44, 503-506.	0.5	3
63	Preface to the Special Issue on Many Faces of Distances. International Transactions in Operational Research, 2016, 23, 841-841.	1.8	4
64	Divisive heuristic for modularity density maximization. Computers and Operations Research, 2016, 71, 100-109.	2.4	15
65	Controlling the Average Behavior of Business Rules Programs. Lecture Notes in Computer Science, 2016, , 83-96.	1.0	4
66	The Learnability of Business Rules. Lecture Notes in Computer Science, 2016, , 257-268.	1.0	3
67	Distance Geometry on the Sphere. Lecture Notes in Computer Science, 2016, , 204-215.	1.0	0
68	Optimal HVAC Control as Demand Response with On-site Energy Storage and Generation System. Energy Procedia, 2015, 78, 2106-2111.	1.8	54
69	An algorithm for realizing Euclidean distance matrices. Electronic Notes in Discrete Mathematics, 2015, 50, 397-402.	0.4	5
70	Simulation and optimization of energy efficient operation of HVAC system as demand response with distributed energy resources. , 2015 , , .		8
71	Community detection with the weighted parsimony criterion. Journal of Systems Science and Complexity, 2015, 28, 517-545.	1.6	1
72	Observing the State of a Smart Grid Using Bilevel Programming. Lecture Notes in Computer Science, 2015, , 364-376.	1.0	4

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73	Optimization and sustainable development. Computational Management Science, 2015, 12, 371-395.	0.8	2
74	An algorithm to enumerate all possible protein conformations verifying a set of distance constraints. BMC Bioinformatics, 2015, 16, 23.	1.2	42
75	The dirty dozen of 4OR. 4or, 2015, 13, 1-13.	1.0	6
76	Discretization vertex orders in distance geometry. Discrete Applied Mathematics, 2015, 197, 27-41.	0.5	44
77	Efficient Computation of Shortest Paths in Time-Dependent Multi-Modal Networks. Journal of Experimental Algorithmics, 2015, 19, 1-29.	0.7	4
78	Orbital Independence in Symmetric Mathematical Programs. Lecture Notes in Computer Science, 2015, , 467-480.	1.0	1
79	On the Weber facility location problem with limited distances and side constraints. Optimization Letters, 2014, 8, 407-424.	0.9	8
80	Euclidean Distance Geometry and Applications. SIAM Review, 2014, 56, 3-69.	4.2	317
81	Mathematical programming: Turing completeness and applications to software analysis. Journal of Combinatorial Optimization, 2014, 28, 82-104.	0.8	14
82	Improving heuristics for network modularity maximization using an exact algorithm. Discrete Applied Mathematics, 2014, 163, 65-72.	0.5	24
83	Stabilizer-based symmetry breaking constraints for mathematical programs. Journal of Global Optimization, 2014, 60, 183-194.	1.1	18
84	On the number of realizations of certain Henneberg graphs arising in protein conformation. Discrete Applied Mathematics, 2014, 165, 213-232.	0.5	43
85	Toulouse Global optimization Workshop 2010 (TOGO10). Journal of Global Optimization, 2013, 56, 757-759.	1.1	O
86	The interval Branch-and-Prune algorithm for the discretizable molecular distance geometry problem with inexact distances. Journal of Global Optimization, 2013, 56, 855-871.	1.1	81
87	The Discretizable Molecular Distance Geometry Problem seems Easier on Proteins. , 2013, , 47-60.		22
88	Is the Distance Geometry Problem in NP?. , 2013, , 85-93.		4
89	A two-phase heuristic for the bottleneck k-hyperplane clustering problem. Computational Optimization and Applications, 2013, 56, 619-633.	0.9	1
90	A discrete search algorithm for finding the structure of protein backbones and side chains. International Journal of Bioinformatics Research and Applications, 2013, 9, 261.	0.1	7

