Pascal Van Hentenryck

List of Publications by Year
in descending order

115 papers	4,382 citations	201674 27 h-index	133252 59 g-index
120 all docs	120 docs citations	120 times ranked	3212 citing authors

#	Article	IF	Citations
1	Rapid assessment of disaster damage using social media activity. Science Advances, 2016, 2, e1500779.	10.3	431
2	Scenario-Based Planning for Partially Dynamic Vehicle Routing with Stochastic Customers. Operations Research, 2004, 52, 977-987.	1.9	359
3	A generic arc-consistency algorithm and its specializations. Artificial Intelligence, 1992, 57, 291-321.	5.8	292
4	A Two-Stage Hybrid Local Search for the Vehicle Routing Problem with Time Windows. Transportation Science, 2004, 38, 515-530.	4.4	250
5	The QC Relaxation: A Theoretical and Computational Study on Optimal Power Flow. IEEE Transactions on Power Systems, 2016, 31, 3008-3018.	6.5	220
6	A Linear-Programming Approximation of AC Power Flows. INFORMS Journal on Computing, 2014, 26, 718-734.	1.7	210
7	Prediction and behavioral analysis of travel mode choice: A comparison of machine learning and logit models. Travel Behaviour & Society, 2020, 20, 22-35.	5.0	176
8	Numerica. , 1997, , .		159
9	AC-Feasibility on Tree Networks is NP-Hard. IEEE Transactions on Power Systems, 2016, 31, 798-801.	6.5	141
10	Convex Relaxations for Gas Expansion Planning. INFORMS Journal on Computing, 2016, 28, 645-656.	1.7	104
11	Convex quadratic relaxations for mixed-integer nonlinear programs in power systems. Mathematical Programming Computation, 2017, 9, 321-367.	4.8	103
12	Performance of Social Network Sensors during Hurricane Sandy. PLoS ONE, 2015, 10, e0117288.	2.5	100
13	Strengthening the SDP Relaxation of AC Power Flows With Convex Envelopes, Bound Tightening, and Valid Inequalities. IEEE Transactions on Power Systems, 2017, 32, 3549-3558.	6.5	74
14	Predicting AC Optimal Power Flows: Combining Deep Learning and Lagrangian Dual Methods. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 630-637.	4.9	72
15	Strategic directions in constraint programming. ACM Computing Surveys, 1996, 28, 701-726.	23.0	71
16	Constraint-Based Local Search. , 2017, , 1-38.		58
17	Constraint and Integer Programming in OPL. INFORMS Journal on Computing, 2002, 14, 345-372.	1.7	57
18	On Lattice Protein Structure Prediction Revisited. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2011, 8, 1620-1632.	3.0	54

