JosÃ© Rui Figueira

List of Publications by Year
in descending order

150 papers	7,407 citations	87888 38 h-index	62596 80 g-index
157 all docs	157 docs citations	157 times ranked	4526 citing authors

#	Article	IF	Citations
1	Determining the weights of criteria in the ELECTRE type methods with a revised Simos' procedure. European Journal of Operational Research, 2002, 139, 317-326.	5.7	485
2	An Overview of ELECTRE Methods and their Recent Extensions. Journal of Multi-Criteria Decision Analysis, 2013, 20, 61-85.	1.9	263
3	Electre Methods. , 2005, , 133-153.		217
4	Electre Tri-C: A multiple criteria sorting method based on characteristic reference actions. European Journal of Operational Research, 2010, 204, 565-580.	5.7	214
5	Using assignment examples to infer weights for ELECTRE TRI method: Some experimental results. European Journal of Operational Research, 2001, 130, 263-275.	5.7	200
6	An aggregation/disaggregation approach to obtain robust conclusions with ELECTRE TRI. European Journal of Operational Research, 2002, 138, 332-348.	5.7	200
7	Building a set of additive value functions representing a reference preorder and intensities of preference: GRIP method. European Journal of Operational Research, 2009, 195, 460-486.	5.7	193
8	Risk-based classification system of nanomaterials. Journal of Nanoparticle Research, 2009, 11, 757-766.	1.9	178
9	A survey on stochastic multicriteria acceptability analysis methods. Journal of Multi-Criteria Decision Analysis, 2008, 15, 1-14.	1.9	174
10	A multiple criteria sorting method where each category is characterized by several reference actions: The Electre Tri-nC method. European Journal of Operational Research, 2012, 217, 567-579.	5.7	159
11	Resolving inconsistencies among constraints on the parameters of an MCDA model. European Journal of Operational Research, 2003, 147, 72-93.	5.7	154
12	A stochastic method for robustness analysis in sorting problems. European Journal of Operational Research, 2009, 192, 236-242.	5.7	144
13	The SMAA-PROMETHEE method. European Journal of Operational Research, 2014, 239, 514-522.	5.7	142
14	Single row facility layout problem using a permutation-based genetic algorithm. European Journal of Operational Research, 2011, 213, 388-394.	5.7	125
15	ELECTRE methods with interaction between criteria: An extension of the concordance index. European Journal of Operational Research, 2009, 199, 478-495.	5.7	106
16	A robust ranking method extending ELECTRE III to hierarchy of interacting criteria, imprecise weights and stochastic analysis. Omega, 2017, 73, 1-17.	5.9	96
17	Discriminating thresholds as a tool to cope with imperfect knowledge in multiple criteria decision aiding: Theoretical results and practical issues. Omega, 2014, 43, 9-20.	5.9	90
18	A multicriteria outranking approach for modeling corporate credit ratings: An application of the Electre Tri-nC method. Omega, 2019, 82, 166-180.	5.9	88