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91	The Anonymous Subgraph Problem. Computers and Operations Research, 2013, 40, 973-979.	2.4	1
92	Eleven surveys in operations research: III. Annals of Operations Research, 2013, 204, 3-9.	2.6	6
93	On the impact of symmetry-breaking constraints on spatial Branch-and-Bound for circle packing in a square. Discrete Applied Mathematics, 2013, 161, 96-106.	0.5	15
94	Optimal design of electrical machines: mathematical programming formulations. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2013, 32, 977-996.	0.5	4
95	On the Composition of Convex Envelopes for Quadrilinear Terms. Springer Optimization and Its Applications, 2013, , 1-16.	0.6	3
96	Technological architecture evolutions of information systems: Trade-off and optimization. Concurrent Engineering Research and Applications, 2012, 20, 127-147.	2.0	5
97	EXPLOITING SYMMETRY PROPERTIES OF THE DISCRETIZABLE MOLECULAR DISTANCE GEOMETRY PROBLEM. Journal of Bioinformatics and Computational Biology, 2012, 10, 1242009.	0.3	28
98	A storm of feasibility pumps for nonconvex MINLP. Mathematical Programming, 2012, 136, 375-402.	1.6	52
99	Recent advances on the Discretizable Molecular Distance Geometry Problem. European Journal of Operational Research, 2012, 219, 698-706.	3.5	63
100	A MILP Approach for Designing Robust Variable-Length Codes Based on Exact Free Distance Computation. , 2012, , .		5
101	Algorithm for parametric community detection in networks. Physical Review E, 2012, 86, 016107.	0.8	10
102	A matroid view of key theorems for edge-swapping algorithms. Mathematical Methods of Operations Research, 2012, 76, 125-127.	0.4	2
103	The discretizable distance geometry problem. Optimization Letters, 2012, 6, 1671-1686.	0.9	60
104	The discretizable molecular distance geometry problem. Computational Optimization and Applications, 2012, 52, 115-146.	0.9	98
105	Discretization orders for distance geometry problems. Optimization Letters, 2012, 6, 783-796.	0.9	62
106	No end of the world in 2012 for 4OR. 4or, 2012, 10, 1-13.	1.0	6
107	Bidirectional <i>A</i> * search on timeâ€dependent road networks. Networks, 2012, 59, 240-251.	1.6	67
108	Reduced RLT representations for nonconvex polynomial programming problems. Journal of Global Optimization, 2012, 52, 447-469.	1.1	24

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109	An improved column generation algorithm for minimum sum-of-squares clustering. Mathematical Programming, 2012, 131, 195-220.	1.6	72
110	Reformulations in mathematical programming: automatic symmetry detection and exploitation. Mathematical Programming, 2012, 131, 273-304.	1.6	46
111	Symmetry in Mathematical Programming. The IMA Volumes in Mathematics and Its Applications, 2012, , 263-283.	0.5	14
112	A Label Correcting Algorithm for the Shortest Path Problem on a Multi-modal Route Network. Lecture Notes in Computer Science, 2012, , 236-247.	1.0	9
113	Relaxations of Multilinear Convex Envelopes: Dual Is Better Than Primal. Lecture Notes in Computer Science, 2012, , 87-98.	1.0	11
114	Orbital Shrinking. Lecture Notes in Computer Science, 2012, , 48-58.	1.0	9
115	Compact Relaxations for Polynomial Programming Problems. Lecture Notes in Computer Science, 2012, , 75-86.	1.0	0
116	A symmetry-driven BP algorithm for the Discretizable Molecular Distance Geometry Problem. , 2011, , .		2
117	Joint Decoding of Multiple-Description Network-Coded Data. , 2011, , .		7
118	Optimal recommender systems blending. , 2011, , .		2
119	Molecular distance geometry methods: from continuous to discrete. International Transactions in Operational Research, 2011, 18, 33-51.	1.8	90
120	8th Cologne/Twente Workshop on Graphs and Combinatorial Optimization (CTW 2009). Discrete Applied Mathematics, 2011, 159, 1659.	0.5	1
121	On the computation of protein backbones by using artificial backbones of hydrogens. Journal of Global Optimization, 2011, 50, 329-344.	1.1	30
122	Improved strategies for branching on general disjunctions. Mathematical Programming, 2011, 130, 225-247.	1.6	21
123	Edge cover by connected bipartite subgraphs. Annals of Operations Research, 2011, 188, 307-329.	2.6	1
124	A recipe for finding good solutions to MINLPs. Mathematical Programming Computation, 2011, 3, 349-390.	3.2	25
125	Locally optimal heuristic for modularity maximization of networks. Physical Review E, 2011, 83, 056105.	0.8	36
126	Influence of Pruning Devices on the Solution of Molecular Distance Geometry Problems. Lecture Notes in Computer Science, 2011, , 206-217.	1.0	12