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19	A conflict-based path-generation heuristic for evacuation planning. Transportation Research Part B: Methodological, 2016, 83, 136-150.	5.9	53
20	Search and strategies in OPL. ACM Transactions on Computational Logic, 2000, 1, 285-320.	0.9	50
21	Benders Decomposition for the Design of a Hub and Shuttle Public Transit System. Transportation Science, 2019, 53, 77-88.	4.4	48
22	Transmission system restoration with co-optimization of repairs, load pickups, and generation dispatch. International Journal of Electrical Power and Energy Systems, 2015, 72, 144-154.	5.5	46
23	Approximating line losses and apparent power in AC power flow linearizations. , 2012, , .		45
24	Combining Deep Learning and Optimization for Preventive Security-Constrained DC Optimal Power Flow. IEEE Transactions on Power Systems, 2021, 36, 3618-3628.	6.5	45
25	Transmission system repair and restoration. Mathematical Programming, 2015, 151, 347-373.	2.4	43
26	Joint Electricity and Natural Gas Transmission Planning With Endogenous Market Feedbacks. IEEE Transactions on Power Systems, 2018, 33, 6397-6409.	6.5	42
27	Computing folding pathways between RNA secondary structures. Nucleic Acids Research, 2010, 38, 1711-1722.	14.5	35
28	Assortment optimization under the Sequential Multinomial Logit Model. European Journal of Operational Research, 2019, 273, 1052-1064.	5.7	34
29	Optimal Resilient transmission Grid Design. , 2016, , .		33
30	Assortment optimization under a multinomial logit model with position bias and social influence. 4or, 2016, 14, 57-75.	1.6	32
31	Differential Privacy for Power Grid Obfuscation. IEEE Transactions on Smart Grid, 2020, 11, 1356-1366.	9.0	32
32	Strengthening Convex Relaxations with Bound Tightening for Power Network Optimization. Lecture Notes in Computer Science, 2015, , 39-57.	1.3	32
33	Unit Commitment With Gas Network Awareness. IEEE Transactions on Power Systems, 2020, 35, 1327-1339.	6.5	31
34	Strategic stockpiling of power system supplies for disaster recovery. , 2011, , .		28
35	A branch-and-price-and-check model for the vehicle routing problem with location congestion. Constraints, 2016, 21, 394-412.	0.7	25
36	A Multistage Very Large-Scale Neighborhood Search for the Vehicle Routing Problem with Soft Time Windows. Transportation Science, 2015, 49, 223-238.	4.4	24

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37	CPBPV: a constraint-programming framework for bounded program verification. Constraints, 2010, 15, 238-264.	0.7	23
38	Primal and dual bounds for Optimal Transmission Switching. , 2014, , .		23
39	Dynamic Compressor Optimization in Natural Gas Pipeline Systems. INFORMS Journal on Computing, 2019, 31, 40-65.	1.7	23
40	Crowdsourcing contest dilemma. Journal of the Royal Society Interface, 2014, 11, 20140532.	3.4	22
41	Privacy-Preserving Power System Obfuscation: A Bilevel Optimization Approach. IEEE Transactions on Power Systems, 2020, 35, 1627-1637.	6.5	22
42	Transmission Network Expansion Planning: Bridging the gap between AC heuristics and DC approximations. , 2014, , .		21
43	Differentially Private Optimal Power Flow for Distribution Grids. IEEE Transactions on Power Systems, 2021, 36, 2186-2196.	6.5	20
44	Solving Steel Mill Slab Problems with constraint-based techniques: CP, LNS, and CBLS. Constraints, 2011, 16, 125-147.	0.7	18
45	Polynomial SDP cuts for Optimal Power Flow. , 2016, , .		18
46	Constraint Satisfaction over Bit-Vectors. Lecture Notes in Computer Science, 2012, , 527-543.	1.3	18
47	The Benefits of Social Influence in Optimized Cultural Markets. PLoS ONE, 2015, 10, e0121934.	2.5	18
48	Online Stochastic and Robust Optimization. Lecture Notes in Computer Science, 2004, , 286-300.	1.3	17
49	A column-generation approach for joint mobilization and evacuation planning. Constraints, 2015, 20, 285-303.	0.7	17
50	Efficient dynamic compressor optimization in natural gas transmission systems. , 2016, , .		17
51	Network flow and copper plate relaxations for AC transmission systems. , 2016, , .		16
52	Spatial Network Decomposition for Fast and Scalable AC-OPF Learning. IEEE Transactions on Power Systems, 2022, 37, 2601-2612.	6.5	16
53	Resiliency of on-demand multimodal transit systems during a pandemic. Transportation Research Part C: Emerging Technologies, 2021, 133, 103418.	7.6	15
54	Graphical models for optimal power flow. Constraints, 2017, 22, 24-49.	0.7	14

