Barry L Nelson

List of Publications by Year
in descending order

117 papers	4,459 citations	147786 31 h-index	138468 58 g-index
123 all docs	123 docs citations	123 times ranked	1291 citing authors

#	Article	IF	Citations
1	A multi-fidelity modelling approach for airline disruption management using simulation. Journal of the Operational Research Society, 2022, 73, 2228-2241.	3.4	4
2	Plausible Screening Using Functional Properties for Simulations with Large Solution Spaces. Operations Research, 2022, 70, 3473-3489.	1.9	1
3	Rapid Discrete Optimization via Simulation with Gaussian Markov Random Fields. INFORMS Journal on Computing, 2021, 33, 915-930.	1.7	11
4	Experiment Design and Analysis. Profiles in Operations Research, 2021, , 199-229.	0.4	1
5	Flat Chance! Using Stochastic Gradient Estimators to Assess Plausible Optimality for Convex Functions. , 2021, , .		0
6	Sensitivity Analysis in Clinical Trial Simulation At Sas Institute. , 2021, , .		1
7	Uncertainty Quantification in Vehicle Content Optimization for General Motors. Interfaces, 2020, 50, 225-238.	1.5	1
8	Metric Learning for Simulation Analytics. , 2020, , .		0
9	The Ease of Fitting but Futility of Testing a Nonstationary Poisson Processes from One Sample Path. , 2020, , .		2
10	Generalized Integrated Brownian Fields for Simulation Metamodeling. Operations Research, 2019, 67, 874-891.	1.9	6
11	Detecting bias due to input modelling in computer simulation. European Journal of Operational Research, 2019, 279, 869-881.	5.7	7
12	Virtual Statistics in Simulation via k Nearest Neighbors. INFORMS Journal on Computing, 2019, 31, 576-592.	1.7	8
13	A Spline-Based Method for Modelling and Generating A Nonhomogeneous Poisson Process. , 2019, , .		8
14	Estimating Sensitivity to Input Model Variance. , 2019, , .		3
15	Gaussian Markov Random Fields for Discrete Optimization via Simulation: Framework and Algorithms. Operations Research, 2019, 67, 250-266.	1.9	30
16	BETTER INPUT MODELING VIA MODEL AVERAGING. , 2018, , .		2
17	MULTI-FIDELITY SIMULATION OPTIMISATION FOR AIRLINE DISRUPTION MANAGEMENT. , 2018, , .		5
18	PLAUSIBLE OPTIMA. , 2018, , .		3

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19	A NEW FRAMEWORK FOR PARALLEL RANKING & SELECTION USING AN ADAPTIVE STANDARD. , 2018, , .		8
20	Technical Note: The MAP_t/Ph_t/∞ Queueing System and Multiclass [MAP_t/Ph_t/∞]^K Queueing Network. INFORMS Journal on Computing, 2017, 29, 367-376.	1.7	0
21	Simulation-based predictive analytics for dynamic queueing systems. , 2017, , .		7
22	Computational methods for optimization via simulation using Gaussian Markov Random Fields. , 2017, , .		5
23	Detecting bias due to input modelling in computer simulation. , 2017, , .		0
24	Parallel Ranking and Selection. Simulation Foundations, Methods and Applications, 2017, , 249-275.	0.1	25
25	Technology transfer of simulation analysis methodology: One man's opinion. , 2016, , .		2
26	A simulation analytics approach to dynamic risk monitoring. , 2016, , .		7
27	Simulation analytics for virtual statistics via k nearest neighbors. , 2016, , .		0
28	Input uncertainty quantification for simulation models with piecewise-constant non-stationary Poisson arrival processes. , 2016, , .		10
29	Simulation: The past 10 years and the next 10 years. , 2016, , .		4
30	Indifference-Zone-Free Selection of the Best. Operations Research, 2016, 64, 1499-1514.	1.9	49
31	Shapley Effects for Global Sensitivity Analysis: Theory and Computation. SIAM-ASA Journal on Uncertainty Quantification, 2016, 4, 1060-1083.	2.0	84
32	General-purpose ranking and selection for computer simulation. IIE Transactions, 2016, 48, 555-564.	2.1	8
33	'Some tactical problems in digital simulation' for the next 10 years. Journal of Simulation, 2016, 10, 2-11.	1.5	49
34	Estimating and interpreting the waiting time for customers arriving to a non-stationary queueing system. , 2015, , .		5
35	Input uncertainty and indifference-zone ranking & selection. , 2015, , .		16
36	Quickly Assessing Contributions to Input Uncertainty. IIE Transactions, 2015, 47, 893-909.	2.1	39

