Mario Vanhoucke

List of Publications by Year
in descending order

164 papers	5,914 citations	81434 41 h-index	107981 68 g-index
175 all docs	175 docs citations	175 times ranked	2680 citing authors

#	Article	IF	Citations
1	A multiproject scheduling and resource management model in projects construction. Engineering, Construction and Architectural Management, 2023, 30, 1578-1600.	1.8	3
2	A fuzzy project buffer management algorithm: a case study in the construction of a renewable project. International Journal of Construction Management, 2023, 23, 2134-2143.	2.2	5
3	A classification and new benchmark instances for the multi-skilled resource-constrained project scheduling problem. European Journal of Operational Research, 2023, 307, 1-19.	3.5	20
4	Various extensions in resource-constrained project scheduling with alternative subgraphs. International Journal of Production Research, 2022, 60, 3501-3520.	4.9	6
5	Using Earned Value Management and Schedule Risk Analysis with resource constraints for project control. European Journal of Operational Research, 2022, 297, 451-466.	3.5	16
6	The bilevel optimisation of a multi-agent project scheduling and staffing problem. European Journal of Operational Research, 2022, 296, 72-86.	3.5	7
7	New summary measures and datasets for the multi-project scheduling problem. European Journal of Operational Research, 2022, 299, 853-868.	3.5	10
8	A Theoretical Framework for Instance Complexity of the Resource-Constrained Project Scheduling Problem. Mathematics of Operations Research, 2022, 47, 3156-3183.	0.8	6
9	A reduction tree approach for the Discrete Time/Cost Trade-Off Problem. Computers and Operations Research, 2022, 143, 105750.	2.4	2
10	An efficient genetic programming approach to design priority rules for resource-constrained project scheduling problem. Expert Systems With Applications, 2022, 198, 116753.	4.4	19
11	Mathematical formulations for project scheduling problems with categorical and hierarchical skills. Computers and Industrial Engineering, 2022, 169, 108147.	3.4	11
12	Using Schedule Risk Analysis with resource constraints for project control. European Journal of Operational Research, 2021, 288, 736-752.	3.5	13
13	A new algorithm for resource-constrained project scheduling with breadth and depth of skills. European Journal of Operational Research, 2021, 292, 43-59.	3.5	33
14	Automatic detection of the best performing priority rule for the resource-constrained project scheduling problem. Expert Systems With Applications, 2021, 167, 114116.	4.4	21
15	Stability and accuracy of deterministic project duration forecasting methods in earned value management. Engineering, Construction and Architectural Management, 2021, , .	1.8	3
16	A column generation-based diving heuristic to solve the multi-project personnel staffing problem with calendar constraints and resource sharing. Computers and Operations Research, 2021, 128, 105163.	2.4	10
17	Finite inventory budgets in production capacity and safety stock placement under the guaranteed service approach. Computers and Operations Research, 2021, 131, 105266.	2.4	6
18	An analysis of network and resource indicators for resource-constrained project scheduling problem instances. Computers and Operations Research, 2021, 132, 105260.	2.4	7