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55	The benefits of autonomous vehicles for community-based trip sharing. Transportation Research Part C: Emerging Technologies, 2021, 124, 102929.	7.6	13
56	The Objective-CP Optimization System. Lecture Notes in Computer Science, 2013, , 8-29.	1.3	13
57	An anytime multistep anticipatory algorithm for online stochastic combinatorial optimization. Annals of Operations Research, 2011, 184, 233-271.	4.1	12
58	Accurate load and generation scheduling for linearized DC models with contingencies. , 2012, , .		12
59	Constraint-based Very Large-Scale Neighborhood search. Constraints, 2012, 17, 87-122.	0.7	12
60	Taming the Unpredictability of Cultural Markets with Social Influence. , 2017, , .		12
61	Power system restoration planning with standing phase angle and voltage difference constraints. , 2014, , .		11
62	The future of optimization technology. Constraints, 2014, 19, 126-138.	0.7	11
63	Lagrangian Duality for Constrained Deep Learning. Lecture Notes in Computer Science, 2021, , 118-135.	1.3	11
64	LS(Graph): a constraint-based local search for constraint optimization on trees and paths. Constraints, 2012, 17, 357-408.	0.7	10
65	Optimal and efficient filtering algorithms for table constraints. Constraints, 2014, 19, 77-120.	0.7	10
66	Optimization of Structural Flood Mitigation Strategies. Water Resources Research, 2019, 55, 1490-1509.	4.2	10
67	Column Generation for Real-Time Ride-Sharing Operations. Lecture Notes in Computer Science, 2019, , 472-487.	1.3	10
68	Privacy-preserving obfuscation for distributed power systems. Electric Power Systems Research, 2020, 189, 106718.	3.6	10
69	Online stochastic reservation systems. Annals of Operations Research, 2009, 171, 101-126.	4.1	9
70	Dynamic structural symmetry breaking for constraint satisfaction problems. Constraints, 2009, 14, 506-538.	0.7	9
71	Large-scale zone-based evacuation planning—Part I: Models and algorithms. Networks, 2021, 77, 127-145.	2.7	9
72	Spatio-Temporal Point Processes With Attention for Traffic Congestion Event Modeling. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 7298-7309.	8.0	9

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73	An exact and scalable problem decomposition for security-constrained optimal power flow. Electric Power Systems Research, 2021, 195, 106677.	3.6	9
74	Backtracking without trailing in CLP (â„œ Lin). ACM Transactions on Programming Languages and Systems, 1995, 17, 635-671.	2.1	8
75	Sequence-based abstract interpretation of Prolog. Theory and Practice of Logic Programming, 2002, 2, 25-84.	1.5	8
76	Popularity signals in trial-offer markets with social influence and position bias. European Journal of Operational Research, 2018, 266, 775-793.	5.7	8
77	Optimizing inspection routes in pipeline networks. Reliability Engineering and System Safety, 2020, 195, 106700.	8.9	8
78	The Commute Trip-Sharing Problem. Transportation Science, 2020, 54, 1640-1675.	4.4	8
79	Nutmeg: a MIP and CP Hybrid Solver Using Branch-and-Check. SN Operations Research Forum, 2020, 1, 1.	1.0	8
80	Compositional Derivation of Symmetries for Constraint Satisfaction. Lecture Notes in Computer Science, 2005, , 234-247.	1.3	8
81	A Path-Generation Matheuristic for Large Scale Evacuation Planning. Lecture Notes in Computer Science, 2014, , 71-84.	1.3	8
82	Constraint-Based Local Search for Constrained Optimum Paths Problems. Lecture Notes in Computer Science, 2010, , 267-281.	1.3	8
83	An Optimal Filtering Algorithm for Table Constraints. Lecture Notes in Computer Science, 2012, , 496-511.	1.3	8
84	Ridesharing and fleet sizing for On-Demand Multimodal Transit Systems. Transportation Research Part C: Emerging Technologies, 2022, 138, 103594.	7.6	8
85	Joint Vehicle and Crew Routing and Scheduling. Lecture Notes in Computer Science, 2015, , 654-670.	1.3	7
86	Joint Vehicle and Crew Routing and Scheduling. Transportation Science, 2020, 54, 488-511.	4.4	7
87	Market segmentation in online platforms. European Journal of Operational Research, 2021, 295, 1025-1041.	5.7	7
88	Constraint programming for combinatorial search problems. ACM Computing Surveys, 1996, 28, 76.	23.0	7
89	Differentially Private Distributed Optimal Power Flow. , 2020, , .		7
90	New developments in metaheuristics and their applications. Journal of Heuristics, 2016, 22, 359-363.	1.4	6