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19	ELECTRE Methods. Profiles in Operations Research, 2016, , 155-185.	0.4	80
20	An interactive decision support system for an aggregate production planning model based on multiple criteria mixed integer linear programming. Omega, 2006, 34, 167-177.	5.9	79
21	ELECTRE Methods: Main Features and Recent Developments. Applied Optimization, 2010, , 51-89.	0.4	77
22	ELECTRE TRI-nB: A new multiple criteria ordinal classification method. European Journal of Operational Research, 2017, 263, 214-224.	5.7	72
23	Multiple criteria decision making for engineering. Omega, 2008, 36, 337-339.	5.9	71
24	Multiple criteria districting problems. Annals of Operations Research, 2007, 154, 69-92.	4.1	69
25	Solving bicriteria 0â€"1 knapsack problems using a labeling algorithm. Computers and Operations Research, 2003, 30, 1865-1886.	4.0	67
26	A parallel multiple reference point approach for multi-objective optimization. European Journal of Operational Research, 2010, 205, 390-400.	5.7	62
27	Modeling centrality measures in social network analysis using bi-criteria network flow optimization problems. European Journal of Operational Research, 2013, 226, 354-365.	5.7	62
28	Dealing with a multiple criteria environmental problem with interaction effects between criteria through an extension of the Electre III method. European Journal of Operational Research, 2015, 245, 837-850.	5.7	60
29	Dealing with inconsistent judgments in multiple criteria sorting models. 4or, 2006, 4, 145-158.	1.6	58
30	On the Choquet multiple criteria preference aggregation model: Theoretical and practical insights from a real-world application. European Journal of Operational Research, 2018, 271, 120-140.	5.7	56
31	A real-integer-discrete-coded particle swarm optimization for design problems. Applied Soft Computing Journal, 2011, 11, 3625-3633.	7.2	53
32	Robust multi-criteria sorting with the outranking preference model and characteristic profiles. Omega, 2015, 55, 126-140.	5.9	53
33	Multi-objective optimization in partitioning the healthcare system of Parana State in Brazil. Omega, 2015, 52, 53-64.	5.9	51
34	Robust Ordinal Regression. Profiles in Operations Research, 2010, , 241-283.	0.4	47
35	A realâ€"integerâ€"discrete-coded differential evolution. Applied Soft Computing Journal, 2013, 13, 3884-3893.	7.2	46
36	Hypervolume Subset Selection in Two Dimensions: Formulations and Algorithms. Evolutionary Computation, 2016, 24, 411-425.	3.0	45

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37	The quality of service: An overall performance assessment for water utilities. Omega, 2017, 69, 115-125.	5.9	43
38	Measuring the efficiency of the Portuguese public hospitals: A value modelled network data envelopment analysis with simulation. Expert Systems With Applications, 2021, 181, 115169.	7.6	42
39	A scatter search method for bi-criteria {0,1}-knapsack problems. European Journal of Operational Research, 2006, 169, 373-391.	5.7	40
40	Robustness analysis methodology for multi-objective combinatorial optimization problems and application to project selection. Omega, 2015, 52, 142-155.	5.9	39
41	Designing a municipal sustainable energy strategy using multi-criteria decision analysis. Journal of Cleaner Production, 2018, 176, 251-260.	9.3	39
42	Electre Tri-C, a multiple criteria decision aiding sorting model applied to assisted reproduction. International Journal of Medical Informatics, 2011, 80, 262-273.	3.3	37
43	Dynamic programming based algorithms for the discounted {0–1} knapsack problem. Applied Mathematics and Computation, 2012, 218, 6921-6933.	2.2	37
44	An interval extension of the outranking approach and its application to multiple-criteria ordinal classification. Omega, 2019, 84, 189-198.	5.9	37
45	A multicriteria outranking approach for ship collision risk assessment. Reliability Engineering and System Safety, 2021, 214, 107789.	8.9	37
46	Supplier classification in emerging economies using the ELECTRE TRI-nC method: A case study considering sustainability aspects. Journal of Cleaner Production, 2018, 201, 925-947.	9.3	34
47	Incorporating preference information in a range directional composite indicator: The case of Portuguese public hospitals. European Journal of Operational Research, 2021, 294, 633-650.	5.7	34
48	A Sorting Model for Group Decision Making: A Case Study of Water Losses in Brazil. Group Decision and Negotiation, 2014, 23, 937-960.	3.3	33
49	An application of the ELECTRE TRI–C method to characterize government performance in OECD countries. International Transactions in Operational Research, 2019, 26, 1935-1955.	2.7	32
50	An indirect elicitation method for the parameters of the ELECTRE TRI-nB model using genetic algorithms. Applied Soft Computing Journal, 2019, 77, 723-733.	7.2	30
51	Using a Choquet integral-based approach for incorporating decision-maker's preference judgments in a Data Envelopment Analysis model. European Journal of Operational Research, 2020, 284, 1016-1030.	5.7	30
52	A note on the paper, "Ranking irregularities when evaluating alternatives by using some ELECTRE methods", by Wang and Triantaphyllou, Omega (2008). Omega, 2009, 37, 731-733.	5.9	28
53	Multi-objective scheduling and a resource allocation problem in hospitals. Journal of Scheduling, 2012, 15, 513-535.	1.9	28
54	Dealing with interaction between bipolar multiple criteria preferences in PROMETHEE methods. Annals of Operations Research, 2014, 217, 137-164.	4.1	27