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19	An analytical model for budget allocation in risk prevention and risk protection. Computers and Industrial Engineering, 2021, 161, 107657.	3.4	12
20	Practical application of reference class forecasting for cost and time estimations: Identifying the properties of similarity. European Journal of Operational Research, 2021, 295, 1161-1179.	3.5	14
21	A decomposed branch-and-price procedure for integrating demand planning in personnel staffing problems. European Journal of Operational Research, 2020, 280, 845-859.	3.5	10
22	Project schedule performance under general mode implementation disruptions. European Journal of Operational Research, 2020, 280, 295-311.	3.5	10
23	Multi-mode schedule optimisation for incentivised projects. Computers and Industrial Engineering, 2020, 142, 106321.	3.4	1
24	A project buffer and resource management model in energy sector; a case study in construction of a wind farm project. International Journal of Energy Sector Management, 2020, 14, 1123-1142.	1.2	11
25	Analysing the impact of alternative network structures on resource-constrained schedules: Artificial and empirical experiments. Computers and Industrial Engineering, 2020, 148, 106706.	3.4	5
26	Multimode time-cost-robustness trade-off project scheduling problem under uncertainty. Journal of Combinatorial Optimization, 2020, , 1.	0.8	3
27	Going to the core of hard resource-constrained project scheduling instances. Computers and Operations Research, 2020, 121, 104976.	2.4	18
28	Integrating Corrective Actions in Project Time Forecasting Using Exponential Smoothing. Journal of Management in Engineering - ASCE, 2020, 36, .	2.6	18
29	Optimizing production capacity and safety stocks in general acyclic supply chains. Computers and Operations Research, 2020, 120, 104938.	2.4	13
30	Resource-constrained multi-project scheduling: benchmark datasets and decoupled scheduling. Journal of Scheduling, 2020, 23, 301-325.	1.3	30
31	The impact of a limited budget on the corrective action taking process. European Journal of Operational Research, 2020, 286, 1070-1086.	3.5	9
32	Forecasting the Project Duration Average and Standard Deviation from Deterministic Schedule Information. Applied Sciences (Switzerland), 2020, 10, 654.	1.3	6
33	Mode generation rules to define activity flexibility for the integrated project staffing problem with discrete time/resource trade-offs. Annals of Operations Research, 2020, 292, 133-160.	2.6	3
34	Performance comparison of activity sensitivity metrics in schedule risk analysis. Automation in Construction, 2019, 106, 102906.	4.8	14
35	Strategies for project scheduling with alternative subgraphs under uncertainty: similar and dissimilar sets of schedules. European Journal of Operational Research, 2019, 279, 38-53.	3.5	16
36	Resource-constrained project scheduling with activity splitting and setup times. Computers and Operations Research, 2019, 109, 230-249.	2.4	20

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37	A Study of the Critical Chain Project Management Method Applied to a Multiproject System. Project Management Journal, 2019, 50, 322-334.	2.6	11
38	The impact of applying effort to reduce activity variability on the project time and cost performance. European Journal of Operational Research, 2019, 277, 442-453.	3.5	26
39	An agency perspective for multi-mode project scheduling with time/cost trade-offs. Computers and Operations Research, 2019, 105, 167-186.	2.4	12
40	Fitting activity distributions using human partitioning and statistical calibration. Computers and Industrial Engineering, 2019, 129, 126-135.	3.4	9
41	A reconfigurable model for implementation in the closing phase of a wind turbines project construction. Engineering, Construction and Architectural Management, 2019, 27, 502-524.	1.8	4
42	A Statistical Method for Estimating Activity Uncertainty Parameters to Improve Project Forecasting. Entropy, 2019, 21, 952.	1.1	9
43	Using real project schedule data to compare earned schedule and earned duration management project time forecasting capabilities. Automation in Construction, 2019, 99, 68-78.	4.8	43
44	Computing project makespan distributions: Markovian PERT networks revisited. Computers and Operations Research, 2019, 103, 123-133.	2.4	9
45	The impact of solution representations on heuristic net present value optimization in discrete time/cost trade-off project scheduling with multiple cash flow and payment models. Computers and Operations Research, 2019, 103, 184-197.	2.4	22
46	Tolerance limits for project control: An overview of different approaches. Computers and Industrial Engineering, 2019, 127, 467-479.	3.4	14
47	A heuristic procedure to solve the project staffing problem with discrete time/resource trade-offs and personnel scheduling constraints. Computers and Operations Research, 2019, 101, 144-161.	2.4	26
48	A tabu search procedure for the resource-constrained project scheduling problem with alternative subgraphs. European Journal of Operational Research, 2019, 273, 841-860.	3.5	65
49	A tool to test and validate algorithms for the resource-constrained project scheduling problem. Computers and Industrial Engineering, 2018, 118, 251-265.	3.4	42
50	An empirical validation of the performance of project control tolerance limits. Automation in Construction, 2018, 89, 71-85.	4.8	17
51	An exact composite lower bound strategy for the resource-constrained project scheduling problem. Computers and Operations Research, 2018, 93, 135-150.	2.4	42
52	Maximising the weighted number of activity execution modes in project planning. European Journal of Operational Research, 2018, 270, 999-1013.	3.5	7
53	A perturbation matheuristic for the integrated personnel shift and task re-scheduling problem. European Journal of Operational Research, 2018, 269, 806-823.	3.5	19
54	The Data-Driven Project Manager. , 2018, , .		3

