

# Emanuele Borgonovo

## List of Publications by Year in descending order

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Version: 2024-02-01

87  
papers

5,026  
citations

147566

31  
h-index

95083

68  
g-index

90  
all docs

90  
docs citations

90  
times ranked

3292  
citing authors

#	ARTICLE	IF	CITATIONS
1	A new uncertainty importance measure. Reliability Engineering and System Safety, 2007, 92, 771-784.	5.1	726
2	Sensitivity analysis: A review of recent advances. European Journal of Operational Research, 2016, 248, 869-887.	3.5	664
3	Global sensitivity measures from given data. European Journal of Operational Research, 2013, 226, 536-550.	3.5	279
4	Forty years of the European Journal of Operational Research: A bibliometric overview. European Journal of Operational Research, 2017, 262, 803-816.	3.5	242
5	A new importance measure for risk-informed decision making. Reliability Engineering and System Safety, 2001, 72, 193-212.	5.1	216
6	Measuring Uncertainty Importance: Investigation and Comparison of Alternative Approaches. Risk Analysis, 2006, 26, 1349-1361.	1.5	216
7	The Future of Sensitivity Analysis: An essential discipline for systems modeling and policy support. Environmental Modelling and Software, 2021, 137, 104954.	1.9	209
8	Moment Independent Importance Measures: New Results and Analytical Test Cases. Risk Analysis, 2011, 31, 404-428.	1.5	132
9	Model emulation and moment-independent sensitivity analysis: An application to environmental modelling. Environmental Modelling and Software, 2012, 34, 105-115.	1.9	129
10	A Monte Carlo methodological approach to plant availability modeling with maintenance, aging and obsolescence. Reliability Engineering and System Safety, 2000, 67, 61-73.	5.1	102
11	A Common Rationale for Global Sensitivity Measures and Their Estimation. Risk Analysis, 2016, 36, 1871-1895.	1.5	91
12	Sensitivity analysis with finite changes: An application to modified EOQ models. European Journal of Operational Research, 2010, 200, 127-138.	3.5	88
13	Invariant Probabilistic Sensitivity Analysis. Management Science, 2013, 59, 2536-2549.	2.4	86
14	Sensitivity of projected long-term CO2 emissions across the Shared Socioeconomic Pathways. Nature Climate Change, 2017, 7, 113-117.	8.1	85
15	Uncertainty in Climate Change Modeling: Can Global Sensitivity Analysis Be of Help?. Risk Analysis, 2014, 34, 271-293.	1.5	84
16	Comparison of global sensitivity analysis techniques and importance measures in PSA. Reliability Engineering and System Safety, 2003, 79, 175-185.	5.1	76
17	Sensitivity analysis in investment project evaluation. International Journal of Production Economics, 2004, 90, 17-25.	5.1	75
18	Sensitivity to energy technology costs: A multi-model comparison analysis. Energy Policy, 2015, 80, 244-263.	4.2	75

#	ARTICLE	IF	CITATIONS
19	Transformations and Invariance in the Sensitivity Analysis of Computer Experiments. <i>Journal of the Royal Statistical Society Series B: Statistical Methodology</i> , 2014, 76, 925-947.	1.1	61
20	The reliability importance of components and prime implicants in coherent and non-coherent systems including total-order interactions. <i>European Journal of Operational Research</i> , 2010, 204, 485-495.	3.5	60
21	Sampling strategies in density-based sensitivity analysis. <i>Environmental Modelling and Software</i> , 2012, 38, 13-26.	1.9	59
22	A Study of Interactions in the Risk Assessment of Complex Engineering Systems: An Application to Space PSA. <i>Operations Research</i> , 2011, 59, 1461-1476.	1.2	58
23	A Protocol for the Global Sensitivity Analysis of Impact Assessment Models in Life Cycle Assessment. <i>Risk Analysis</i> , 2016, 36, 357-377.	1.5	55
24	Differential, criticality and Birnbaum importance measures: An application to basic event, groups and SSCs in event trees and binary decision diagrams. <i>Reliability Engineering and System Safety</i> , 2007, 92, 1458-1467.	5.1	54
25	A new time-independent reliability importance measure. <i>European Journal of Operational Research</i> , 2016, 254, 427-442.	3.5	53
26	Moment independent and variance-based sensitivity analysis with correlations: An application to the stability of a chemical reactor. <i>International Journal of Chemical Kinetics</i> , 2008, 40, 687-698.	1.0	51
27	Uncertainty and global sensitivity analysis in the evaluation of investment projects. <i>International Journal of Production Economics</i> , 2006, 104, 62-73.	5.1	50
28	Making the most out of a hydrological model data set: Sensitivity analyses to open the model black-box. <i>Water Resources Research</i> , 2017, 53, 7933-7950.	1.7	50
29	What drives value creation in investment projects? An application of sensitivity analysis to project finance transactions. <i>European Journal of Operational Research</i> , 2010, 205, 227-236.	3.5	49
30	Financial management in inventory problems: Risk averse vs risk neutral policies. <i>International Journal of Production Economics</i> , 2009, 118, 233-242.	5.1	44
31	A note on the sensitivity analysis of the internal rate of return. <i>International Journal of Production Economics</i> , 2012, 135, 526-529.	5.1	37
32	Risk analysis and decision theory: A bridge. <i>European Journal of Operational Research</i> , 2018, 264, 280-293.	3.5	37
33	Probabilistic sensitivity measures as information value. <i>European Journal of Operational Research</i> , 2021, 289, 595-610.	3.5	32
34	Global sensitivity analysis in inventory management. <i>International Journal of Production Economics</i> , 2007, 108, 302-313.	5.1	30
35	Differential importance and comparative statics: An application to inventory management. <i>International Journal of Production Economics</i> , 2008, 111, 170-179.	5.1	29
36	Sensitivity analysis of agent-based models: a new protocol. <i>Computational and Mathematical Organization Theory</i> , 2022, 28, 52-94.	1.5	29