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127	On the Number of Solutions of the Discretizable Molecular Distance Geometry Problem. Lecture Notes in Computer Science, 2011, , 322-342.	1.0	8
128	On convex relaxations of quadrilinear terms. Journal of Global Optimization, 2010, 47, 661-685.	1.1	39
129	Fast paths in large-scale dynamic road networks. Computational Optimization and Applications, 2010, 45, 143-158.	0.9	21
130	On interval-subgradient and no-good cuts. Operations Research Letters, 2010, 38, 341-345.	0.5	20
131	Mathematical programming based debugging. Electronic Notes in Discrete Mathematics, 2010, 36, 1311-1318.	0.4	2
132	Formulation symmetries in circle packing. Electronic Notes in Discrete Mathematics, 2010, 36, 1303-1310.	0.4	13
133	Static Analysis by Abstract Interpretation: A Mathematical Programming Approach. Electronic Notes in Theoretical Computer Science, 2010, 267, 73-87.	0.9	8
134	Loops and multiple edges in modularity maximization of networks. Physical Review E, 2010, 81, 046102.	0.8	35
135	Edge ratio and community structure in networks. Physical Review E, 2010, 81, 026105.	0.8	21
136	On the solution of molecular distance geometry problems with interval data. , 2010, , .		7
137	Discussion about formulations and resolution techniques of electrical machine design problems. , 2010, , .		1
138	Column generation algorithms for exact modularity maximization in networks. Physical Review E, 2010, 82, 046112.	0.8	96
139	A parallel version of the Branch & Prune algorithm for the Molecular Distance Geometry Problem. , 2010, , .		18
140	Experiments with a Feasibility Pump Approach for Nonconvex MINLPs. Lecture Notes in Computer Science, 2010, , 350-360.	1.0	14
141	MD-jeep: An Implementation of a Branch and Prune Algorithm for Distance Geometry Problems. Lecture Notes in Computer Science, 2010, , 186-197.	1.0	16
142	The Reformulation-Optimization Software Engine. Lecture Notes in Computer Science, 2010, , 303-314.	1.0	10
143	Optimal Technological Architecture Evolutions of Information Systems. , 2010, , 137-148.		3
144	Feasibility-Based Bounds Tightening via Fixed Points. Lecture Notes in Computer Science, 2010, , 65-76.	1.0	20

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145	DISCRETE APPROACHES FOR SOLVING MOLECULAR DISTANCE GEOMETRY PROBLEMS USING NMR DATA. International Journal of Computational Bioscience, 2010, 1, .	0.2	8
146	Computing artificial backbones of hydrogen atoms in order to discover protein backbones. , 2009, , .		7
147	An artificial backbone of hydrogens for finding the conformation of protein molecules. , 2009, , .		5
148	Reformulations in Mathematical Programming: Definitions and Systematics. RAIRO - Operations Research, 2009, 43, 55-85.	1.0	46
149	Comparisons between an exact and a metaheuristic algorithm for the molecular distance geometry problem. , 2009, , .		17
150	On a discretizable subclass of instances of the molecular distance geometry problem. , 2009, , .		13
151	A Good Recipe for Solving MINLPs. Annals of Information Systems, 2009, , 231-244.	0.5	21
152	Double variable neighbourhood search with smoothing for the molecular distance geometry problem. Journal of Global Optimization, 2009, 43, 207-218.	1.1	27
153	Optimal configuration of gamma ray machine radiosurgery units: the sphere covering subproblem. Optimization Letters, 2009, 3, 109-121.	0.9	11
154	Edge-swapping algorithms for the minimum fundamental cycle basis problem. Mathematical Methods of Operations Research, 2009, 69, 205-233.	0.4	10
155	Reformulation in mathematical programming: An application to quantum chemistry. Discrete Applied Mathematics, 2009, 157, 1309-1318.	0.5	12
156	Branching and bounds tighteningtechniques for non-convex MINLP. Optimization Methods and Software, 2009, 24, 597-634.	1.6	448
157	Optimally Running a Biomass-Based Energy Production Process. Energy Systems, 2009, , 221-232.	0.5	2
158	Reformulations in Mathematical Programming: A Computational Approach. Studies in Computational Intelligence, 2009, , 153-234.	0.7	42
159	Optimal running and planning of a biomass-based energy production process. Energy Policy, 2008, 36, 2430-2438.	4.2	45
160	A Branchâ€andâ€Prune algorithm for the Molecular Distance Geometry Problem. International Transactions in Operational Research, 2008, 15, 1-17.	1.8	108
161	Spherical cuts for integer programming problems. International Transactions in Operational Research, 2008, 15, 283-294.	1.8	4
162	Shortest paths on dynamic graphs. International Transactions in Operational Research, 2008, 15, 551-563.	1.8	19

