Michael C Fu

List of Publications by Year
in descending order

185 papers	4,836 citations	147801 31 h-index	123424 61 g-index
189 all docs	189 docs citations	189 times ranked	2159 citing authors

#	Article	IF	Citations
1	Feature Article: Optimization for simulation: Theory vs. Practice. INFORMS Journal on Computing, 2002, 14, 192-215.	1.7	673
2	Optimization via simulation: A review. Annals of Operations Research, 1994, 53, 199-247.	4.1	323
3	Efficient Simulation Budget Allocation for Selecting an Optimal Subset. INFORMS Journal on Computing, 2008, 20, 579-595.	1.7	195
4	A Model Reference Adaptive Search Method for Global Optimization. Operations Research, 2007, 55, 549-568.	1.9	157
5	Conditional Monte Carlo. , 1997, , .		147
6	Queueing theory in manufacturing: A survey. Journal of Manufacturing Systems, 1999, 18, 214-240.	13.9	135
7	Models for multi-echelon repairable item inventory systems with limited repair capacity. European Journal of Operational Research, 1997, 97, 480-492.	5.7	129
8	A time aggregation approach to Markov decision processes. Automatica, 2002, 38, 929-943.	5.0	115
9	Optimization of (s, S) Inventory Systems with Random Lead Times and a Service Level Constraint. Management Science, 1998, 44, S243-S256.	4.1	107
10	Pricing American options: a comparison of Monte Carlo simulation approaches. Journal of Computational Finance, 2001, 4, 39-88.	0.3	105
11	Chapter 19 Gradient Estimation. Handbooks in Operations Research and Management Science, 2006, 13, 575-616.	0.6	100
12	Sample Path Derivatives for (s, S) Inventory Systems. Operations Research, 1994, 42, 351-364.	1.9	83
13	An Adaptive Sampling Algorithm for Solving Markov Decision Processes. Operations Research, 2005, 53, 126-139.	1.9	80
14	Conditional Monte Carlo Estimation of Quantile Sensitivities. Management Science, 2009, 55, 2019-2027.	4.1	80
15	Simulation Allocation for Determining the Best Design in the Presence of Correlated Sampling. INFORMS Journal on Computing, 2007, 19, 101-111.	1.7	72
16	Two-timescale simultaneous perturbation stochastic approximation using deterministic perturbation sequences. ACM Transactions on Modeling and Computer Simulation, 2003, 13, 180-209.	0.8	70
17	Sensitivity Analysis for Monte Carlo Simulation of Option Pricing. Probability in the Engineering and Informational Sciences, 1995, 9, 417-446.	0.8	67
18	Ranking and Selection as Stochastic Control. IEEE Transactions on Automatic Control, 2018, 63, 2359-2373.	5.7	60

#	Article	IF	Citations
19	Optimal joint preventive maintenance and production policies. Naval Research Logistics, 2005, 52, 668-681.	2.2	58
20	What you should know about simulation and derivatives. Naval Research Logistics, 2008, 55, 723-736.	2.2	56
21	Solving Continuous-State POMDPs via Density Projection. IEEE Transactions on Automatic Control, 2010, 55, 1101-1116.	5.7	51
22	A Model Reference Adaptive Search Method for Stochastic Global Optimization. Communications in Information and Systems, 2008, 8, 245-276.	0.5	51
23	Optimization of discrete event systems via simultaneous perturbation stochastic approximation. IIE Transactions, 1997, 29, 233-243.	2.1	49
24	Efficient Dynamic Simulation Allocation in Ordinal Optimization. IEEE Transactions on Automatic Control, 2006, 51, 2005-2009.	5.7	49
25	Simulation optimization using the cross-entropy method with optimal computing budget allocation. ACM Transactions on Modeling and Computer Simulation, 2010, 20, 1-22.	0.8	48
26	A New Unbiased Stochastic Derivative Estimator for Discontinuous Sample Performances with Structural Parameters. Operations Research, 2018, 66, 487-499.	1.9	48
27	Techniques for optimization via simulation: an experimental study on an (s, S) inventory system. IIE Transactions, 1997, 29, 191-199.	2.1	46
28	Estimating customer service in a two-location continuous review inventory model with emergency transshipments. European Journal of Operational Research, 2003, 145, 569-584.	5.7	46
29	Probabilistic Error Bounds for Simulation Quantile Estimators. Management Science, 2003, 49, 230-246.	4.1	45
30	Two-timescale algorithms for simulation optimization of hidden Markov models. IIE Transactions, 2001, 33, 245-258.	2.1	39
31	Stochastic Gradient Estimation. Profiles in Operations Research, 2015, , 105-147.	0.4	38
32	Simulation optimization: A tutorial overview and recent developments in gradient-based methods. , 2014, , .		36
33	Some topics for simulation optimization. , 2008, , .		34
34	Minimizing work-in-process and material handling in the facilities layout problem. IIE Transactions, 1997, 29, 29-36.	2.1	33
35	Dynamic Sampling Allocation and Design Selection. INFORMS Journal on Computing, 2016, 28, 195-208.	1.7	31
36	A New Stochastic Derivative Estimator for Discontinuous Payoff Functions with Application to Financial Derivatives. Operations Research, 2012, 60, 447-460.	1.9	30

