

Matthias Ehrgott

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

88

papers

3,233

citations

29

h-index

55

g-index

92

ext. papers

3,606

ext. citations

2.5

avg, IF

5.62

L-index

#	Paper	IF	Citations
88	A survey and annotated bibliography of multiobjective combinatorial optimization. <i>OR Spectrum</i> , 2000 , 22, 425-460	1.9	467
87	An MCDM approach to portfolio optimization. <i>European Journal of Operational Research</i> , 2004 , 155, 752-770	3.70	210
86	Railway track allocation: models and methods. <i>OR Spectrum</i> , 2011 , 33, 843-883	1.9	163
85	Minmax robustness for multi-objective optimization problems. <i>European Journal of Operational Research</i> , 2014 , 239, 17-31	5.6	155
84	Constructing robust crew schedules with bicriteria optimization. <i>Journal of Multi-Criteria Decision Analysis</i> , 2002 , 11, 139-150	1.9	132
83	A comparison of solution strategies for biobjective shortest path problems. <i>Computers and Operations Research</i> , 2009 , 36, 1299-1331	4.6	125
82	Approximative solution methods for multiobjective combinatorial optimization. <i>Top</i> , 2004 , 12, 1-63	1.3	120
81	A discussion of scalarization techniques for multiple objective integer programming. <i>Annals of Operations Research</i> , 2006 , 147, 343-360	3.2	108
80	Mutiobjective Programming 2005 , 667-708		88
79	Computation of ideal and Nadir values and implications for their use in MCDM methods. <i>European Journal of Operational Research</i> , 2003 , 151, 119-139	5.6	84
78	An iterative approach to robust and integrated aircraft routing and crew scheduling. <i>Computers and Operations Research</i> , 2010 , 37, 833-844	4.6	82
77	Two phase algorithms for the bi-objective assignment problem. <i>European Journal of Operational Research</i> , 2008 , 185, 509-533	5.6	75
76	Bound sets for biobjective combinatorial optimization problems. <i>Computers and Operations Research</i> , 2007 , 34, 2674-2694	4.6	72
75	A two phase method for multi-objective integer programming and its application to the assignment problem with three objectives. <i>Discrete Optimization</i> , 2010 , 7, 149-165	1	64
74	Decomposition of integer matrices and multileaf collimator sequencing. <i>Discrete Applied Mathematics</i> , 2005 , 152, 6-34	1	58
73	Mathematical optimization in intensity modulated radiation therapy. <i>Annals of Operations Research</i> , 2010 , 175, 309-365	3.2	56
72	A bi-objective user equilibrium model of travel time reliability in a road network. <i>Transportation Research Part B: Methodological</i> , 2014 , 66, 4-15	7.2	55

71	An approximation algorithm for convex multi-objective programming problems. <i>Journal of Global Optimization</i> , 2011 , 50, 397-416	1.5	49
70	A Recursive Algorithm for Finding All Nondominated Extreme Points in the Outcome Set of a Multiobjective Integer Programme. <i>INFORMS Journal on Computing</i> , 2010 , 22, 371-386	2.4	47
69	Approximately solving multiobjective linear programmes in objective space and an application in radiotherapy treatment planning. <i>Mathematical Methods of Operations Research</i> , 2008 , 68, 257-276	1	47
68	Mathematical optimization in intensity modulated radiation therapy. <i>4or</i> , 2008 , 6, 199-262	1.4	46
67	A bi-objective cyclist route choice model. <i>Transportation Research, Part A: Policy and Practice</i> , 2012 , 46, 652-663	3.7	45
66	A dual variant of Benson's outer approximation algorithm for multiple objective linear programming. <i>Journal of Global Optimization</i> , 2012 , 52, 757-778	1.5	44
65	A set packing inspired method for real-time junction train routing. <i>Computers and Operations Research</i> , 2013 , 40, 713-724	4.6	39
64	A framework for and empirical study of algorithms for traffic assignment. <i>Computers and Operations Research</i> , 2015 , 54, 90-107	4.6	34
63	Routing Trains Through Railway Junctions: A New Set-Packing Approach. <i>Transportation Science</i> , 2011 , 45, 228-245	4.4	34
62	Optimisation of beam directions in intensity modulated radiation therapy planning. <i>OR Spectrum</i> , 2003 , 25, 251-264	1.9	34
61	A two-phase algorithm for the biobjective integer minimum cost flow problem. <i>Computers and Operations Research</i> , 2009 , 36, 1945-1954	4.6	32
60	A Bilevel Multi-objective Road Pricing Model for Economic, Environmental and Health Sustainability. <i>Transportation Research Procedia</i> , 2014 , 3, 393-402	2.4	31
59	Uncertain Data Envelopment Analysis. <i>European Journal of Operational Research</i> , 2018 , 268, 231-242	5.6	28
58	Identification of mechanical properties of heterogeneous soft bodies using gravity loading. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2011 , 27, 391-407	2.6	28
57	Hybrid Metaheuristics for Multi-objective Combinatorial Optimization. <i>Studies in Computational Intelligence</i> , 2008 , 221-259	0.8	28
56	Integer programming methods for large-scale practical classroom assignment problems. <i>Computers and Operations Research</i> , 2015 , 53, 42-53	4.6	27
55	An exact method for the double TSP with multiple stacks. <i>International Transactions in Operational Research</i> , 2010 , 17, 637-652	2.9	25
54	Multiobjective Optimization. <i>AI Magazine</i> , 2009 , 29, 47	6.1	25

