Carla P Gomes

List of Publications by Citations

52 papers	1,570 citations	16 h-index	39 g-index
58 ext. papers	2,034 ext. citations	8.3 avg, IF	4.38 L-index

#	Paper	IF	Citations
52	The eBird enterprise: An integrated approach to development and application of citizen science. *Biological Conservation*, **2014**, 169, 31-40	6.2	449
51	Algorithm portfolios. *Artificial Intelligence*, **2001**, 126, 43-62	3.6	260
50	Heavy-Tailed Phenomena in Satisfiability and Constraint Satisfaction Problems. *Journal of Automated Reasoning*, **2000**, 24, 67-100	1	190
49	Chapter 2 Satisfiability Solvers. *Foundations of Artificial Intelligence*, **2008**, 3, 89-134		97
48	Heavy-tailed distributions in combinatorial search. *Lecture Notes in Computer Science*, **1997**, 121-135	0.9	62
47	Reducing greenhouse gas emissions of Amazon hydropower with strategic dam planning. *Nature Communications*, **2019**, 10, 4281	17.4	58
46	Automated Phase Mapping with AgileFD and its Application to Light Absorber Discovery in the V-Mn-Nb Oxide System. *ACS Combinatorial Science*, **2017**, 19, 37-46	3.9	46
45	Trade-offs and efficiencies in optimal budget-constrained multispecies corridor networks. *Conservation Biology*, **2017**, 31, 192-202	6	35
44	Autonomous experimentation systems for materials development: A community perspective. *Matter*, **2021**, 4, 2702-2726	12.7	26
43	Artificial intelligence for materials discovery. *MRS Bulletin*, **2019**, 44, 538-544	3.2	25
42	Constraint Reasoning and Kernel Clustering for Pattern Decomposition with Scaling. *Lecture Notes in Computer Science*, **2011**, 508-522	0.9	23
41	Artificial intelligence and operations research: challenges and opportunities in planning and scheduling. *Knowledge Engineering Review*, **2000**, 15, 1-10	2.1	22
40	Statistical Regimes Across Constrainedness Regions. *Constraints*, **2005**, 10, 317-337	0.3	19
39	Computational sustainability. *Communications of the ACM*, **2019**, 62, 56-65	2.5	18
38	Formal Models of Heavy-Tailed Behavior in Combinatorial Search. *Lecture Notes in Computer Science* , **2001**, 408-421	0.9	17
37	Tradeoffs in the Complexity of Backdoor Detection **2007**, 256-270		16
36	Computer science. Satisfied with physics. *Science*, **2002**, 297, 784-5	33.3	14

35	CRYSTAL: a multi-agent AI system for automated mapping of materials crystal structures. *MRS Communications*, **2019**, 9, 600-608	2.7	13
34	Reserve design to optimize functional connectivity and animal density. *Conservation Biology*, **2019**, 33, 1023-1034	6	11
33	Multi-component background learning automates signal detection for spectroscopic data. *Npj Computational Materials*, **2019**, 5,	10.9	11
32	Approximations and Randomization to Boost CSP Techniques. *Annals of Operations Research*, **2004**, 130, 117-141	3.2	10
31	Deep Multi-species Embedding **2017**,		10
30	Backdoors to Combinatorial Optimization: Feasibility and Optimality. *Lecture Notes in Computer Science*, **2009**, 56-70	0.9	10
29	Backdoors in the Context of Learning. *Lecture Notes in Computer Science*, **2009**, 73-79	0.9	10
28	Materials representation and transfer learning for multi-property prediction. *Applied Physics Reviews*, **2021**, 8, 021409	17.3	10
27	Bayesian Classification of Flight Calls with a Novel Dynamic Time Warping Kernel **2010**,		8
26	Tradeoffs in the complexity of backdoors to satisfiability: dynamic sub-solvers and learning during search. *Annals of Mathematics and Artificial Intelligence*, **2014**, 70, 399-431	0.8	7
25	Randomness and Structure. *Foundations of Artificial Intelligence*, **2006**, 2, 639-664		7
24	An improved approximation algorithm for the partial Latin square extension problem. *Operations Research Letters*, **2004**, 32, 479-484	1	7
23	Climate change may impair electricity generation and economic viability of future Amazon hydropower. *Global Environmental Change*, **2021**, 71, 102383	10.1	6
22	Automating crystal-structure phase mapping by combining deep learning with constraint reasoning. *Nature Machine Intelligence*, **2021**, 3, 812-822	22.5	6
21	Learning policies for battery usage optimization in electric vehicles. *Machine Learning*, **2013**, 92, 177-194	4	5
20	Generating highly balanced sudoku problems as hard problems. *Journal of Heuristics*, **2011**, 17, 589-614	1.9	4
19	HYBRID SEARCH STRATEGIES FOR HETEROGENEOUS SEARCH SPACES. *International Journal on Artificial Intelligence Tools*, **2000**, 09, 45-57	0.9	4
18	Disentangled Variational Autoencoder based Multi-Label Classification with Covariance-Aware Multivariate Probit Model **2020**,		4

17	Learning Policies for Battery Usage Optimization in Electric Vehicles. *Lecture Notes in Computer Science*, **2012**, 195-210	0.9	4
16	Randomized Backtrack Search. *Operations Research/ Computer Science Interfaces Series*, **2004**, 233-291	0.3	4
15	Reducing adverse impacts of Amazon hydropower expansion.. *Science*, **2022**, 375, 753-760	33.3	4
14	Boosting Efficiency for Computing the Pareto Frontier on Tree Structured Networks. *Lecture Notes in Computer Science*, **2018**, 263-279	0.9	3
13	Regular-SAT: A many-valued approach to solving combinatorial problems. *Discrete Applied Mathematics*, **2007**, 155, 1613-1626	1	3
12	Optical Identification of Materials Transformations in Oxide Thin Films. *ACS Combinatorial Science*, **2020**, 22, 887-894	3.9	3
11	Autonomous materials synthesis via hierarchical active learning of nonequilibrium phase diagrams.. *Science Advances*, **2021**, 7, eabg4930	14.3	3
10	Behavior Identification in Two-Stage Games for Incentivizing Citizen Science Exploration. *Lecture Notes in Computer Science*, **2016**, 701-717	0.9	2
9	Extending the Reach of SAT with Many-Valued Logics. *Electronic Notes in Discrete Mathematics*, **2001**, 9, 392-407	0.3	2
8	On the intersection of AI and OR. *Knowledge Engineering Review*, **2001**, 16, 1-4	2.1	2
7	Structure and Problem Hardness: Goal Asymmetry and DPLL Proofs in SAT-Based Planning. *Logical Methods in Computer Science*, **2007**, 3,		2
6	Quality of LP-Based Approximations for Highly Combinatorial Problems. *Lecture Notes in Computer Science*, **2004**, 377-392	0.9	2
5	Computational sustainability meets materials science. *Nature Reviews Materials*, **2021**, 6, 645-647	73.3	2
4	Efficiently Optimizing for Dendritic Connectivity on Tree-Structured Networks in a Multi-Objective Framework **2018**,		2
3	Density of states prediction for materials discovery via contrastive learning from probabilistic embeddings.. *Nature Communications*, **2022**, 13, 949	17.4	2
2	Strategic planning of hydropower development: balancing benefits and socioenvironmental costs. *Current Opinion in Environmental Sustainability*, **2022**, 56, 101175	7.2	2
1	A generative power-law search tree model. *Computers and Operations Research*, **2009**, 36, 2376-2386	4.6	