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37	Myopic Allocation Policy With Asymptotically Optimal Sampling Rate. IEEE Transactions on Automatic Control, 2017, 62, 2041-2047.	5.7	30
38	Efficient Design and Sensitivity Analysis of Control Charts Using Monte Carlo Simulation. Management Science, 1999, 45, 395-413.	4.1	29
39	Smoothed perturbation analysis derivative estimation for Markov chains. Operations Research Letters, 1994, 15, 241-251.	0.7	28
40	Optimization of discrete event systems via simultaneous perturbation stochastic approximation. IIE Transactions, 1997, 29, 233-243.	2.1	28
41	Simulation-Based Algorithms for Markov Decision Processes. Communications and Control Engineering, 2013, , .	1.6	28
42	Variance-Gamma and Monte Carlo. , 2007, , 21-34.		27
43	Monotone Optimal Policies for a Transient Queueing Staffing Problem. Operations Research, 2000, 48, 327-331.	1.9	26
44	Sequential Selection with Unknown Correlation Structures. Operations Research, 2015, 63, 931-948.	1.9	26
45	Optimal Exercise Policies and Simulation-Based Valuation for American-Asian Options. Operations Research, 2003, 51, 52-66.	1.9	25
46	A Survey of Some Model-Based Methods for Global Optimization. Systems and Control: Foundations and Applications, 2012, , 157-179.	0.3	25
47	Technical Noteâ€"On Estimating Quantile Sensitivities via Infinitesimal Perturbation Analysis. Operations Research, 2015, 63, 435-441.	1.9	25
48	AlphaGo and Monte Carlo tree search: The simulation optimization perspective. , 2016, , .		25
49	Optimal importance sampling in securities pricing. Journal of Computational Finance, 2002, 5, 27-50.	0.3	25
50	(<i>s, S</i>) Inventory Systems with Random Lead Times: <i>Harris Recurrence and Its Implications in Sensitivity Analysis</i>. Probability in the Engineering and Informational Sciences, 1994, 8, 355-376.	0.8	24
51	Gradient Extrapolated Stochastic Kriging. ACM Transactions on Modeling and Computer Simulation, 2014, 24, 1-25.	0.8	24
52	Optimal Preventive Maintenance Scheduling in Semiconductor Manufacturing Systems: Software Tool and Simulation Case Studies. IEEE Transactions on Semiconductor Manufacturing, 2010, 23, 477-489.	1.7	23
53	Efficient Simulation Resource Sharing and Allocation for Selecting the Best. IEEE Transactions on Automatic Control, 2013, 58, 1017-1023.	5.7	23
54	A particle filtering framework for randomized optimization algorithms. , 2008, , .		22

