Warren B Powell

List of Publications by Year
in descending order

100 papers	4,049 citations	185998 28 h-index	133063 59 g-index
143 all docs	143 docs citations	143 times ranked	2862 citing authors

#	Article	IF	Citations
1	Stochastic optimization for vaccine and testing kit allocation for the COVID-19 pandemic. European Journal of Operational Research, 2023, 304, 325-338.	3.5	32
2	Adaptive Learning of Drug Quality and Optimization of Patient Recruitment for Clinical Trials with Dropouts. Manufacturing and Service Operations Management, 2022, 24, 580-599.	2.3	8
3	Designing Lookahead Policies for Sequential Decision Problems in Transportation and Logistics. IEEE Open Journal of Intelligent Transportation Systems, 2022, 3, 313-327.	2.6	3
4	Zeroth-Order Stochastic Compositional Algorithms for Risk-Aware Learning. SIAM Journal on Optimization, 2022, 32, 386-416.	1.2	4
5	From Reinforcement Learning to Optimal Control: A Unified Framework for Sequential Decisions. Studies in Systems, Decision and Control, 2021, , 29-74.	0.8	8
6	Least squares policy iteration with instrumental variables vs. direct policy search: comparison against optimal benchmarks using energy storage. Infor, 2020, 58, 141-166.	0.5	0
7	Optimistic Monte Carlo Tree Search with Sampled Information Relaxation Dual Bounds. Operations Research, 2020, 68, 1678-1697.	1.2	3
8	Optimal Online Learning for Nonlinear Belief Models Using Discrete Priors. Operations Research, 2020, 68, 1538-1556.	1.2	3
9	Reinforcement learning for electricity dispatch in grids with high intermittent generation and energy storage systems: A case study for the Brazilian grid. International Journal of Energy Research, 2020, 44, 8635-8653.	2.2	9
10	A unified framework for stochastic optimization. European Journal of Operational Research, 2019, 275, 795-821.	3.5	151
11	Computational sustainability. Communications of the ACM, 2019, 62, 56-65.	3.3	49
12	Optimal Learning for Urban Delivery Fleet Allocation. Transportation Science, 2019, 53, 623-641.	2.6	18
13	Bias-Corrected Q-Learning With Multistate Extension. IEEE Transactions on Automatic Control, 2019, 64, 4011-4023.	3.6	6
14	Bayesian Exploration for Approximate Dynamic Programming. Operations Research, 2019, 67, 198-214.	1.2	5
15	SMART-Invest: a stochastic, dynamic planning for optimizing investments in wind, solar, and storage in the presence of fossil fuels. The case of the PJM electricity market. Energy Systems, 2018, 9, 277-303.	1.8	4
16	Low-Rank Value Function Approximation for Co-Optimization of Battery Storage. IEEE Transactions on Smart Grid, 2018, 9, 6590-6598.	6.2	14
17	Benchmarking a Scalable Approximate Dynamic Programming Algorithm for Stochastic Control of Grid-Level Energy Storage. INFORMS Journal on Computing, 2018, 30, 106-123.	1.0	38
18	Risk-Averse Approximate Dynamic Programming with Quantile-Based Risk Measures. Mathematics of Operations Research, 2018, 43, 554-579.	0.8	23

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19	A Knowledge Gradient Policy for Sequencing Experiments to Identify the Structure of RNA Molecules Using a Sparse Additive Belief Model. INFORMS Journal on Computing, 2018, 30, 750-767.	1.0	2
20	High-throughput in vivo mapping of RNA accessible interfaces to identify functional sRNA binding sites. Nature Communications, 2018, 9, 4084.	5.8	30
21	Optimal Learning for Stochastic Optimization with Nonlinear Parametric Belief Models. SIAM Journal on Optimization, 2018, 28, 2327-2359.	1.2	5
22	Parallel Nonstationary Direct Policy Search for Risk-Averse Stochastic Optimization. INFORMS Journal on Computing, 2017, 29, 332-349.	1.0	9
23	Optimization of a novel biophysical model using large scale in vivo antisense hybridization data displays improved prediction capabilities of structurally accessible RNA regions. Nucleic Acids Research, 2017, 45, 5523-5538.	6.5	23
24	ADAPT: A Price-Stabilizing Compliance Policy for Renewable Energy Certificates: The Case of SREC Markets. Operations Research, 2017, 65, 1429-1445.	1.2	16
25	Optimal online learning in bidding for sponsored search auctions. , 2017, , .		2
26	Perspectives of approximate dynamic programming. Annals of Operations Research, 2016, 241, 319-356.	2.6	45
27	From Single Commodity to Multiattribute Models for Locomotive Optimization: A Comparison of Optimal Integer Programming and Approximate Dynamic Programming. Transportation Science, 2016, 50, 366-389.	2.6	26
28	Tutorial on Stochastic Optimization in Energy—Part I: Modeling and Policies. IEEE Transactions on Power Systems, 2016, 31, 1459-1467.	4.6	98
29	Tutorial on Stochastic Optimization in Energy—Part II: An Energy Storage Illustration. IEEE Transactions on Power Systems, 2016, 31, 1468-1475.	4.6	82
30	An Approximate Dynamic Programming Algorithm for Monotone Value Functions. Operations Research, 2015, 63, 1489-1511.	1.2	50
31	Optimal Learning in Experimental Design Using the Knowledge Gradient Policy with Application to Characterizing Nanoemulsion Stability. SIAM-ASA Journal on Uncertainty Quantification, 2015, 3, 320-345.	1.1	25
32	Optimal learning with a local parametric belief model. Journal of Global Optimization, 2015, 63, 401-425.	1.1	3
33	Optimal Hour-Ahead Bidding in the Real-Time Electricity Market with Battery Storage Using Approximate Dynamic Programming. INFORMS Journal on Computing, 2015, 27, 525-543.	1.0	72
34	Mean-Conditional Value-at-Risk Optimal Energy Storage Operation in the Presence of Transaction Costs. IEEE Transactions on Power Systems, 2015, 30, 1222-1232.	4.6	62
35	A New Optimal Stepsize for Approximate Dynamic Programming. IEEE Transactions on Automatic Control, 2015, 60, 743-758.	3.6	14
36	Optimal learning for sequential sampling with non-parametric beliefs. Journal of Global Optimization, 2014, 58, 517-543.	1.1	10

