William E Hart

List of Publications by Year
in descending order

44 papers	3,000 citations	430874 18 h-index	501196 28 g-index
44 all docs	44 docs citations	44 times ranked	1927 citing authors

#	Article	IF	Citations
1	Pyomo: modeling and solving mathematical programs in Python. Mathematical Programming Computation, 2011, 3, 219-260.	4.8	665
2	The Battle of the Water Sensor Networks (BWSN): A Design Challenge for Engineers and Algorithms. Journal of Water Resources Planning and Management - ASCE, 2008, 134, 556-568.	2.6	464
3	Sensor Placement in Municipal Water Networks with Temporal Integer Programming Models. Journal of Water Resources Planning and Management - ASCE, 2006, 132, 218-224.	2.6	232
4	Sensor Placement in Municipal Water Networks. Journal of Water Resources Planning and Management - ASCE, 2005, 131, 237-243.	2.6	222
5	Review of Sensor Placement Strategies for Contamination Warning Systems in Drinking Water Distribution Systems. Journal of Water Resources Planning and Management - ASCE, 2010, 136, 611-619.	2.6	187
6	Pyomo â€“ Optimization Modeling in Python. Springer Optimization and Its Applications, 2012, , .	0.9	132
7	Robust Proofs of NP-Hardness for Protein Folding: General Lattices and Energy Potentials. Journal of Computational Biology, 1997, 4, 1-22.	1.6	113
8	Opportunities for Combinatorial Optimization in Computational Biology. INFORMS Journal on Computing, 2004, 16, 211-231.	1.7	101
9	A Multiple-Objective Analysis of Sensor Placement Optimization in Water Networks. , 2004, , 1.		96
10	PySP: modeling and solving stochastic programs in Python. Mathematical Programming Computation, 2012, 4, 109-149.	4.8	89
11	Fast Protein Folding in the Hydrophobicâ€“Hydrophilic Model within Three-Eighths of Optimal. Journal of Computational Biology, 1996, 3, 53-96.	1.6	86
12	Formulation and Optimization of Robust Sensor Placement Problems for Drinking Water Contamination Warning Systems. Journal of Infrastructure Systems, 2009, 15, 330-339.	1.8	72
13	Designing Contamination Warning Systems for Municipal Water Networks Using Imperfect Sensors. Journal of Water Resources Planning and Management - ASCE, 2009, 135, 253-263.	2.6	70
14	Robust optimization of contaminant sensor placement for community water systems. Mathematical Programming, 2006, 107, 337-356.	2.4	59
15	Pico: An Object-Oriented Framework for Parallel Branch and Bound. Studies in Computational Mathematics, 2001, , 219-265.	0.2	46
16	Lattice and Off-Lattice Side Chain Models of Protein Folding: Linear Time Structure Prediction Better than 86% of Optimal. Journal of Computational Biology, 1997, 4, 241-259.	1.6	42
17	A General Integer-Programming-Based Framework for Sensor Placement in Municipal Water Networks. , 2004, , 1.		40
18	A Convergence Analysis of Unconstrained and Bound Constrained Evolutionary Pattern Search. Evolutionary Computation, 2001, 9, 1-23.	3.0	27

#	Article	IF	Citations
19	The TEVA-SPOT Toolkit for Drinking Water Contaminant Warning System Design. , 2008, , .		25
20	US Environmental Protection Agency Uses Operations Research to Reduce Contamination Risks in Drinking Water. Interfaces, 2009, 39, 57-68.	1.5	24
21	Water Quality Sensor Placement in Water Networks with Budget Constraints. , 2005, , 1.		20
22	Python Optimization Modeling Objects (Pyomo). , 2009, , 3-19.		20
23	Sensor network design of contammination warning systems: A decision framework. Journal - American Water Works Association, 2008, 100, 97-109.	0.3	19
24	The Role of Development in Genetic Algorithms. Foundations of Genetic Algorithms, 1995, 3, 315-332.	0.6	19
25	Locally-Adaptive and Memetic Evolutionary Pattern Search Algorithms. Evolutionary Computation, 2003, 11, 29-51.	3.0	17
26	PEBBL: an object-oriented framework for scalable parallel branch and bound. Mathematical Programming Computation, 2015, 7, 429-469.	4.8	14
27	Real-time inversion in large-scale water networks using discrete measurements. Computers and Chemical Engineering, 2012, 37, 143-151.	3.8	13
28	Validation and Assessment of Integer Programming Sensor Placement Models. , 2005, , 1.		11
29	A Filter-Based Evolutionary Algorithm for Constrained Optimization. Evolutionary Computation, 2005, 13, 329-352.	3.0	10
30	Scalability of Integer Programming Computations for Sensor Placement in Water Networks. , 2005, , 1.		9
31	Real-World Case Studies for Sensor Network Design of Drinking Water Contamination Warning Systems. , 2011, , 319-348.		9
32	Limited-Memory Techniques for Sensor Placement in Water Distribution Networks. Lecture Notes in Computer Science, 2008, , 125-137.	1.3	9
33	Scalable Water Network Sensor Placement via Aggregation. , 2007, , 1.		8
34	Invariant patterns in crystal lattices: Implications for protein folding algorithms (extended abstract). Lecture Notes in Computer Science, 1996, , 288-303.	1.3	6
35	Rethinking the design of real-coded evolutionary algorithms: Making discrete choices in continuous search domains. Soft Computing, 2005, 9, 225-235.	3.6	5
36	Optimal Determination of Grab Sample Locations and Source Inversion in Large-Scale Water Distribution Systems. , 2011, , .		5

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37	Real-Time Inversion and Response Planning in Large-Scale Networks. Computer Aided Chemical Engineering, 2010, , 1027-1032.	0.5	4
38	Formulating and Analyzing Multi-Stage Sensor Placement Problems. , 2011, , .		4
39	Risk Reduction and Sensor Network Design. , 2009, , .		3
40	Minimize Impact or Maximize Benefit: The Role of Objective Function in Approximately Optimizing Sensor Placement for Municipal Water Distribution Networks. , 2011, , .		1
41	Integrating Event Detection System Operating Characteristics into Sensor Placement Optimization. , 2011, , .		1
42	A Stochastic Programming Formulation for Disinfectant Booster Station Placement to Protect Large-Scale Water Distribution Systems. Computer Aided Chemical Engineering, 2012, 31, 1462-1466.	0.5	1
43	Convergence Examples of a Filter-Based Evolutionary Algorithm. Lecture Notes in Computer Science, 2004, , 666-677.	1.3	0
44	An Analysis of Multiple Contaminant Warning System Design Objectives for Sensor Placement Optimization in Water Distribution Networks. Profiles in Operations Research, 2021, , 125-145.	0.4	0