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55	Application of perturbation analysis to a class of periodic review (s, S) inventory systems. Naval Research Logistics, 1994, 41, 47-80.	2.2	21
56	Stochastic Optimization in a Cumulative Prospect Theory Framework. IEEE Transactions on Automatic Control, 2018, 63, 2867-2882.	5.7	21
57	Consistency of infinitesimal perturbation analysis for the GI/G/m queue. European Journal of Operational Research, 1991, 54, 121-139.	5.7	20
58	A simulation study of donor scheduling systems for the American Red Cross. Computers and Operations Research, 1993, 20, 199-213.	4.0	20
59	Pricing American-Style Derivatives with European Call Options. Management Science, 2006, 52, 95-110.	4.1	20
60	An Asymptotically Efficient Simulation-Based Algorithm for Finite Horizon Stochastic Dynamic Programming. IEEE Transactions on Automatic Control, 2007, 52, 89-94.	5.7	19
61	Simulation optimization of (s,S) inventory systems. , 1992, , .		18
62	Simulation and Optimization. , 2008, , 247-260.		17
63	Adaptive System Optimization Using Random Directions Stochastic Approximation. IEEE Transactions on Automatic Control, 2017, 62, 2223-2238.	5.7	17
64	Techniques for optimization via simulation: an experimental study on an (s,S) inventory system. IIE Transactions, 1997, 29, 191-199.	2.1	16
65	Second Derivative Sample Path Estimators for the GI/G/m Queue. Management Science, 1993, 39, 359-383.	4.1	15
66	ONLINE TRAFFIC LIGHT CONTROL THROUGH GRADIENT ESTIMATION USING STOCHASTIC FLUID MODELS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 90-95.	0.4	15
67	Title is missing!. Discrete Event Dynamic Systems: Theory and Applications, 2002, 12, 447-469.	1.5	14
68	Gradient-Based Myopic Allocation Policy: An Efficient Sampling Procedure in a Low-Confidence Scenario. IEEE Transactions on Automatic Control, 2018, 63, 3091-3097.	5.7	14
69	Recursive Learning Automata Approach to Markov Decision Processes. IEEE Transactions on Automatic Control, 2007, 52, 1349-1355.	5.7	13
70	Simulation optimization: A panel on the state of the art in research and practice. , 2014, , .		13
71	Particle Filtering Framework for a Class of Randomized Optimization Algorithms. IEEE Transactions on Automatic Control, 2014, 59, 1025-1030.	5.7	13
72	Non-monotonicity of probability of correct selection. , 2015, , .		13

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73	On sample average approximation algorithms for determining the optimal importance sampling parameters in pricing financial derivatives on LÃ©vy processes. Operations Research Letters, 2016, 44, 44-49.	0.7	13
74	Maximum Likelihood Estimation by Monte Carlo Simulation: Toward Data-Driven Stochastic Modeling. Operations Research, 2020, 68, 1896-1912.	1.9	13
75	Capital renewal as a real option. European Journal of Operational Research, 2011, 214, 109-117.	5.7	12
76	Optimal Army officer force profiles. Optimization Letters, 2015, 9, 1769-1785.	1.6	12
77	Option Pricing for a Jump-Diffusion Model with General Discrete Jump-Size Distributions. Management Science, 2017, 63, 3961-3977.	4.1	12
78	Applications of generalized likelihood ratio method to distribution sensitivities and steady-state simulation. Discrete Event Dynamic Systems: Theory and Applications, 2018, 28, 109-125.	1.5	12
79	An Overview of Stochastic Approximation. Profiles in Operations Research, 2015, , 149-178.	0.4	12
80	A survey of some simulation-based algorithms for Markov decision processes. Communications in Information and Systems, 2007, 7, 59-92.	0.5	12
81	An Evolutionary Random Policy Search Algorithm for Solving Markov Decision Processes. INFORMS Journal on Computing, 2007, 19, 161-174.	1.7	11
82	Ranking and selection with unknown correlation structures. , 2012, , .		11
83	History of seeking better solutions, AKA simulation optimization. , 2017, , .		11
84	Simulation-Based Algorithms for Markov Decision Processes: Monte Carlo Tree Search from AlphaGo to AlphaZero. Asia-Pacific Journal of Operational Research, 2019, 36, 1940009.	1.3	11
85	New global optimization algorithms for model-based clustering. Computational Statistics and Data Analysis, 2009, 53, 3999-4017.	1.2	10
86	Adaptive Adversarial Multi-Armed Bandit Approach to Two-Person Zero-Sum Markov Games. IEEE Transactions on Automatic Control, 2010, 55, 463-468.	5.7	10
87	Regression Models Augmented with Direct Stochastic Gradient Estimators. INFORMS Journal on Computing, 2014, 26, 484-499.	1.7	10
88	On the asymptotic analysis of quantile sensitivity estimation by Monte Carlo simulation. , 2017, , .		10
89	Perturbation Analysis of a Dynamic Priority Call Center. IEEE Transactions on Automatic Control, 2010, 55, 1191-1196.	5.7	9
90	Gradient-based simulated maximum likelihood estimation for LÃ©vy-driven Ornsteinâ€“Uhlenbeck stochastic volatility models. Quantitative Finance, 2014, 14, 1399-1414.	1.7	9

