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	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
2	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
3	Electre-Score: A first outranking based method for scoring actions. European Journal of Operational Research, 2022, 297, 986-1005.	5.7	14
4	Handling imperfect information in multiple criteria decision-making through a comprehensive interval outranking approach. Socio-Economic Planning Sciences, 2022, 82, 101254.	5.0	3
5	Decision space robustness for multi-objective integer linear programming. Annals of Operations Research, 2022, 319, 1769-1791.	4.1	1
6	An evolutionary approach for inferring the model parameters of the hierarchical Electre III method. Information Sciences, 2022, 607, 705-726.	6.9	9
7	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
8	Customers satisfaction in pediatric inpatient services: A multiple criteria satisfaction analysis. Socio-Economic Planning Sciences, 2021, 78, 101036.	5.0	13
9	A robust ranking of maritime connectivity: revisiting UNCTADâ€™s liner shipping connectivity index (LSCI). Maritime Economics and Logistics, 2021, 23, 424-443.	4.0	5
10	The binary knapsack problem with qualitative levels. European Journal of Operational Research, 2021, 289, 508-514.	5.7	5
11	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
12	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
13	The convergence of the World Health Organization Member States regarding the United Nationsâ€™ Sustainable Development Goal â€˜Good health and well-beingâ€™. Omega, 2021, 104, 102495.	5.9	24
14	A multicriteria outranking approach for ship collision risk assessment. Reliability Engineering and System Safety, 2021, 214, 107789.	8.9	37
15	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
16	Quality assessment of the Portuguese public hospitals: A multiple criteria approach. Omega, 2021, 105, 102505.	5.9	11
17	Exact hypervolume subset selection through incremental computations. Computers and Operations Research, 2021, 136, 105471.	4.0	5
18	Finding multi-objective supported efficient spanning trees. Computational Optimization and Applications, 2021, 78, 491-528.	1.6	1

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19	Multiple Criteria Decision Support. , 2021, , 893-920.		4
20	Interval-based extensions of two outranking methods for multi-criteria ordinal classification. Omega, 2020, 95, 102065.	5.9	23
21	Improving medical decision-making with a management science game theory approach to liver transplantation. Omega, 2020, 94, 102050.	5.9	9
22	Shortest paths with ordinal weights. European Journal of Operational Research, 2020, 280, 1160-1170.	5.7	6
23	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
24	Sparsifying parity-check matrices. Applied Soft Computing Journal, 2020, 96, 106601.	7.2	0
25	A special issue on multi-criteria decision aiding. Decisions in Economics and Finance, 2020, 43, 557-558.	1.8	1
26	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
27	Using criticality categories to evaluate water distribution networks and improve maintenance management. Sustainable Cities and Society, 2020, 61, 102308.	10.4	8
28	Using a segmenting description approach in multiple criteria decision aiding. Expert Systems With Applications, 2020, 147, 113186.	7.6	3
29	Using a Choquet integral-based approach for incorporating decision-makerâ€™s preference judgments in a Data Envelopment Analysis model. European Journal of Operational Research, 2020, 284, 1016-1030.	5.7	30
30	Secure multi-cloud virtual network embedding. Computer Communications, 2020, 155, 252-265.	5.1	9
31	A robust hierarchical nominal multicriteria classification method based on similarity and dissimilarity. European Journal of Operational Research, 2020, 286, 986-1001.	5.7	11
32	An interval extension of the outranking approach and its application to multiple-criteria ordinal classification. Omega, 2019, 84, 189-198.	5.9	37
33	Assigning a house for refugees: an application of a multiple criteria nominal classification method. Operational Research, 2019, , 1.	2.0	9
34	Supporting the Use of Decision Aiding Methods by Non-specialists. Lecture Notes in Business Information Processing, 2019, , 81-94.	1.0	0
35	On the orness of Bonferroni mean and its variants. International Journal of Intelligent Systems, 2019, 34, 1889-1919.	5.7	3
36	Multiobjective Irrigation Model: Alqueva River Basin Application. Journal of Irrigation and Drainage Engineering - ASCE, 2019, 145, 05019006.	1.0	2