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163	Bidirectional A  â^—  Search for Time-Dependent Fast Paths. , 2008, , 334-346.		64
164	Automatic Generation of Symmetry-Breaking Constraints. Lecture Notes in Computer Science, 2008, , 328-338.	1.0	13
165	Mathematical Programming Formulations for the Bottleneck Hyperplane Clustering Problem. Communications in Computer and Information Science, 2008, , 87-96.	0.4	5
166	Fast Computation of Point-to-Point Paths on Time-Dependent Road Networks. Lecture Notes in Computer Science, 2008, , 225-234.	1.0	2
167	Solving Hartree-Fock systems with global optimization methods. Europhysics Letters, 2007, 77, 50006.	0.7	5
168	New formulations for the Kissing Number Problem. Discrete Applied Mathematics, 2007, 155, 1837-1841.	0.5	19
169	Compact linearization for binary quadratic problems. 4or, 2007, 5, 231-245.	1.0	35
170	Writing Global Optimization Software., 2006,, 211-262.		43
171	An Exact Reformulation Algorithm for Large Nonconvex NLPs Involving Bilinear Terms. Journal of Global Optimization, 2006, 36, 161-189.	1.1	100
172	Computational Experience with the Molecular Distance Geometry Problem. , 2006, , 213-225.		24
173	Comparison of deterministic and stochastic approaches to global optimization. International Transactions in Operational Research, 2005, 12, 263-285.	1.8	68
174	Linearity Embedded in Nonconvex Programs. Journal of Global Optimization, 2005, 33, 157-196.	1.1	19
175	Mathematical models and a constructive heuristic for finding minimum fundamental cycle bases. Yugoslav Journal of Operations Research, 2005, 15, 15-24.	0.5	5
176	Reduction constraints for the global optimization of NLPs. International Transactions in Operational Research, 2004, 11, 33-41.	1.8	19
177	Reformulation and convex relaxation techniques for global optimization. 4or, 2004, 2, 255-258.	1.0	31
178	Algorithms for finding minimum fundamental cycle bases in graphs. Electronic Notes in Discrete Mathematics, 2004, 17, 29-33.	0.4	2
179	The Kissing Number Problem: A New Result from Global Optimization. Electronic Notes in Discrete Mathematics, 2004, 17, 203-207.	0.4	2
180	Efficient Edge-Swapping Heuristics for Finding Minimum Fundamental Cycle Bases. Lecture Notes in Computer Science, 2004, , 14-29.	1.0	5

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181	On a class of nonconvex problems where all local minima are global. Publications De L'Institut Mathematique, 2004, 76, 101-109.	0.3	6
182	Convex Envelopes of Monomials of Odd Degree. Journal of Global Optimization, 2003, 25, 157-168.	1.1	58
183	Comparison of Convex Relaxations for Monomials of Odd Degree. Series on Computers and Operations Research, 2003, , 165-174.	0.2	2
184	Structure of the Invertible CA Transformations Group. Journal of Computer and System Sciences, 1999, 59, 521-536.	0.9	4
185	Maximum feasible subsystems of distance geometry constraints. Journal of Global Optimization, 0, , 1.	1.1	0
186	MD-jeep: a New Release for Discretizable Distance Geometry Problems with Interval Data., 0,,.		3