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91	MONTE CARLO TREE SEARCH: A TUTORIAL. , 2018, , .		9
92	Sensitivity Analysis in Monte Carlo Simulation of Stochastic Activity Networks. , 2006, , 351-366.		9
93	Predictive Modeling for Epidemic Outbreaks: A New Approach and COVID-19 Case Study. Asia-Pacific Journal of Operational Research, 2020, 37, 2050028.	1.3	9
94	Comparison of gradient estimation techniques for queues with non-identical servers. Computers and Operations Research, 1995, 22, 715-729.	4.0	8
95	A NOTE ON PERTURBATION ANALYSIS ESTIMATORS FOR AMERICAN-STYLE OPTIONS. Probability in the Engineering and Informational Sciences, 2000, 14, 385-392.	0.8	8
96	Applying Model Reference Adaptive Search to American-Style Option Pricing. , 2006, , .		8
97	Dynamic sample budgetÂallocation in model-based optimization. Journal of Global Optimization, 2011, 50, 575-596.	1.8	8
98	Efficient Sampling Allocation Procedures for Optimal Quantile Selection. INFORMS Journal on Computing, 2021, 33, 230-245.	1.7	8
99	Learning logistic demand curves in business-to-business pricing. , 2013, , .		7
100	Gradient-based simulated maximum likelihood estimation for stochastic volatility models using characteristic functions. Quantitative Finance, 2016, 16, 1393-1411.	1.7	7
101	Markov Decision Processes, AlphaGo, and Monte Carlo Tree Search: Back to the Future. , 2017, , 68-88.		7
102	Dynamic estimation of auditory temporal response functions via state-space models with Gaussian mixture process noise. PLoS Computational Biology, 2020, 16, e1008172.	3.2	7
103	An Optimal Computing Budget Allocation Tree Policy for Monte Carlo Tree Search. IEEE Transactions on Automatic Control, 2022, 67, 2685-2699.	5.7	7
104	Dynamic Sampling Allocation Under Finite Simulation Budget for Feasibility Determination. INFORMS Journal on Computing, 2022, 34, 557-568.	1.7	7
105	On unbounded hazard rates for smoothed perturbation analysis. Journal of Applied Probability, 1995, 32, 659-667.	0.7	6
106	A density projection approach to dimension reduction for continuous-state POMDPs. , 2008, , .		6
107	Model-based Evolutionary Optimization. , 2010, , .		6
108	A tutorial overview of optimization via discrete-event simulation. , 1994, , 409-418.		5