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37	Fully Sequential Procedures for Large-Scale Ranking-and-Selection Problems in Parallel Computing Environments. Operations Research, 2015, 63, 1177-1194.	1.9	72
38	Single-experiment input uncertainty. Journal of Simulation, 2015, 9, 249-259.	1.5	25
39	Discrete Optimization via Simulation. Profiles in Operations Research, 2015, , 9-44.	0.4	38
40	Advanced tutorial: Input uncertainty quantification. , 2014, , .		41
41	Quantifying Input Uncertainty via Simulation Confidence Intervals. INFORMS Journal on Computing, 2014, 26, 74-87.	1.7	88
42	Discrete optimization via simulation using Gaussian Markov random fields. , 2014, , .		16
43	A Bayesian Framework for Quantifying Uncertainty in Stochastic Simulation. Operations Research, 2014, 62, 1439-1452.	1.9	69
44	Foundations and Methods of Stochastic Simulation. Profiles in Operations Research, 2013, , .	0.4	79
45	Modeling and simulation grand challenges: An OR/MS perspective. , 2013, , .		19
46	Generalized integrated brownian fields for simulation metamodeling. , 2013, , .		11
47	A quicker assessment of input uncertainty. , 2013, , .		8
48	Empirical stochastic branch-and-bound for optimization via simulation. IIE Transactions, 2013, 45, 685-698.	2.1	25
49	Enhancing Stochastic Kriging Metamodels with Gradient Estimators. Operations Research, 2013, 61, 512-528.	1.9	63
50	The simulation Curmudgeon. , 2013, , .		1
51	The effects of common random numbers on stochastic kriging metamodels. ACM Transactions on Modeling and Computer Simulation, 2012, 22, 1-20.	0.8	62
52	A quick assessment of input uncertainty. , 2012, , .		23
53	Moving Least Squares regression for high dimensional simulation metamodeling. , 2012, , .		3
54	Stochastic kriging for conditional value-at-risk and its sensitivities. , 2012, , .		6

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55	Thirty years of “Batch Size Effects”. , 2011, , .		2
56	Metamodelling for cycle time-throughput-product mix surfaces using progressive model fitting. Production Planning and Control, 2011, 22, 50-68.	8.8	16
57	Relative error stochastic kriging. , 2011, , .		1
58	Optimization via Simulation Over Discrete Decision Variables. , 2010, , 193-207.		23
59	Simulation on demand for pricing many securities. , 2010, , .		6
60	Common random numbers and stochastic kriging. , 2010, , .		7
61	Industrial strength COMPASS. ACM Transactions on Modeling and Computer Simulation, 2010, 20, 1-29.	0.8	125
62	An efficient simulation procedure for point estimation of expected shortfall. , 2010, , .		5
63	Stochastic Kriging for Simulation Metamodeling. Operations Research, 2010, 58, 371-382.	1.9	471
64	Bootstrapping-based fixed-width confidence intervals for ranking and selection. , 2010, , .		4
65	Empirical stochastic branch-and-bound for optimization via simulation. , 2010, , .		0
66	The influence of correlation functions on stochastic kriging metamodels. , 2010, , .		13
67	Fully sequential selection procedures with control variates. IIE Transactions, 2009, 42, 71-82.	2.1	12
68	A brief introduction to optimization via simulation. , 2009, , .		75
69	Indirect cycle time quantile estimation using the Cornishâ€"Fisher expansion. IIE Transactions, 2009, 42, 31-44.	2.1	25
70	In memory of Richard E. Rosenthal: 1950â€"2008. Naval Research Logistics, 2008, 55, 193-193.	2.2	0
71	Stochastic kriging for simulation metamodeling. , 2008, , .		48
72	Panel discussion: What makes good research in modeling and simulation: Assessing the quality, success, and utility of M&S research. , 2008, , .		4