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55	A resource type analysis of the integrated project scheduling and personnel staffing problem. Annals of Operations Research, 2017, 252, 407-433.	2.6	11
56	Project regularity: Development and evaluation of a new project characteristic. Journal of Systems Science and Systems Engineering, 2017, 26, 100-120.	0.8	10
57	Extensions of earned value management: Using the earnedÂincentive metric to improve signal quality. International Journal of Project Management, 2017, 35, 148-168.	2.7	32
58	The integration of constrained resources into top-down project control. Computers and Industrial Engineering, 2017, 110, 277-288.	3.4	13
59	A parallel multi-objective scatter search for optimising incentive contract design in projects. European Journal of Operational Research, 2017, 261, 1066-1084.	3.5	22
60	A buffer control method for top-down project control. European Journal of Operational Research, 2017, 262, 274-286.	3.5	29
61	On the performance of priority rules for the stochastic resource constrained multi-project scheduling problem. Computers and Industrial Engineering, 2017, 114, 223-234.	3.4	49
62	On the resource renting problem with overtime. Computers and Industrial Engineering, 2017, 111, 303-319.	3.4	6
63	A Nearest Neighbour extension to project duration forecasting with Artificial Intelligence. European Journal of Operational Research, 2017, 259, 1097-1111.	3.5	39
64	Improving project forecast accuracy by integrating earned value management with exponential smoothing and reference class forecasting. International Journal of Project Management, 2017, 35, 28-43.	2.7	77
65	Capital- and resource-constrained project scheduling with net present value optimization. European Journal of Operational Research, 2017, 256, 757-776.	3.5	36
66	A metaheuristic solution approach for the time-constrained project scheduling problem. OR Spectrum, 2017, 39, 353-371.	2.1	9
67	How Many Types of Critical Activities Exist? A Conjecture in Need of Proof. Procedia Engineering, 2016, 164, 3-11.	1.2	11
68	A scatter search for the extended resource renting problem. International Journal of Production Research, 2016, 54, 4723-4743.	4.9	7
69	Payment models and net present value optimization for resource-constrained project scheduling. Computers and Industrial Engineering, 2016, 91, 139-153.	3.4	38
70	On the use of multivariate regression methods for longest path calculations from earned value management observations. Omega, 2016, 61, 127-140.	3.6	13
71	A comparative study of Artificial Intelligence methods for project duration forecasting. Expert Systems With Applications, 2016, 46, 249-261.	4.4	51
72	An approach using SAT solvers for the RCPSP with logical constraints. European Journal of Operational Research, 2016, 249, 577-591.	3.5	32