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55	Sustainable supply chain network design: An application to the wine industry in Southern Portugal. Journal of the Operational Research Society, 0, , 1-16.	3.4	27
56	Benchmarking in a multiple criteria performance context: An application and a conceptual framework. European Journal of Operational Research, 2008, 184, 244-254.	5.7	26
57	Algorithmic improvements on dynamic programming for the bi-objective {0,1} knapsack problem. Computational Optimization and Applications, 2013, 56, 97-111.	1.6	26
58	On finding representative non-dominated points for bi-objective integer network flow problems. Computers and Operations Research, 2014, 48, 1-10.	4.0	26
59	Finding non-dominated solutions in bi-objective integer network flow problems. Computers and Operations Research, 2009, 36, 2554-2564.	4.0	25
60	A Multiple Criteria Decision Analysis Model Based on ELECTRE TRI-C for Erosion Risk Assessment in Agricultural Areas. Environmental Modeling and Assessment, 2014, 19, 221-242.	2.2	25
61	Interactive Multiobjective Optimization Using a Set of Additive Value Functions. Lecture Notes in Computer Science, 2008, , 97-119.	1.3	24
62	The convergence of the World Health Organization Member States regarding the United Nations' Sustainable Development Goal 'Good health and well-being'. Omega, 2021, 104, 102495.	5.9	24
63	A Scatter Search Method for the Bi-Criteria Multi-dimensional {0,1}-Knapsack Problem using Surrogate Relaxation. Mathematical Modelling and Algorithms, 2004, 3, 183-208.	0.5	23
64	Interval-based extensions of two outranking methods for multi-criteria ordinal classification. Omega, 2020, 95, 102065.	5.9	23
65	Supporting public decision process in buildings energy retrofitting operations: The application of a Multiple Criteria Decision Aiding model to a case study in Southern Italy. Sustainable Cities and Society, 2020, 60, 102214.	10.4	23
66	Core problems in bi-criteria -knapsack problems. Computers and Operations Research, 2008, 35, 2292-2306.	4.0	22
67	Graph partitioning by multi-objective real-valued metaheuristics: A comparative study. Applied Soft Computing Journal, 2011, 11, 3976-3987.	7.2	22
68	Integrating partial optimization with scatter search for solving bi-criteria {0,1}-knapsack problems. European Journal of Operational Research, 2007, 177, 1656-1677.	5.7	21
69	Solving the bi-objective multi-dimensional knapsack problem exploiting the concept of core. Applied Mathematics and Computation, 2009, 215, 2502-2514.	2.2	21
70	Labeling algorithms for multiple objective integer knapsack problems. Computers and Operations Research, 2010, 37, 700-711.	4.0	21
71	An application of a multi-criteria approach to assessing the performance of Portugal's economic sectors. European Business Review, 2005, 17, 113-132.	3.4	20
72	CUT: A Multicriteria Approach for Concavifiable Preferences. Operations Research, 2014, 62, 633-642.	1.9	20