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73	Response surface methodology for simulating hedging and trading strategies. , 2008, , .		5
74	The more plot: Displaying measures of risk & error from simulation output. , 2008, , .		28
75	Using simulation early in the design of a fuel injector production line. , 2008, , .		1
76	Using quantiles in ranking and selection procedures. , 2007, , .		15
77	A confidence interval for tail conditional expectation via two-level simulation. , 2007, , .		6
78	Fortieth anniversary special panel: Landmark papers. , 2007, , .		3
79	Selecting the best system when systems are revealed sequentially. IIE Transactions, 2007, 39, 723-734.	2.1	46
80	Recent advances in ranking and selection. , 2007, , .		4
81	Metamodeling for cycle time-throughput-product mix surfaces using progressive model fitting. , 2007, , .		2
82	Fortieth anniversary special panel: Landmark papers. , 2007, , .		1
83	Efficient generation of cycle time-throughput curves through simulation and metamodeling. Naval Research Logistics, 2007, 54, 78-93.	2.2	61
84	From the editor: Online supplements to published papers in NRL. Naval Research Logistics, 2007, 54, 709-709.	2.2	0
85	Chapter 17 Selecting the Best System. Handbooks in Operations Research and Management Science, 2006, 13, 501-534.	0.6	187
86	An Adaptive Procedure for Estimating Coherent Risk Measures Based on Generalized Scenarios. , 2006, , .		3
87	Chapter 1 Stochastic Computer Simulation. Handbooks in Operations Research and Management Science, 2006, 13, 1-18.	0.6	5
88	Chapter 15 Correlation-Based Methods for Output Analysis. Handbooks in Operations Research and Management Science, 2006, 13, 455-475.	0.6	9
89	Controlled Sequential Bifurcation: A New Factor-Screening Method for Discrete-Event Simulation. Operations Research, 2006, 54, 743-755.	1.9	83
90	On the Asymptotic Validity of Fully Sequential Selection Procedures for Steady-State Simulation. Operations Research, 2006, 54, 475-488.	1.9	104

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91	A sequential procedure for neighborhood selection-of-the-best in optimization via simulation. European Journal of Operational Research, 2006, 173, 283-298.	5.7	53
92	Discrete Optimization via Simulation Using COMPASS. Operations Research, 2006, 54, 115-129.	1.9	251
93	Dispatching vehicles in a mega container terminal. OR Spectrum, 2005, 27, 491-506.	3.4	98
94	The tradeoff between sampling and switching: New sequential procedures for indifference-zone selection. IIE Transactions, 2005, 37, 623-634.	2.1	54
95	Some Almost-Sure Convergence Properties Useful in Sequential Analysis. Sequential Analysis, 2005, 24, 411-419.	0.5	6
96	50th Anniversary Article: Stochastic Simulation Research inManagement Science. Management Science, 2004, 50, 855-868.	4.1	50
97	The Pht/Pht/â^ž Queueing System: Part Iâ€"The Single Node. INFORMS Journal on Computing, 2004, 16, 266-274.	1.7	31
98	Using Ranking and Selection to â€œClean Upâ€•after Simulation Optimization. Operations Research, 2003, 51, 814-825.	1.9	155
99	A framework for simulation-optimization software. IIE Transactions, 2003, 35, 221-229.	2.1	45
100	A combined procedure for optimization via simulation. ACM Transactions on Modeling and Computer Simulation, 2003, 13, 155-179.	0.8	93
101	Ranking and Selection for Steady-State Simulation: Procedures and Perspectives. INFORMS Journal on Computing, 2002, 14, 2-19.	1.7	74
102	Estimating the probability that a simulated system will be the best. Naval Research Logistics, 2002, 49, 341-358.	2.2	5
103	Comparisons with a Standard in Simulation Experiments. Management Science, 2001, 47, 449-463.	4.1	73
104	Simple Procedures for Selecting the Best Simulated System When the Number of Alternatives is Large. Operations Research, 2001, 49, 950-963.	1.9	270
105	Selecting a good system: procedures and inference. IIE Transactions, 2001, 33, 149-166.	2.1	1
106	A fully sequential procedure for indifference-zone selection in simulation. ACM Transactions on Modeling and Computer Simulation, 2001, 11, 251-273.	0.8	331
107	Selecting a good system: procedures and inference. IIE Transactions, 2001, 33, 149-166.	2.1	18
108	Efficient multinomial selection in simulation. Naval Research Logistics, 1998, 45, 459-482.	2.2	20

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109	Multiple Comparisons in the General Linear Model. Journal of Computational and Graphical Statistics, 1998, 7, 23-41.	1.7	25
110	Computer-assisted simulation analysis. IIE Transactions, 1997, 29, 221-231.	2.1	4
111	Computer-assisted simulation analysis. IIE Transactions, 1997, 29, 221-231.	2.1	2
112	Using Common Random Numbers for Indifference-Zone Selection and Multiple Comparisons in Simulation. Management Science, 1995, 41, 1935-1945.	4.1	130
113	Robust multiple comparisons under common random numbers. ACM Transactions on Modeling and Computer Simulation, 1993, 3, 225-243.	0.8	18
114	Online Risk Monitoring Using Offline Simulation. INFORMS Journal on Computing, 0, , .	1.7	10
115	Inputâ€"Output Uncertainty Comparisons for Discrete Optimization via Simulation. Operations Research, 0, , .	1.9	19
116	Meaningful Sensitivities: A New Family of Simulation Sensitivity Measures. IISE Transactions, 0, , 1-30.	2.4	3
117	Reducing Simulation Input-Model Risk via Input Model Averaging. INFORMS Journal on Computing, 0, , .	1.7	3