53	Approximating the nondominated set of an MOLP by approximately solving its dual problem. <i>Mathematical Methods of Operations Research</i> , 2008 , 68, 469-492	1	23
52	On the number of criteria needed to decide Pareto optimality. <i>Mathematical Methods of Operations Research</i> , 2002 , 55, 329-345	1	21
51	Modelling route choice behaviour in a tolled road network with a time surplus maximisation bi-objective user equilibrium model. <i>Transportation Research Part B: Methodological</i> , 2013 , 57, 342-360	7.2	20
50	A comparison of stochastic programming and bi-objective optimisation approaches to robust airline crew scheduling. <i>OR Spectrum</i> , 2011 , 33, 49-75	1.9	20
49	Real-World Applications of Multiobjective Optimization. <i>Lecture Notes in Computer Science</i> , 2008 , 285-327	9	20
48	Continuous Multiobjective Programming. <i>Profiles in Operations Research</i> , 2016 , 739-815	1	18
47	Integer programming for minimal perturbation problems in university course timetabling. <i>Annals of Operations Research</i> , 2017 , 252, 283-304	3.2	17
46	Solving multi-objective traffic assignment. <i>Annals of Operations Research</i> , 2014 , 222, 483-516	3.2	17
45	A matheuristic approach to solve the multiobjective beam angle optimization problem in intensity-modulated radiation therapy. <i>International Transactions in Operational Research</i> , 2018 , 25, 243-268	2.8	16
44	Exact Methods for Multi-Objective Combinatorial Optimisation. <i>Profiles in Operations Research</i> , 2016 , 817-850	1	16
43	The biobjective integer minimum cost flow problem: the correctness of Sedeš-Noda and González-Martín's algorithm. <i>Computers and Operations Research</i> , 2006 , 33, 1459-1463	4.6	16
42	Discrete representation of non-dominated sets in multi-objective linear programming. <i>European Journal of Operational Research</i> , 2016 , 255, 687-698	5.6	16
41	Interactive decision support in radiation therapy treatment planning. <i>OR Spectrum</i> , 2008 , 30, 311-329	1.9	15
40	Multiobjective Programming and Multiattribute Utility Functions in Portfolio Optimization. <i>Infor</i> , 2009 , 47, 31-42	0.5	14
39	Pareto local search algorithms for the multi-objective beam angle optimisation problem. <i>Journal of Heuristics</i> , 2018 , 24, 205-238	1.9	13
38	A bi-objective column generation algorithm for the multi-commodity minimum cost flow problem. <i>European Journal of Operational Research</i> , 2015 , 244, 369-378	5.6	13
37	Primal and dual multi-objective linear programming algorithms for linear multiplicative programmes. <i>Optimization</i> , 2016 , 65, 415-431	1.2	11
36	Output-sensitive complexity of multiobjective combinatorial optimization. <i>Journal of Multi-Criteria Decision Analysis</i> , 2017 , 24, 25-36	1.9	11