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109	On the relationship of capacitated production/inventory models to manufacturing flow control models. Operations Research Letters, 1995, 18, 15-24.	0.7	5
110	Pricing of financial derivatives via simulation. , 1995, , .		5
111	Sensitivity analysis for barrier options. , 2009, , .		5
112	A REVIEW OF STATIC AND DYNAMIC OPTIMIZATION FOR RANKING AND SELECTION. , 2018, , .		5
113	Monte Carlo tree search with optimal computing budget allocation. , 2019, , .		5
114	A Simulation-Based Policy Iteration Algorithm for Average Cost Unichain Markov Decision Processes. Operations Research/ Computer Science Interfaces Series, 2000, , 161-182.	0.3	5
115	Sample Path Derivatives for (s, S) Inventory Systems with Price Determination. , 2005, , 229-246.		4
116	Conditional Monte Carlo Gradient Estimation in Economic Design of Control Limits. Production and Operations Management, 2009, 18, 60-77.	3.8	4
117	On direct gradient enhanced simulation metamodels. , 2012, , .		4
118	Importance Splitting for Finite-Time Rare Event Simulation. IEEE Transactions on Automatic Control, 2018, 63, 1760-1767.	5.7	4
119	Random Directions Stochastic Approximation With Deterministic Perturbations. IEEE Transactions on Automatic Control, 2020, 65, 2450-2465.	5.7	4
120	Computing Sensitivities for Distortion Risk Measures. INFORMS Journal on Computing, 0, , .	1.7	4
121	Simulation Optimization. , 2013, , 1418-1423.		4
122	Simulation Optimization in the Future: Evolution or Revolution?. INFORMS Journal on Computing, 2002, 14, 226-227.	1.7	3
123	Estimating distribution sensitivity using generalized likelihood ratio method. , 2016, , .		3
124	Learning Demand Curves in B2B Pricing: A New Framework and Case Study. Production and Operations Management, 2020, 29, 1287-1306.	3.8	3
125	Markov Decision Processes. Communications and Control Engineering, 2013, , 1-17.	1.6	3
126	Simulation of Stochastic Discrete-Event Systems. , 2013, , 1410-1418.		3

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127	A Tutorial Introduction to Monte Carlo Tree Search. , 2020, , .		3
128	Variance reduction for generalized likelihood ratio method by conditional Monte Carlo and randomized Quasi-Monte Carlo methods. Journal of Management Science and Engineering, 2022, 7, 550-577.	2.8	3
129	Sample path properties of the G/D/m queue. European Journal of Operational Research, 1993, 65, 270-273.	5.7	2
130	Transfer optimization via simultaneous perturbation stochastic approximation. , 1995, , .		2
131	A comparison of perturbation analysis techniques. , 1996, , .		2
132	Setting thresholds for periodic order release. Journal of Intelligent Manufacturing, 1997, 8, 369-383.	7.3	2
133	Dynamic lead time promising. , 2011, , .		2
134	Estimation of State-Space Models with Gaussian Mixture Process Noise. , 2019, , .		2
135	Estimating Quantile Sensitivity for Financial Models with Correlations and Jumps. , 2019, , .		2
136	Optimal unbiased estimation for expected cumulative discounted cost. European Journal of Operational Research, 2020, 286, 604-618.	5.7	2
137	Option pricing under a discrete-time Markov switching stochastic volatility with co-jump model. Frontiers of Mathematical Finance, 2022, 1, 137.	0.7	2
138	Overview of the Handbook. Profiles in Operations Research, 2015, , 1-7.	0.4	2
139	Variance Reduction for Generalized Likelihood Ratio Method in Quantile Sensitivity Estimation. , 2021, , .		2
140	Bias properties of infinitesimal perturbation analysis for systems with parallel servers. Computers and Operations Research, 1992, 19, 409-423.	4.0	1
141	Adversarial Multi-Armed Bandit Approach to Stochastic Optimization. , 2006, , .		1
142	A model reference adaptive search method for stochastic optimization with applications to Markov decision processes. , 2007, , .		1
143	Adversarial multi-armed bandit approach to two-person zero-sum Markov games. , 2007, , .		1
144	Estimating Greeks for Variance-Gamma. , 2010, , .		1