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91	A microkernel architecture for constraint programming. Constraints, 2017, 22, 107-151.	0.7	6
92	Communication-Constrained Expansion Planning for Resilient Distribution Systems. INFORMS Journal on Computing, 0, , .	1.7	6
93	<scp>Large‐scale</scp> zone‐based evacuation planning, Part <scp>II</scp>: Macroscopic and microscopic evaluations. Networks, 2021, 77, 341-358.	2.7	6
94	Differential privacy of hierarchical Census data: An optimization approach. Artificial Intelligence, 2021, 296, 103475.	5.8	6
95	Optimization Models for Estimating Transit Network Origin–Destination Flows with Big Transit Data. Journal of Big Data Analytics in Transportation, 2021, 3, 247-262.	3.0	6
96	Benders Subproblem Decomposition for Bilevel Problems with Convex Follower. INFORMS Journal on Computing, 2022, 34, 1749-1767.	1.7	5
97	RNA STRUCTURAL SEGMENTATION. , 2009, , 57-68.		4
98	Differential Privacy of Hierarchical Census Data: An Optimization Approach. Lecture Notes in Computer Science, 2019, , 639-655.	1.3	4
99	Parallel Composition of Scheduling Solvers. Lecture Notes in Computer Science, 2016, , 159-169.	1.3	3
100	Constraint-Based Local Search. , 2018, , 223-260.		3
101	Domain Consistency with Forbidden Values. Lecture Notes in Computer Science, 2010, , 191-205.	1.3	3
102	Optimal deployment of eventually-serializable data services. Annals of Operations Research, 2011, 184, 273-294.	4.1	2
103	A Column-Generation Algorithm for Evacuation Planning with Elementary Paths. Lecture Notes in Computer Science, 2017, , 549-564.	1.3	2
104	Transient dynamics in trial-offer markets with social influence: Trade-offs between appeal and quality. PLoS ONE, 2017, 12, e0180040.	2.5	2
105	Guest Editorial Special Issue on Analysis, Control, and Optimization of Energy Networks. IEEE Transactions on Control of Network Systems, 2019, 6, 922-924.	3.7	2
106	Transfer-Expanded Graphs for On-Demand Multimodal Transit Systems. Lecture Notes in Computer Science, 2020, , 167-175.	1.3	2
107	Bilevel Optimization for On-Demand Multimodal Transit Systems. Lecture Notes in Computer Science, 2020, , 52-68.	1.3	2
108	A Constraint Programming Approach for Non-preemptive Evacuation Scheduling. Lecture Notes in Computer Science, 2015, , 574-591.	1.3	2

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109	Branch-and-Check with Explanations for the Vehicle Routing Problem with Time Windows. Lecture Notes in Computer Science, 2017, , 579-595.	1.3	2
110	The flexible and real-time commute trip sharing problems. Constraints, 2020, 25, 160-179.	0.7	1
111	Domain consistency with forbidden values. Constraints, 2013, 18, 377-403.	0.7	0
112	Looking into the crystal-ball: a bright future for CP. Constraints, 2014, 19, 121-125.	0.7	0
113	A nonlinear optimization model for transient stable line switching. , 2017, , .		0
114	Graphical Models and Belief Propagation Hierarchy for Physics-Constrained Network Flows. The IMA Volumes in Mathematics and Its Applications, 2018, , 223-250.	0.5	0
115	Strengthening the SDP Relaxation of AC Power Flows With Convex Envelopes, Bound Tightening, and Valid Inequalities. , 2019, , .		0