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37	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
38	Interpolation by lattice polynomial functions: A polynomial time algorithm. Fuzzy Sets and Systems, 2019, 368, 101-118.	2.7	0
39	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
40	An application of the ELECTRE TRIâ€€ method to characterize government performance in OECD countries. International Transactions in Operational Research, 2019, 26, 1935-1955.	2.7	32
41	A Multiple Criteria Approach Defining Cultural Adaptive Reuse of Abandoned Buildings. Profiles in Operations Research, 2019, , 193-220.	0.4	8
42	Designing a municipal sustainable energy strategy using multi-criteria decision analysis. Journal of Cleaner Production, 2018, 176, 251-260.	9.3	39
43	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
44	Finding representations for an unconstrained bi-objective combinatorial optimization problem. Optimization Letters, 2018, 12, 321-334.	1.6	4
45	Compressed data structures for bi-objective {0,1}-knapsack problems. Computers and Operations Research, 2018, 89, 82-93.	4.0	4
46	Managerial multiple objective optimization. Annals of Operations Research, 2018, 267, 1-2.	4.1	2
47	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
48	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
49	ELECTRE TRI-nB: A new multiple criteria ordinal classification method. European Journal of Operational Research, 2017, 263, 214-224.	5.7	72
50	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
51	A multi-objective genetic algorithm based approach for location of grain silos in ParanÃ¡ State of Brazil. Computers and Industrial Engineering, 2017, 111, 381-390.	6.3	10
52	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
53	Bi-dimensional knapsack problems with one soft constraint. Computers and Operations Research, 2017, 78, 15-26.	4.0	4
54	The quality of service: An overall performance assessment for water utilities. Omega, 2017, 69, 115-125.	5.9	43

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55	Hypervolume Subset Selection in Two Dimensions: Formulations and Algorithms. Evolutionary Computation, 2016, 24, 411-425.	3.0	45
56	Finding compromise solutions in project portfolio selection with multiple experts by inverse optimization. Computers and Operations Research, 2016, 66, 12-19.	4.0	19
57	ELECTRE Methods. Profiles in Operations Research, 2016, , 155-185.	0.4	80
58	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
59	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
60	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
61	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
62	Multi-objective optimization in partitioning the healthcare system of Parana State in Brazil. Omega, 2015, 52, 53-64.	5.9	51
63	Robustness analysis methodology for multi-objective combinatorial optimization problems and application to project selection. Omega, 2015, 52, 142-155.	5.9	39
64	Robust multi-criteria sorting with the outranking preference model and characteristic profiles. Omega, 2015, 55, 126-140.	5.9	53
65	Site Selection for a University Kindergarten in Madrid. , 2015, , 201-214.		1
66	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
67	CUT: A Multicriteria Approach for Concavifiable Preferences. Operations Research, 2014, 62, 633-642.	1.9	20
68	Generalized manipulability of fuzzy social choice functions. Journal of Intelligent and Fuzzy Systems, 2014, 26, 253-257.	1.4	0
69	On finding representative non-dominated points for bi-objective integer network flow problems. Computers and Operations Research, 2014, 48, 1-10.	4.0	26
70	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
71	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
72	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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73	Dynamic programming algorithms for the bi-objective integer knapsack problem. European Journal of Operational Research, 2014, 236, 85-99.	5.7	18
74	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
75	The SMAA-PROMETHEE method. European Journal of Operational Research, 2014, 239, 514-522.	5.7	142
76	On the multicriteria allocation problem. Annals of Operations Research, 2014, 222, 535-549.	4.1	1
77	Algorithmic improvements on dynamic programming for the bi-objective {0,1} knapsack problem. Computational Optimization and Applications, 2013, 56, 97-111.	1.6	26
78	The inverse<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si43.gif" display="inline" overflow="scroll"><mml:mrow><mml:mo>{</mml:mo><mml:mn>0</mml:mn><mml:mo>,</mml:mo><mml:mn>1</mml:mn><mml:mo> problem: Theory, algorithms and computational experiments. Discrete Optimization, 2013, 10, 181-192.	0.9	11
79	A characterization of fuzzy strategy-proof social choice functions. , 2013, , .		1
80	Optimal administrative geographies: An algorithmic approach. Socio-Economic Planning Sciences, 2013, 47, 247-257.	5.0	11
81	Multicriteria 0-1 knapsack problems with k-min objectives. Computers and Operations Research, 2013, 40, 1481-1496.	4.0	5
82	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
83	A realâ€“integerâ€“discrete-coded differential evolution. Applied Soft Computing Journal, 2013, 13, 3884-3893.	7.2	46
84	A reduction dynamic programming algorithm for the bi-objective integer knapsack problem. European Journal of Operational Research, 2013, 231, 299-313.	5.7	13
85	Inverse multi-objective combinatorial optimization. Discrete Applied Mathematics, 2013, 161, 2764-2771.	0.9	12
86	An Overview of ELECTRE Methods and their Recent Extensions. Journal of Multi-Criteria Decision Analysis, 2013, 20, 61-85.	1.9	263
87	On Local Search for Bi-objective Knapsack Problems. Evolutionary Computation, 2013, 21, 179-196.	3.0	10
88	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
89	On the calculation of stability radius for multi-objective combinatorial optimization problems by inverse optimization. 4or, 2012, 10, 379-389.	1.6	5
90	Multi-objective scheduling and a resource allocation problem in hospitals. Journal of Scheduling, 2012, 15, 513-535.	1.9	28