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37	Bias-corrected Q-learning to control max-operator bias in Q-learning. , 2013, , .		12
38	Asymptotically optimal Bayesian sequential change detection and identification rules. Annals of Operations Research, 2013, 208, 337-370.	2.6	16
39	Ranking and selection meets robust optimization. , 2012, , .		4
40	Bayesian active learning with basis functions. , 2011, , .		8
41	Information Collection on a Graph. Operations Research, 2011, 59, 188-201.	1.2	21
42	Dynamic Resource Allocation Problems. Wiley Series in Probability and Statistics, 2011, , 541-592.	0.0	0
43	Adaptive Stochastic Control for the Smart Grid. Proceedings of the IEEE, 2011, 99, 1098-1115.	16.4	125
44	An hour-ahead prediction model for heavy-tailed spot prices. Energy Economics, 2011, 33, 1252-1266.	5.6	11
45	A review of stochastic algorithms with continuous value function approximation and some new approximate policy iteration algorithms for multidimensional continuous applications. Journal of Control Theory and Applications, 2011, 9, 336-352.	0.8	31
46	An adaptive-learning framework for semi-cooperative multi-agent coordination. , 2011, , .		4
47	May the best man win: Simulation optimization for match-making in e-sports. , 2011, , .		4
48	The Knowledge-Gradient Algorithm for Sequencing Experiments in Drug Discovery. INFORMS Journal on Computing, 2011, 23, 346-363.	1.0	75
49	Calibrating simulation models using the knowledge gradient with continuous parameters. , 2010, , .		10
50	Optimal control of dosage decisions in controlled ovarian hyperstimulation. Annals of Operations Research, 2010, 178, 223-245.	2.6	13
51	A dynamic model for the failure replacement ofÂagingÂhigh-voltage transformers. Energy Systems, 2010, 1, 31-59.	1.8	13
52	One-stage R&D portfolio optimization withÂanÂapplication to solid oxide fuel cells. Energy Systems, 2010, 1, 141-163.	1.8	6
53	Robust policies for the transformer acquisition andÂallocation problem. Energy Systems, 2010, 1, 245-272.	1.8	4
54	Minimizing total tardiness in a stochastic single machine scheduling problem using approximate dynamic programming. Journal of Scheduling, 2010, 13, 597-607.	1.3	24