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73	Finding compromise solutions in project portfolio selection with multiple experts by inverse optimization. Computers and Operations Research, 2016, 66, 12-19.	4.0	19
74	A multiple criteria nominal classification method based on the concepts of similarity and dissimilarity. European Journal of Operational Research, 2018, 271, 193-209.	5.7	19
75	Spatial Aggregation and Compactness of Census Areas with a Multiobjective Genetic Algorithm: A Case Study in Canada. Environment and Planning B: Planning and Design, 2012, 39, 376-392.	1.7	18
76	Dynamic programming algorithms for the bi-objective integer knapsack problem. European Journal of Operational Research, 2014, 236, 85-99.	5.7	18
77	Are the Portuguese public hospitals sustainable? A triple bottom line hybrid data envelopment analysis approach. International Transactions in Operational Research, 2023, 30, 453-475.	2.7	18
78	A multi-objective approach with soft constraints for water supply and wastewater coverage improvements. European Journal of Operational Research, 2015, 246, 609-618.	5.7	17
79	An efficient algorithm for bi-objective combined heat and power production planning under the emission trading scheme. Energy Conversion and Management, 2014, 88, 525-534.	9.2	16
80	Some convergence-based M-ary cardinal metrics for comparing performances of multi-objective optimizers. Computers and Operations Research, 2012, 39, 1754-1762.	4.0	15
81	A two phase approach for the bi-objective non-convex combined heat and power production planning problem. European Journal of Operational Research, 2015, 245, 296-308.	5.7	15
82	Electre-Score: A first outranking based method for scoring actions. European Journal of Operational Research, 2022, 297, 986-1005.	5.7	14
83	On the computation of all supported efficient solutions in multi-objective integer network flow problems. European Journal of Operational Research, 2009, 199, 68-76.	5.7	13
84	A two state reduction based dynamic programming algorithm for the bi-objective 0â€"1 knapsack problem. Computers and Mathematics With Applications, 2011, 62, 2913-2930.	2.7	13
85	A reduction dynamic programming algorithm for the bi-objective integer knapsack problem. European Journal of Operational Research, 2013, 231, 299-313.	5.7	13
86	A multicriteria classification approach for assessing the current governance capacities on energy efficiency in the European Union. Energy Policy, 2021, 148, 111946.	8.8	13
87	Customers satisfaction in pediatric inpatient services: A multiple criteria satisfaction analysis. Socio-Economic Planning Sciences, 2021, 78, 101036.	5.0	13
88	Graph partitioning through a multi-objective evolutionary algorithm. , 2008, , .		12
89	Identifying preferred solutions to Multi-Objective Binary Optimisation problems, with an application to the Multi-Objective Knapsack Problem. Journal of Global Optimization, 2011, 49, 213-235.	1.8	12
90	Inverse multi-objective combinatorial optimization. Discrete Applied Mathematics, 2013, 161, 2764-2771.	0.9	12