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91	Interaction of Criteria and Robust Ordinal Regression in Bi-polar PROMETHEE Methods. Communications in Computer and Information Science, 2012, , 469-479.	0.5	0
92	Computational performance of basic state reduction based dynamic programming algorithms for bi-objective 0â€“1 knapsack problems. Computers and Mathematics With Applications, 2012, 63, 1462-1480.	2.7	8
93	Dynamic programming based algorithms for the discounted {0â€“1} knapsack problem. Applied Mathematics and Computation, 2012, 218, 6921-6933.	2.2	37
94	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
95	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
96	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
97	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
98	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
99	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
100	A real-integer-discrete-coded particle swarm optimization for design problems. Applied Soft Computing Journal, 2011, 11, 3625-3633.	7.2	53
101	Single row facility layout problem using a permutation-based genetic algorithm. European Journal of Operational Research, 2011, 213, 388-394.	5.7	125
102	Graph partitioning by multi-objective real-valued metaheuristics: A comparative study. Applied Soft Computing Journal, 2011, 11, 3976-3987.	7.2	22
103	Interactive Multicriteria Methods in Portfolio Decision Analysis. Profiles in Operations Research, 2011, , 107-130.	0.4	4
104	A parallel multiple reference point approach for multi-objective optimization. European Journal of Operational Research, 2010, 205, 390-400.	5.7	62
105	Labeling algorithms for multiple objective integer knapsack problems. Computers and Operations Research, 2010, 37, 700-711.	4.0	21
106	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
107	Solving scalarized multiâ€objective network flow problems using an interior point method. International Transactions in Operational Research, 2010, 17, 607-636.	2.7	6
108	Robust Ordinal Regression. Profiles in Operations Research, 2010, , 241-283.	0.4	47