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73	An exact algorithm for an integrated project staffing problem with a homogeneous workforce. Journal of Scheduling, 2016, 19, 107-133.	1.3	18
74	Empirical Perspective on Activity Durations for Project-Management Simulation Studies. Journal of Construction Engineering and Management - ASCE, 2016, 142, .	2.0	18
75	Decomposition-based heuristics for the integrated physician rostering and surgery scheduling problem. Health Systems, 2015, 4, 159-175.	0.9	8
76	Generalized Discrete Time-Cost Tradeoff Problems. , 2015, , 639-658.		3
77	On the design of custom packs: grouping of medical disposable items for surgeries. International Journal of Production Research, 2015, 53, 7343-7359.	4.9	15
78	Construction and evaluation framework for a real-life project database. International Journal of Project Management, 2015, 33, 697-710.	2.7	94
79	Influence of learning in resource-constrained project scheduling. Computers and Industrial Engineering, 2015, 87, 569-579.	3.4	29
80	Classification of articles and journals on project control and earned value management. International Journal of Project Management, 2015, 33, 1610-1634.	2.7	80
81	Empirical Evaluation of Earned Value Management Forecasting Accuracy for Time and Cost. Journal of Construction Engineering and Management - ASCE, 2015, 141, .	2.0	40
82	Study of the Stability of Earned Value Management Forecasting. Journal of Construction Engineering and Management - ASCE, 2015, 141, 04014086.	2.0	20
83	Evaluation of deterministic state-of-the-art forecasting approaches for project duration based on earned value management. International Journal of Project Management, 2015, 33, 1588-1596.	2.7	74
84	Operating theatre modelling: integrating social measures. Journal of Simulation, 2015, 9, 121-128.	1.0	9
85	Developing a framework for statistical process control approaches in project management. International Journal of Project Management, 2015, 33, 1289-1300.	2.7	27
86	The Multi-Mode Resource-Constrained Project Scheduling Problem. , 2015, , 491-511.		2
87	A new scheduling technique for the resourceâ€“constrained project scheduling problem with discounted cash flows. International Journal of Production Research, 2015, 53, 2771-2786.	4.9	42
88	A multivariate approach for top-down project control using earned value management. Decision Support Systems, 2015, 79, 65-76.	3.5	37
89	A comparison of the performance of various project control methods using earned value management systems. Expert Systems With Applications, 2015, 42, 3159-3175.	4.4	48
90	Hybrid tabu search and a truncated branch-and-bound for the unrelated parallel machine scheduling problem. Computers and Operations Research, 2015, 53, 107-117.	2.4	50

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91	Heuristic Methods for the Resource Availability Cost Problem. , 2015, , 339-359.		7
92	Blended Learning in Project Management - Experiences on Business Games and Case Studies. , 2015, , .		2
93	An experimental investigation of metaheuristics for the multi-mode resource-constrained project scheduling problem on new dataset instances. European Journal of Operational Research, 2014, 235, 62-72.	3.5	132
94	Scheduling of unrelated parallel machines with limited server availability on multiple production locations: a case study in knitted fabrics. International Journal of Production Research, 2014, 52, 2630-2653.	4.9	16
95	Support Vector Machine Regression for project control forecasting. Automation in Construction, 2014, 47, 92-106.	4.8	87
96	Analysis of the Integration of the Physician Rostering Problem and the Surgery Scheduling Problem. Journal of Medical Systems, 2014, 38, 43.	2.2	37
97	A hybrid Electromagnetism-like Mechanism/tabu search procedure for the single machine scheduling problem with a maximum lateness objective. Computers and Industrial Engineering, 2014, 67, 44-55.	3.4	11
98	Setting tolerance limits for statistical project control using earned value management. Omega, 2014, 49, 107-122.	3.6	68
99	Integrated Project Management and Control. Management for Professionals, 2014, , .	0.3	18
100	Schedule Risk. Management for Professionals, 2014, , 77-89.	0.3	0
101	Schedule Control. Management for Professionals, 2014, , 91-102.	0.3	0
102	P2 Engine. Management for Professionals, 2014, , 115-127.	0.3	0
103	Project Data. Management for Professionals, 2014, , 3-16.	0.3	0
104	ProTrack. Management for Professionals, 2014, , 105-114.	0.3	0
105	Reconstructing nurse schedules: Computational insights in the problem size parameters. Omega, 2013, 41, 903-918.	3.6	19
106	Analyzing the nursing organizational structure and process from a scheduling perspective. Health Care Management Science, 2013, 16, 177-196.	1.5	13
107	An artificial immune system algorithm for the resource availability cost problem. Flexible Services and Manufacturing Journal, 2013, 25, 122-144.	1.9	28
108	An integrated nurse staffing and scheduling analysis for longer-term nursing staff allocation problems. Omega, 2013, 41, 485-499.	3.6	109