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91	On the manipulability of the fuzzy social choice functions. Fuzzy Sets and Systems, 2008, 159, 177-184.	2.7	11
92	Using the idea of expanded core for the exact solution of bi-objective multi-dimensional knapsack problems. Journal of Global Optimization, 2011, 49, 589-606.	1.8	11
93	The inverse $\{0, 1\}$ problem: Theory, algorithms and computational experiments. Discrete Optimization, 2013, 10, 181-192.	0.9	11
94	Optimal administrative geographies: An algorithmic approach. Socio-Economic Planning Sciences, 2013, 47, 247-257.	5.0	11
95	An improved version of a core based algorithm for the multi-objective multi-dimensional knapsack problem: A computational study and comparison with meta-heuristics. Applied Mathematics and Computation, 2015, 270, 25-43.	2.2	11
96	Easy to say they are Hard, but Hard to see they are Easy- Towards a Categorization of Tractable Multiobjective Combinatorial Optimization Problems. Journal of Multi-Criteria Decision Analysis, 2017, 24, 82-98.	1.9	11
97	Quality assessment of the Portuguese public hospitals: A multiple criteria approach. Omega, 2021, 105, 102505.	5.9	11
98	A robust hierarchical nominal multicriteria classification method based on similarity and dissimilarity. European Journal of Operational Research, 2020, 286, 986-1001.	5.7	11
99	On Local Search for Bi-objective Knapsack Problems. Evolutionary Computation, 2013, 21, 179-196.	3.0	10
100	A multi-objective genetic algorithm based approach for location of grain silos in Paraná State of Brazil. Computers and Industrial Engineering, 2017, 111, 381-390.	6.3	10
101	Assigning a house for refugees: an application of a multiple criteria nominal classification method. Operational Research, 2019, , 1.	2.0	9
102	Improving medical decision-making with a management science game theory approach to liver transplantation. Omega, 2020, 94, 102050.	5.9	9
103	Secure multi-cloud virtual network embedding. Computer Communications, 2020, 155, 252-265.	5.1	9
104	A Multi-Criteria Decision Analysis Approach for Prioritization of Performance Metrics. NATO Science for Peace and Security Series C: Environmental Security, 2007, , 261-298.	0.2	9
105	An evolutionary approach for inferring the model parameters of the hierarchical Electre III method. Information Sciences, 2022, 607, 705-726.	6.9	9
106	Computational performance of basic state reduction based dynamic programming algorithms for bi-objective 0–1 knapsack problems. Computers and Mathematics With Applications, 2012, 63, 1462-1480.	2.7	8
107	New conditions for testing necessarily/possibly efficiency of non-degenerate basic solutions based on the tolerance approach. European Journal of Operational Research, 2020, 283, 341-355.	5.7	8
108	Using criticality categories to evaluate water distribution networks and improve maintenance management. Sustainable Cities and Society, 2020, 61, 102308.	10.4	8

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109	A Multiple Criteria Approach Defining Cultural Adaptive Reuse of Abandoned Buildings. Profiles in Operations Research, 2019, , 193-220.	0.4	8
110	Comparing two territory partitions in districting problems: Indices and practical issues. Socio-Economic Planning Sciences, 2009, 43, 72-88.	5.0	6
111	A primal–dual simplex algorithm for bi-objective network flow problems. 4or, 2009, 7, 255-273.	1.6	6
112	Solving scalarized multi‐objective network flow problems using an interior point method. International Transactions in Operational Research, 2010, 17, 607-636.	2.7	6
113	Shortest paths with ordinal weights. European Journal of Operational Research, 2020, 280, 1160-1170.	5.7	6
114	On the calculation of stability radius for multi-objective combinatorial optimization problems by inverse optimization. 4or, 2012, 10, 379-389.	1.6	5
115	Multicriteria 0-1 knapsack problems with k-min objectives. Computers and Operations Research, 2013, 40, 1481-1496.	4.0	5
116	A robust ranking of maritime connectivity: revisiting UNCTAD's liner shipping connectivity index (LSCI). Maritime Economics and Logistics, 2021, 23, 424-443.	4.0	5
117	The binary knapsack problem with qualitative levels. European Journal of Operational Research, 2021, 289, 508-514.	5.7	5
118	Non-dominated sorting genetic-based algorithm for exploiting a large-sized fuzzy outranking relation. European Journal of Operational Research, 2021, 293, 615-631.	5.7	5
119	Exact hypervolume subset selection through incremental computations. Computers and Operations Research, 2021, 136, 105471.	4.0	5
120	An Ordinal Regression Method for Multicriteria Analysis of Customer Satisfaction. Lecture Notes in Economics and Mathematical Systems, 2010, , 167-176.	0.3	5
121	A Real-Integer-Discrete-Coded Differential Evolution Algorithm: A Preliminary Study. Lecture Notes in Computer Science, 2010, , 35-46.	1.3	5
122	Bi-dimensional knapsack problems with one soft constraint. Computers and Operations Research, 2017, 78, 15-26.	4.0	4
123	Finding representations for an unconstrained bi-objective combinatorial optimization problem. Optimization Letters, 2018, 12, 321-334.	1.6	4
124	Compressed data structures for bi-objective {0,1}-knapsack problems. Computers and Operations Research, 2018, 89, 82-93.	4.0	4
125	Multiple Criteria Decision Support. , 2021, , 893-920.		4
126	Interactive Multicriteria Methods in Portfolio Decision Analysis. Profiles in Operations Research, 2011, , 107-130.	0.4	4