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109	ELECTRE Methods: Main Features and Recent Developments. Applied Optimization, 2010, , 51-89.	0.4	77
110	An Ordinal Regression Method for Multicriteria Analysis of Customer Satisfaction. Lecture Notes in Economics and Mathematical Systems, 2010, , 167-176.	0.3	5
111	Computing and Selecting Îµ-Efficient Solutions of {0, 1}-Knapsack Problems. Lecture Notes in Economics and Mathematical Systems, 2010, , 379-389.	0.3	3
112	A Real-Integer-Discrete-Coded Differential Evolution Algorithm: A Preliminary Study. Lecture Notes in Computer Science, 2010, , 35-46.	1.3	5
113	A note on the paper, â€œRanking irregularities when evaluating alternatives by using some ELECTRE methodsâ€, by Wang and Triantaphyllou, Omega (2008). Omega, 2009, 37, 731-733.	5.9	28
114	Comparing two territory partitions in districting problems: Indices and practical issues. Socio-Economic Planning Sciences, 2009, 43, 72-88.	5.0	6
115	A primalâ€“dual simplex algorithm for bi-objective network flow problems. 4or, 2009, 7, 255-273.	1.6	6
116	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
117	Risk-based classification system of nanomaterials. Journal of Nanoparticle Research, 2009, 11, 757-766.	1.9	178
118	A stochastic method for robustness analysis in sorting problems. European Journal of Operational Research, 2009, 192, 236-242.	5.7	144
119	Finding non-dominated solutions in bi-objective integer network flow problems. Computers and Operations Research, 2009, 36, 2554-2564.	4.0	25
120	Solving the bi-objective multi-dimensional knapsack problem exploiting the concept of core. Applied Mathematics and Computation, 2009, 215, 2502-2514.	2.2	21
121	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
122	ELECTRE methods with interaction between criteria: An extension of the concordance index. European Journal of Operational Research, 2009, 199, 478-495.	5.7	106
123	A survey on stochastic multicriteria acceptability analysis methods. Journal of Multi-Criteria Decision Analysis, 2008, 15, 1-14.	1.9	174
124	Guest Editorial from Volume 14, Issues 4â€“6. Journal of Multi-Criteria Decision Analysis, 2008, 15, 65-66.	1.9	0
125	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
126	Core problems in bi-criteria -knapsack problems. Computers and Operations Research, 2008, 35, 2292-2306.	4.0	22

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127	On the manipulability of the fuzzy social choice functions. Fuzzy Sets and Systems, 2008, 159, 177-184.	2.7	11
128	Multiple criteria decision making for engineering. Omega, 2008, 36, 337-339.	5.9	71
129	Interactive Multiobjective Optimization Using a Set of Additive Value Functions. Lecture Notes in Computer Science, 2008, , 97-119.	1.3	24
130	Graph partitioning through a multi-objective evolutionary algorithm. , 2008, , .		12
131	A priori landscape analysis in guiding interactive multi-objective metaheuristics. , 2008, , .		3
132	Strategic manipulation and regular decomposition of fuzzy preference relations. , 2008, , .		1
133	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
134	Multiple criteria districting problems. Annals of Operations Research, 2007, 154, 69-92.	4.1	69
135	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
136	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
137	A scatter search method for bi-criteria {0,1}-knapsack problems. European Journal of Operational Research, 2006, 169, 373-391.	5.7	40
138	Dealing with inconsistent judgments in multiple criteria sorting models. 4or, 2006, 4, 145-158.	1.6	58
139	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
140	An application of a multiâ€criteria approach to assessing the performance of Portugal's economic sectors. European Business Review, 2005, 17, 113-132.	3.4	20
141	Electre Methods. , 2005, , 133-153.		217
142	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
143	Solving bicriteria 0â€“1 knapsack problems using a labeling algorithm. Computers and Operations Research, 2003, 30, 1865-1886.	4.0	67
144	Resolving inconsistencies among constraints on the parameters of an MCDA model. European Journal of Operational Research, 2003, 147, 72-93.	5.7	154

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145	An aggregation/disaggregation approach to obtain robust conclusions with ELECTRE TRI. European Journal of Operational Research, 2002, 138, 332-348.	5.7	200
146	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
147	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
148	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
149	A multiple criteria socio-technical approach for the Portuguese Army Special Forces recruitment. 4or, 0, , 1.	1.6	0
150	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