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37	Epistemic Uncertainty in the Ranking and Categorization of Probabilistic Safety Assessment Model Elements: Issues and Findings. <i>Risk Analysis</i> , 2008, 28, 983-1001.	1.5	27
38	On the importance of uncertain factors in seismic fragility assessment. <i>Reliability Engineering and System Safety</i> , 2013, 109, 66-76.	5.1	26
39	On the Boolean extension of the Birnbaum importance to non-coherent systems. <i>Reliability Engineering and System Safety</i> , 2017, 160, 191-200.	5.1	26
40	Decision Making During Nuclear Power Plant Incidents – A New Approach to the Evaluation of Precursor Events. <i>Risk Analysis</i> , 2007, 27, 1027-1042.	1.5	24
41	Decision analysis under ambiguity. <i>European Journal of Operational Research</i> , 2015, 244, 823-836.	3.5	24
42	The importance of assumptions in investment evaluation. <i>International Journal of Production Economics</i> , 2006, 101, 298-311.	5.1	23
43	Functional ANOVA, ultramodularity and monotonicity: Applications in multiattribute utility theory. <i>European Journal of Operational Research</i> , 2011, 210, 326-335.	3.5	23
44	Remaining-useful-lifetime and system-remaining-profit based importance measures for decisions on preventive maintenance. <i>Reliability Engineering and System Safety</i> , 2021, 216, 107951.	5.1	23
45	A Methodology for Determining Interactions in Probabilistic Safety Assessment Models by Varying One Parameter at a Time. <i>Risk Analysis</i> , 2010, 30, 385-399.	1.5	21
46	Effects of temperature on flood forecasting: analysis of an operative case study in Alpine basins. <i>Natural Hazards and Earth System Sciences</i> , 2013, 13, 1051-1062.	1.5	21
47	Deciding with Thresholds: Importance Measures and Value of Information. <i>Risk Analysis</i> , 2017, 37, 1828-1848.	1.5	19
48	Risk analysis with contractual default. Does covenant breach matter?. <i>European Journal of Operational Research</i> , 2013, 230, 431-443.	3.5	18
49	Interactions and computer experiments. <i>Scandinavian Journal of Statistics</i> , 2022, 49, 1274-1303.	0.9	17
50	Sensitivity Analysis of Model Output with Input Constraints: A Generalized Rationale for Local Methods. <i>Risk Analysis</i> , 2008, 28, 667-680.	1.5	16
51	A global tolerance approach to sensitivity analysis in linear programming. <i>European Journal of Operational Research</i> , 2018, 267, 321-337.	3.5	15
52	Global sensitivity analysis in epidemiological modeling. <i>European Journal of Operational Research</i> , 2023, 304, 9-24.	3.5	15
53	Cancer Cell Reprogramming: Stem Cell Differentiation Stage Factors and An Agent Based Model to Optimize Cancer Treatment. <i>Current Pharmaceutical Biotechnology</i> , 2011, 12, 231-242.	0.9	14
54	Copula theory and probabilistic sensitivity analysis: Is there a connection?. <i>European Journal of Operational Research</i> , 2019, 277, 1046-1059.	3.5	14