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109	Project Management with Dynamic Scheduling. , 2013, , .		21
110	An Overview of Recent Research Results and Future Research Avenues Using Simulation Studies in Project Management. , 2013, 2013, 1-19.		21
111	An Artificial Immune System Based Approach for Solving the Nurse Re-rostering Problem. Lecture Notes in Computer Science, 2013, , 97-108.	1.0	8
112	Earned Value Management. , 2013, , 217-240.		2
113	The Critical Path Method. , 2013, , 37-57.		2
114	Schedule Risk Analysis. , 2013, , 81-100.		2
115	Resource-Constrained Project Scheduling. , 2013, , 109-139.		1
116	Resource-Constrained Scheduling Extensions. , 2013, , 141-174.		3
117	The VMW Project. , 2013, , 59-79.		0
118	A comparison of priority rules for the job shop scheduling problem under different flow time- and tardiness-related objective functions. International Journal of Production Research, 2012, 50, 4255-4270.	4.9	112
119	Project Management with Dynamic Scheduling. , 2012, , .		53
120	A hybrid genetic algorithm for the single machine maximum lateness problem with release times and family setups. Computers and Operations Research, 2012, 39, 2346-2358.	2.4	14
121	Measuring the efficiency of project control using fictitious and empirical project data. International Journal of Project Management, 2012, 30, 252-263.	2.7	82
122	On the dynamic use of project performance and schedule risk information during projecttracking. Omega, 2011, 39, 416-426.	3.6	100
123	A hybrid single and dual population search procedure for the job shop scheduling problem. European Journal of Operational Research, 2011, 215, 512-523.	3.5	23
124	Applying a hybrid job shop procedure to a Belgian manufacturing company producing industrial wheels and castors in rubber. Computers and Industrial Engineering, 2011, 61, 697-708.	3.4	5
125	Using resource scarceness characteristics to solve theÂmulti-mode resource-constrained project scheduling problem. Journal of Heuristics, 2011, 17, 705-728.	1.1	44
126	An evolutionary approach for the nurse rerostering problem. Computers and Operations Research, 2011, 38, 1400-1411.	2.4	49

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127	Multi-mode resource-constrained project scheduling using RCPSP and SAT solvers. European Journal of Operational Research, 2011, 213, 73-82.	3.5	101
128	Introducing Optimization Techniques to Students: An Exam Case Distribution Model. INFORMS Transactions on Education, 2010, 10, 53-61.	0.4	5
129	Branching strategies in a branch-and-price approach forÂaÂmultiple objective nurse scheduling problem. Journal of Scheduling, 2010, 13, 77-93.	1.3	84
130	Using activity sensitivity and network topology information to monitor project time performance. Omega, 2010, 38, 359-370.	3.6	84
131	A hybrid scatter search heuristic for personalized crew rostering in the airline industry. European Journal of Operational Research, 2010, 206, 155-167.	3.5	64
132	A genetic algorithm for the preemptive and non-preemptive multi-mode resource-constrained project scheduling problem. European Journal of Operational Research, 2010, 201, 409-418.	3.5	251
133	A scatter search heuristic for maximising the net present value of a resource-constrained project with fixed activity cash flows. International Journal of Production Research, 2010, 48, 1983-2001.	4.9	38
134	On the characterization and generation of nurse scheduling problem instances. European Journal of Operational Research, 2009, 196, 457-467.	3.5	48
135	A finite-capacity production scheduling procedure for a Belgian steel company. International Journal of Production Research, 2009, 47, 561-584.	4.9	7
136	An Artificial Immune System for the Multi-Mode Resource-Constrained Project Scheduling Problem. Lecture Notes in Computer Science, 2009, , 85-96.	1.0	23
137	The impact of incorporating nurse-specific characteristics in a cyclical scheduling approach. Journal of the Operational Research Society, 2009, 60, 1683-1698.	2.1	9
138	Static and Dynamic Determinants of Earned Value Based Time Forecast Accuracy. Advances in IT Personnel and Project Management, 2009, , 358-371.	0.3	1
139	Setup times and fast tracking in resource-constrained project scheduling. Computers and Industrial Engineering, 2008, 54, 1062-1070.	3.4	20
140	Comparison and hybridization of crossover operators forÂthe nurse scheduling problem. Annals of Operations Research, 2008, 159, 333-353.	2.6	36
141	The impact of various activity assumptions on the lead time and resource utilization of resource-constrained projects. Computers and Industrial Engineering, 2008, 54, 140-154.	3.4	44
142	An evaluation of the adequacy of project network generators with systematically sampled networks. European Journal of Operational Research, 2008, 187, 511-524.	3.5	142
143	Diversity in Resource Consumption Patterns and Robustness of Costing Systems to Errors. Management Science, 2008, 54, 1715-1730.	2.4	39
144	A Decomposition-Based Genetic Algorithm for the Resource-Constrained Project-Scheduling Problem. Operations Research, 2007, 55, 457-469.	1.2	162