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145	A dynamic framework for statistical selection problems. , 2013, , .		1
146	An empirical sensitivity analysis of the Kiefer-Wolfowitz algorithm and its variants. , 2013, , .		1
147	Bias Reduction in Estimating Quantile Sensitivities. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 10463-10468.	0.4	1
148	Optimal importance sampling for simulation of LÃ©vy processes. , 2015, , .		1
149	Simulation-based work load and job release control for semiconductor manufacturing. , 2015, , .		1
150	On the regularity conditions and applications for generalized likelihood ratio method. , 2016, , .		1
151	Data-driven adaptive threshold control for bike share systems. , 2017, , .		1
152	Technical Noteâ€"Central Limit Theorems for Estimated Functions at Estimated Points. Operations Research, 2020, 68, 1557-1563.	1.9	1
153	A new stochastic gradient estimator for American option pricing. , 2009, , .		1
154	Two Timescale SPSA Algorithms for Rate-Based ABR Flow Control. Kluwer International Series in Engineering and Computer Science, 2000, , 367-378.	0.2	1
155	Approximate Dynamic Programming. , 2013, , 73-77.		1
156	Sensitivity Analysis of ARC Criticalities in Stochastic Activity Networks. , 2020, , .		1
157	Estimating a Conditional Expectation with the Generalized Likelihood Ratio Method. , 2021, , .		1
158	Variance Properties of Second Derivative Perturbation Analysis Estimators for Single-Server Queues. , 1990, , .		0
159	On Perturbation Propagation for Smoothed Perturbation Analysis. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1996, 29, 4790-4794.	0.4	0
160	<title>Rate-based ABR flow control using two timescale SPSA</title>. , 1999, , .		0
161	Two-timescale algorithms for simulation optimization of hidden Markov models. IIE Transactions, 2001, 33, 245-258.	2.1	0
162	A numerical method for financial decision problems under stochastic volatility. , 2009, , .		0

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163	On-Line Control Methods via Simulation. Communications and Control Engineering, 2013, , 179-218.	1.6	0
164	Smoothed Perturbation Analysis: A Retrospective and Prospective Look. , 2013, , 25-44.		0
165	Regulation of systemic risk through contributory endogenous agent-based modeling. , 2014, , .		0
166	On the sensitivity of greek kernel estimators to bandwidth parameters. , 2014, , .		0
167	Quantile sensitivity estimation for dependent sequences. Journal of Applied Probability, 2016, 53, 715-732.	0.7	0
168	ON EFFICIENCIES OF STOCHASTIC OPTIMIZATION PROCEDURES UNDER IMPORTANCE SAMPLING. , 2018, , .		0
169	EUROPEAN OPTION PRICING WITH STOCHASTIC VOLATILITY AND JUMPS: COMPARISON OF MONTE CARLO AND FAST FOURIER TRANSFORM METHODS. , 2018, , .		0
170	SEQUENTIAL FIRST-ORDER RESPONSE SURFACE METHODOLOGY AUGMENTED WITH DIRECT GRADIENTS. , 2018, , .		0
171	Utility-Based Statistical Selection Procedures. , 2019, , .		0
172	A Spectral Index for Selecting the Best Alternative. , 2019, , .		0
173	Bayesian Sequential Experimental Design for Stochastic Kriging with Jackknife Error Estimates. , 2019, , .		0
174	A case study for optimal dynamic simulation allocation in ordinal optimization. , 2004, , .		0
175	New Global Optimization Algorithms for Model-Based Clustering. SSRN Electronic Journal, 0, , .	0.4	0
176	Model Reference Adaptive Search. Communications and Control Engineering, 2013, , 89-177.	1.6	0
177	Perturbation Analysis. , 2013, , 1114-1119.		0
178	Population-Based Evolutionary Approaches. Communications and Control Engineering, 2013, , 61-87.	1.6	0
179	Gradient Estimation and Mountain Range Options. SSRN Electronic Journal, 0, , .	0.4	0
180	Differentiation via Logarithmic Expansions. Asia-Pacific Journal of Operational Research, 2020, 37, 1950034.	1.3	0

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181	Sensitivity Analysis and Time-Cost Tradeoffs in Stochastic Activity Networks. , 2021, , .		0
182	Title is missing!. , 2020, 16, e1008172.		0
183	Title is missing!. , 2020, 16, e1008172.		0
184	Title is missing!. , 2020, 16, e1008172.		0
185	Title is missing!. , 2020, 16, e1008172.		0