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55	On the robustness of a one-period look-ahead policy in multi-armed bandit problems. Procedia Computer Science, 2010, 1, 1635-1644.	1.2	10
56	Approximate dynamic programming with correlated Bayesian beliefs. , 2010, , .		7
57	Optimal learning of transition probabilities in the two-agent newsvendor problem. , 2010, , .		3
58	Paradoxes in Learning and the Marginal Value of Information. Decision Analysis, 2010, 7, 378-403.	1.2	47
59	Evolutionary Policy Iteration Under a Sampling Regime for Stochastic Combinatorial Optimization. IEEE Transactions on Automatic Control, 2010, 55, 1254-1257.	3.6	10
60	A Monte Carlo knowledge gradient method for learning abatement potential of emissions reduction technologies. , 2009, , .		8
61	A convergent recursive least squares approximate policy iteration algorithm for multi-dimensional Markov decision process with continuous state and action spaces. , 2009, , .		9
62	The knowledge gradient algorithm for online subset selection. , 2009, , .		21
63	The Knowledge-Gradient Policy for Correlated Normal Beliefs. INFORMS Journal on Computing, 2009, 21, 599-613.	1.0	286
64	What you should know about approximate dynamic programming. Naval Research Logistics, 2009, 56, 239-249.	1.4	110
65	Simulation model calibration with correlated knowledge-gradients. , 2009, , .		6
66	An Approximate Dynamic Programming Algorithm for Large-Scale Fleet Management: A Case Application. Transportation Science, 2009, 43, 178-197.	2.6	125
67	An Optimal Approximate Dynamic Programming Algorithm for the Lagged Asset Acquisition Problem. Mathematics of Operations Research, 2009, 34, 210-237.	0.8	41
68	A Knowledge-Gradient Policy for Sequential Information Collection. SIAM Journal on Control and Optimization, 2008, 47, 2410-2439.	1.1	275
69	The knowledge-gradient stopping rule for ranking and selection. , 2008, , .		15
70	Approximate dynamic programming: Lessons from the field. , 2008, , .		7
71	The optimizing-simulator: Merging simulation and optimization using approximate dynamic programming. , 2007, , .		2
72	Adaptive stepsizes for recursive estimation with applications in approximate dynamic programming. Machine Learning, 2006, 65, 167-198.	3.4	117

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73	Dynamic-Programming Approximations for Stochastic Time-Staged Integer Multicommodity-Flow Problems. INFORMS Journal on Computing, 2006, 18, 31-42.	1.0	152
74	Combining cost-based and rule-based knowledge in complex resource allocation problems. IIE Transactions, 2006, 38, 159-172.	2.1	9
75	Learning Algorithms for Separable Approximations of Discrete Stochastic Optimization Problems. Mathematics of Operations Research, 2004, 29, 814-836.	0.8	98
76	Some Fixed-Point Results for the Dynamic Assignment Problem. Annals of Operations Research, 2003, 124, 15-33.	2.6	4
77	An adaptive dynamic programming algorithm for a stochastic multiproduct batch dispatch problem. Naval Research Logistics, 2003, 50, 742-769.	1.4	40
78	Exact algorithms for scheduling multiple families of jobs on parallel machines. Naval Research Logistics, 2003, 50, 823-840.	1.4	43
79	A Representational Paradigm for Dynamic Resource Transformation Problems. Annals of Operations Research, 2001, 104, 231-279.	2.6	22
80	On the Value of Optimal Myopic Solutions for Dynamic Routing and Scheduling Problems in the Presence of User Noncompliance. Transportation Science, 2000, 34, 67-85.	2.6	61
81	Adaptive Labeling Algorithms for the Dynamic Assignment Problem. Transportation Science, 2000, 34, 50-66.	2.6	39
82	A note on Bertsekas' small-label-first strategy. Networks, 1997, 29, 111-116.	1.6	1
83	Restricted recourse strategies for bounding the expected network recourse function. Annals of Operations Research, 1996, 64, 261-287.	2.6	2
84	Stochastic programs over trees with random arc capacities. Networks, 1994, 24, 161-175.	1.6	24
85	A network recourse decomposition method for dynamic networks with random arc capacities. Networks, 1994, 24, 369-384.	1.6	32
86	Bounding procedures for multistage stochastic dynamic networks. Networks, 1993, 23, 575-595.	1.6	2
87	On Algorithms for Nonlinear Dynamic Networks. Network Optimization Problems: Algorithms, Applications and Complexity, 1993, , 203-231.	0.1	2
88	Introduction to Markov Decision Processes. Wiley Series in Probability and Statistics, 0, , 57-109.	0.0	1
89	Policy Search. Wiley Series in Probability and Statistics, 0, , 249-288.	0.0	0
90	Approximating Value Functions. Wiley Series in Probability and Statistics, 0, , 289-336.	0.0	1

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91	Policies. Wiley Series in Probability and Statistics, 0, , 221-248.	0.0	0
92	Learning Value Function Approximations. Wiley Series in Probability and Statistics, 0, , 337-381.	0.0	0
93	The Challenges of Dynamic Programming. Wiley Series in Probability and Statistics, 0, , 1-23.	0.0	0
94	Optimizing While Learning. Wiley Series in Probability and Statistics, 0, , 383-418.	0.0	0
95	Modeling Dynamic Programs. Wiley Series in Probability and Statistics, 0, , 167-219.	0.0	0
96	Implementation Challenges. Wiley Series in Probability and Statistics, 0, , 593-606.	0.0	0
97	Exploration Versus Exploitation. Wiley Series in Probability and Statistics, 0, , 457-496.	0.0	0
98	Value Function Approximations for Resource Allocation Problems. Wiley Series in Probability and Statistics, 0, , 497-539.	0.0	0
99	Some Illustrative Models. Wiley Series in Probability and Statistics, 0, , 25-56.	0.0	0
100	Adaptive Estimation and Stepsizes. Wiley Series in Probability and Statistics, 0, , 419-456.	0.0	0