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145	A simulation and evaluation of earned value metrics to forecast the project duration. Journal of the Operational Research Society, 2007, 58, 1361-1374.	2.1	109
146	A Simulation Analysis of Interactions among Errors in Costing Systems. Accounting Review, 2007, 82, 939-962.	1.7	76
147	An electromagnetic meta-heuristic for the nurse scheduling problem. Journal of Heuristics, 2007, 13, 359-385.	1.1	77
148	The discrete time/cost trade-off problem: extensions and heuristic procedures. Journal of Scheduling, 2007, 10, 311-326.	1.3	98
149	A comparison of different project duration forecasting methods using earned value metrics. International Journal of Project Management, 2006, 24, 289-302.	2.7	235
150	A hybrid scatter search/electromagnetism meta-heuristic for project scheduling. European Journal of Operational Research, 2006, 169, 638-653.	3.5	252
151	Work Continuity Constraints in Project Scheduling. Journal of Construction Engineering and Management - ASCE, 2006, 132, 14-25.	2.0	62
152	An Efficient Hybrid Search Algorithm for Various Optimization Problems. Lecture Notes in Computer Science, 2006, , 272-283.	1.0	8
153	New Computational Results for the Nurse Scheduling Problem: A Scatter Search Algorithm. Lecture Notes in Computer Science, 2006, , 159-170.	1.0	11
154	The Electromagnetism Meta-heuristic Applied to the Resource-Constrained Project Scheduling Problem. Lecture Notes in Computer Science, 2006, , 259-270.	1.0	16
155	Scheduling an R&D Project with Quality-Dependent Time Slots. Lecture Notes in Computer Science, 2006, , 621-630.	1.0	6
156	New computational results for the discrete time/cost trade-off problem with time-switch constraints. European Journal of Operational Research, 2005, 165, 359-374.	3.5	54
157	A Bi-population Based Genetic Algorithm for the Resource-Constrained Project Scheduling Problem. Lecture Notes in Computer Science, 2005, , 378-387.	1.0	14
158	RanGen: A Random Network Generator for Activity-on-the-Node Networks. Journal of Scheduling, 2003, 6, 17-38.	1.3	221
159	Progress payments in project scheduling problems. European Journal of Operational Research, 2003, 148, 604-620.	3.5	31
160	Discrete time/cost trade-offs in project scheduling with time-switch constraints. Journal of the Operational Research Society, 2002, 53, 741-751.	2.1	48
161	Maximizing the net present value of a project with linear time-dependent cash flows. International Journal of Production Research, 2001, 39, 3159-3181.	4.9	44
162	On Maximizing the Net Present Value of a Project Under Renewable Resource Constraints. Management Science, 2001, 47, 1113-1121.	2.4	89

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163	Title is missing!. Annals of Operations Research, 2001, 102, 179-196.	2.6	63
164	New computational results on the discrete time/cost trade-off problem in project networks. Journal of the Operational Research Society, 1998, 49, 1153-1163.	2.1	91