35	An objective space cut and bound algorithm for convex multiplicative programmes. <i>Journal of Global Optimization</i> , 2014 , 58, 711-728	1.5	11
34	Navigation in multiobjective optimization methods. <i>Journal of Multi-Criteria Decision Analysis</i> , 2017 , 24, 57-70	1.9	11
33	Tolling Analysis with Bi-objective Traffic Assignment. <i>Lecture Notes in Economics and Mathematical Systems</i> , 2010 , 117-129	0.4	11
32	On multi-objective stochastic user equilibrium. <i>Transportation Research Part B: Methodological</i> , 2015 , 81, 704-717	7.2	10
31	Multi-objective optimisation of positively homogeneous functions and an application in radiation therapy. <i>Operations Research Letters</i> , 2014 , 42, 268-272	1	10
30	Quality assessment for VMAT prostate radiotherapy planning based on data envelopment analysis. <i>Physics in Medicine and Biology</i> , 2013 , 58, 5753-69	3.8	10
29	Saddle Points and Pareto Points in Multiple Objective Programming. <i>Journal of Global Optimization</i> , 2005 , 32, 11-33	1.5	9
28	The Method of Elastic Constraints for Multiobjective Combinatorial Optimization and its Application in Airline Crew Scheduling 2003 , 117-122		8
27	Supporting healthy route choice for commuter cyclists: The trade-off between travel time and pollutant dose. <i>Operations Research for Health Care</i> , 2018 , 19, 156-164	1.8	8
26	Primal and dual algorithms for optimization over the efficient set. <i>Optimization</i> , 2018 , 67, 1661-1686	1.2	8
25	Decomposition of matrices and static multileaf collimators: a survey 2008 , 25-46		8
24	On Vector Equilibria, Vector Optimization and Vector Variational Inequalities. <i>Journal of Multi-Criteria Decision Analysis</i> , 2011 , 18, 39-54	1.9	7
23	A primaldual simplex algorithm for bi-objective network flow problems. <i>4or</i> , 2009 , 7, 255-273	1.4	6
22	Time-adaptive and history-adaptive multicriterion routing in stochastic, time-dependent networks. <i>Operations Research Letters</i> , 2009 , 37, 201-205	1	6
21	Finding Representative Nondominated Points in Multiobjective Linear Programming 2007 ,		6
20	Multi-objective Approaches to the Unit Crewing Problem in Airline Crew Scheduling. <i>Journal of Multi-Criteria Decision Analysis</i> , 2014 , 21, 257-277	1.9	5
19	Integrating column generation in a method to compute a discrete representation of the non-dominated set of multi-objective linear programmes. <i>4or</i> , 2017 , 15, 331-357	1.4	4
18	Bi-objective Branch-and-Cut Algorithms Based on LP Relaxation and Bound Sets. <i>INFORMS Journal on Computing</i> , 2019 , 31, 790-804	2.4	4

17	A multiobjective optimization approach to compute the efficient frontier in data envelopment analysis. <i>Journal of Multi-Criteria Decision Analysis</i> , 2019 , 26, 187-198	1.9	4
16	Considerations for using data envelopment analysis for the assessment of radiotherapy treatment plan quality. <i>International Journal of Health Care Quality Assurance</i> , 2017 , 30, 703-716	1.3	4
15	On the generality of the greedy algorithm for solving matroid base problems. <i>Discrete Applied Mathematics</i> , 2015 , 195, 114-128	1	3
14	Multiobjective navigation of external radiotherapy plans based on clinical criteria. <i>Journal of Multi-Criteria Decision Analysis</i> , 2018 , 25, 31-41	1.9	3
13	A three-objective user equilibrium model: Time surplus maximisation under uncertainty. <i>Journal of Multi-Criteria Decision Analysis</i> , 2018 , 25, 3-15	1.9	3
12	Computational Results for Four Exact Methods to Solve the Three-Objective Assignment Problem. <i>Lecture Notes in Economics and Mathematical Systems</i> , 2009 , 79-88	0.4	3
11	On Multi-objective Stochastic User Equilibrium. <i>Transportation Research Procedia</i> , 2015 , 7, 96-109	2.4	2
10	Evaluating the Quality of Radiotherapy Treatment Plans for Prostate Cancer. <i>Profiles in Operations Research</i> , 2019 , 41-66	1	2
9	Bi-Objective Network Equilibrium, Traffic Assignment and Road Pricing. <i>Operations Research Proceedings: Papers of the Annual Meeting = Vorträge Der Jahrestagung / DGOR</i> , 2014 , 563-568	0.1	2
8	Numerical stability of path-based algorithms for traffic assignment. <i>Optimization Methods and Software</i> , 2016 , 31, 53-67	1.3	2
7	Bi-objective optimisation over a set of convex sub-problems. <i>Annals of Operations Research</i> , 1	3.2	2
6	An approximation algorithm for convex multiplicative programming problems 2011 ,		1
5	Multiobjective (Combinatorial) Optimisation Some Thoughts on Applications. <i>Lecture Notes in Economics and Mathematical Systems</i> , 2009 , 267-282	0.4	1
4	Minimizing the number of apertures in multileaf collimator sequencing with field splitting. <i>Discrete Applied Mathematics</i> , 2018 , 250, 87-103	1	1
3	Integrating Data Envelopment Analysis into radiotherapy treatment planning for head and neck cancer patients. <i>European Journal of Operational Research</i> , 2022 , 296, 289-303	5.6	1
2	Evaluating the Quality of Radiation Therapy Treatment Plans Using Data Envelopment Analysis 2022 , 883-897		1
1	The Lexicographic Tolerable Robustness Concept for Uncertain Multi-Objective Optimization Problems: A Study on Water Resources Management. <i>Sustainability</i> , 2020 , 12, 7582	3.6	0