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55	Money, privacy, anonymity: What do experiments tell us?. <i>Journal of Financial Stability</i> , 2021, 56, 100934.	2.6	14
56	Which Parameters Are Important? Differential Importance Under Uncertainty. <i>Risk Analysis</i> , 2018, 38, 2459-2477.	1.5	13
57	Finite change comparative statics for risk-coherent inventories. <i>International Journal of Production Economics</i> , 2011, 131, 52-62.	5.1	11
58	Computing Shapley Effects for Sensitivity Analysis. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2021, 9, 1411-1437.	1.1	11
59	Managerial insights from service industry models: a new scenario decomposition method. <i>Annals of Operations Research</i> , 2011, 185, 161-179.	2.6	9
60	Is mortality or interest rate the most important risk in annuity models? A comparison of sensitivity analysis methods. <i>Insurance: Mathematics and Economics</i> , 2020, 95, 48-58.	0.7	9
61	Elicitation of multiattribute value functions through high dimensional model representations: Monotonicity and interactions. <i>European Journal of Operational Research</i> , 2015, 246, 517-527.	3.5	8
62	Functional ANOVA with Multiple Distributions: Implications for the Sensitivity Analysis of Computer Experiments. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2018, 6, 397-427.	1.1	8
63	Faster Kriging: Facing High-Dimensional Simulators. <i>Operations Research</i> , 2020, 68, 233-249.	1.2	8
64	Invariant methods for an ensemble-based sensitivity analysis of a passive containment cooling system of an AP1000 nuclear power plant. <i>Reliability Engineering and System Safety</i> , 2016, 151, 12-19.	5.1	7
65	On the Relationship between Safety and Decision Significance. <i>Risk Analysis</i> , 2018, 38, 1541-1558.	1.5	7
66	A Shapley-Owen Index for Interaction Quantification. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2019, 7, 1060-1075.	1.1	7
67	Nonparametric estimation of probabilistic sensitivity measures. <i>Statistics and Computing</i> , 2020, 30, 447-467.	0.8	7
68	Screening: From tornado diagrams to effective dimensions. <i>European Journal of Operational Research</i> , 2023, 304, 1200-1211.	3.5	7
69	Sampling plans for the estimation of moment-independent importance measures. <i>Procedia, Social and Behavioral Sciences</i> , 2010, 2, 7629-7630.	0.5	6
70	Fighting the Curse of Sparsity: Probabilistic Sensitivity Measures From Cumulative Distribution Functions. <i>Risk Analysis</i> , 2020, 40, 2639-2660.	1.5	6
71	Moment calculations for piecewise-defined functions: an application to stochastic optimization with coherent risk measures. <i>Annals of Operations Research</i> , 2010, 176, 235-258.	2.6	5
72	Composite multilinearity, epistemic uncertainty and risk achievement worth. <i>European Journal of Operational Research</i> , 2012, 222, 301-311.	3.5	5

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73	Decision-network polynomials and the sensitivity of decision-support models. <i>European Journal of Operational Research</i> , 2014, 239, 490-503.	3.5	5
74	Sensitivity analysis of multinomial decision trees. <i>International Journal of Mathematics in Operational Research</i> , 2009, 1, 121.	0.1	4
75	Total Order Reliability Importance in Space PSA. <i>Procedia, Social and Behavioral Sciences</i> , 2010, 2, 7617-7618.	0.5	4
76	Sensitivity analysis of portfolio properties with budget constraints. <i>International Journal of Mathematics in Operational Research</i> , 2011, 3, 295.	0.1	3
77	Guiding Genetic Algorithms using importance measures for reliable design of embedded systems. , 2016, , .		3
78	Sensitivity to Energy Technology Costs: A Multi-Model Comparison Analysis. <i>SSRN Electronic Journal</i> , 0, , .	0.4	3
79	Uncertainty Importance and Risk-Based Decision Making in the Inoperability Input-Output Model. <i>Procedia, Social and Behavioral Sciences</i> , 2010, 2, 7621-7622.	0.5	2
80	Uncertainty in Integrated Assessment Modelling: Can Global Sensitivity Analysis Be of Help?. <i>SSRN Electronic Journal</i> , 2012, , .	0.4	2
81	Trend Analysis in the Age of Machine Learning. <i>SSRN Electronic Journal</i> , 0, , .	0.4	2
82	Global Sensitivity Analysis with Mixtures: A Generalized Functional ANOVA Approach. <i>Risk Analysis</i> , 2022, 42, 304-333.	1.5	2
83	Moment-Independent and Reliability-Based Importance Measures. , 2017, , 1265-1287.		2
84	Sensitivity Analysis of Portfolio Volatility: Importance of Weights, Sectors and Impact of Trading Strategies. , 2007, , 47-68.		2
85	Improving the reliability of cohesion policy databases. <i>PLoS ONE</i> , 2022, 17, e0266823.	1.1	1
86	Theorems and Analytical Test Cases in Moment Independent Sensitivity Analysis. <i>Procedia, Social and Behavioral Sciences</i> , 2010, 2, 7619-7620.	0.5	0
87	Moment-Independent and Reliability-Based Importance Measures. , 2015, , 1-23.		0