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127	A theoretical look at ordinal classification methods based on comparing actions with limiting boundaries between adjacent classes. Annals of Operations Research, 0, , 1.	4.1	4
128	A priori landscape analysis in guiding interactive multi-objective metaheuristics. , 2008, , .		3
129	On the orness of Bonferroni mean and its variants. International Journal of Intelligent Systems, 2019, 34, 1889-1919.	5.7	3
130	Using a segmenting description approach in multiple criteria decision aiding. Expert Systems With Applications, 2020, 147, 113186.	7.6	3
131	Computing and Selecting Îµ-Efficient Solutions of {0, 1}-Knapsack Problems. Lecture Notes in Economics and Mathematical Systems, 2010, , 379-389.	0.3	3
132	Handling imperfect information in multiple criteria decision-making through a comprehensive interval outranking approach. Socio-Economic Planning Sciences, 2022, 82, 101254.	5.0	3
133	A generalized approach to ordinal classification based on the comparison of actions with either limiting or characteristic profiles. European Journal of Operational Research, 2023, 305, 1309-1322.	5.7	3
134	Managerial multiple objective optimization. Annals of Operations Research, 2018, 267, 1-2.	4.1	2
135	Multiobjective Irrigation Model: Alqueva River Basin Application. Journal of Irrigation and Drainage Engineering - ASCE, 2019, 145, 05019006.	1.0	2
136	Decision Analysis Tools for Safety, Security, and Sustainability Of Ports and Harbors. NATO Science for Peace and Security Series C: Environmental Security, 2007, , 245-260.	0.2	2
137	Strategic manipulation and regular decomposition of fuzzy preference relations. , 2008, , .		1
138	A characterization of fuzzy strategy-proof social choice functions. , 2013, , .		1
139	On the multicriteria allocation problem. Annals of Operations Research, 2014, 222, 535-549.	4.1	1
140	A special issue on multi-criteria decision aiding. Decisions in Economics and Finance, 2020, 43, 557-558.	1.8	1
141	Finding multi-objective supported efficient spanning trees. Computational Optimization and Applications, 2021, 78, 491-528.	1.6	1
142	Site Selection for a University Kindergarten in Madrid. , 2015, , 201-214.		1
143	Decision space robustness for multi-objective integer linear programming. Annals of Operations Research, 2022, 319, 1769-1791.	4.1	1
144	Guest Editorial from Volume 14, Issues 4â€"6. Journal of Multi-Criteria Decision Analysis, 2008, 15, 65-66.	1.9	0

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145	Interaction of Criteria and Robust Ordinal Regression in Bi-polar PROMETHEE Methods. Communications in Computer and Information Science, 2012, , 469-479.	0.5	0
146	Generalized manipulability of fuzzy social choice functions. Journal of Intelligent and Fuzzy Systems, 2014, 26, 253-257.	1.4	0
147	Supporting the Use of Decision Aiding Methods by Non-specialists. Lecture Notes in Business Information Processing, 2019, , 81-94.	1.0	0
148	Interpolation by lattice polynomial functions: A polynomial time algorithm. Fuzzy Sets and Systems, 2019, 368, 101-118.	2.7	0
149	Sparsifying parity-check matrices. Applied Soft Computing Journal, 2020, 96, 106601.	7.2	0
150	A multiple criteria socio-technical approach for the Portuguese Army Special Forces recruitment. 4or, 0, , 1.	1.6	0