Andrea Saltelli

List of Publications by Year
in descending order

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140 papers	21,870 citations	30070 54 h-index	15732 125 g-index
159 all docs	159 docs citations	159 times ranked	15631 citing authors

#	Article	IF	Citations
1	Variance based sensitivity analysis of model output. Design and estimator for the total sensitivity index. Computer Physics Communications, 2010, 181, 259-270.	7.5	2,138
2	A Quantitative Model-Independent Method for Global Sensitivity Analysis of Model Output. Technometrics, 1999, 41, 39-56.	1.9	1,521
3	Making best use of model evaluations to compute sensitivity indices. Computer Physics Communications, 2002, 145, 280-297.	7.5	1,466
4	Importance measures in global sensitivity analysis of nonlinear models. Reliability Engineering and System Safety, 1996, 52, 1-17.	8.9	1,442
5	An effective screening design for sensitivity analysis of large models. Environmental Modelling and Software, 2007, 22, 1509-1518.	4.5	1,354
6	Sensitivity Analysis for Importance Assessment. Risk Analysis, 2002, 22, 579-590.	2.7	864
7	How to avoid a perfunctory sensitivity analysis. Environmental Modelling and Software, 2010, 25, 1508-1517.	4.5	711
8	Sensitivity Analysis for Chemical Models. Chemical Reviews, 2005, 105, 2811-2828.	47.7	555
9	Uncertainty and sensitivity analysis techniques as tools for the quality assessment of composite indicators. Journal of the Royal Statistical Society Series A: Statistics in Society, 2005, 168, 307-323.	1.1	547
10	Sensitivity Anaysis as an Ingredient of Modeling. Statistical Science, 2000, 15, 377.	2.8	513
11	The role of sensitivity analysis in ecological modelling. Ecological Modelling, 2007, 203, 167-182.	2.5	455
12	Sensitivity analysis practices: Strategies for model-based inference. Reliability Engineering and System Safety, 2006, 91, 1109-1125.	8.9	432
13	A Quantitative Model-Independent Method for Global Sensitivity Analysis of Model Output. Technometrics, 1999, 41, 39.	1.9	424
14	Sensitivity measures,anova-like Techniques and the use of bootstrap. Journal of Statistical Computation and Simulation, 1997, 58, 99-120.	1.2	392
15	Why so many published sensitivity analyses are false: A systematic review of sensitivity analysis practices. Environmental Modelling and Software, 2019, 114, 29-39.	4.5	381
16	On the Relative Importance of Input Factors in Mathematical Models. Journal of the American Statistical Association, 2002, 97, 702-709.	3.1	378
17	Composite Indicators between Analysis and Advocacy. Social Indicators Research, 2007, 81, 65-77.	2.7	314
18	From screening to quantitative sensitivity analysis. A unified approach. Computer Physics Communications, 2011, 182, 978-988.	7.5	295

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19	An alternative way to compute Fourier amplitude sensitivity test (FAST). Computational Statistics and Data Analysis, 1998, 26, 445-460.	1.2	284
20	About the use of rank transformation in sensitivity analysis of model output. Reliability Engineering and System Safety, 1995, 50, 225-239.	8.9	261
21	Five ways to ensure that models serve society: a manifesto. Nature, 2020, 582, 482-484.	27.8	249
22	Creating composite indicators with DEA and robustness analysis: the case of the Technology Achievement Index. Journal of the Operational Research Society, 2008, 59, 239-251.	3.4	234
23	Sensitivity analysis of an environmental model: an application of different analysis methods. Reliability Engineering and System Safety, 1997, 57, 49-69.	8.9	224
24	Non-parametric statistics in sensitivity analysis for model output: A comparison of selected techniques. Reliability Engineering and System Safety, 1990, 28, 229-253.	8.9	222
25	Rickety numbers: Volatility of university rankings and policy implications. Research Policy, 2011, 40, 165-177.	6.4	217
26	The Future of Sensitivity Analysis: An essential discipline for systems modeling and policy support. Environmental Modelling and Software, 2021, 137, 104954.	4.5	209
27	Ratings and Rankings: Voodoo or Science?. Journal of the Royal Statistical Society Series A: Statistics in Society, 2013, 176, 609-634.	1.1	201
28	Sensitivity and uncertainty analysis in spatial modelling based on GIS. Agriculture, Ecosystems and Environment, 2000, 81, 71-79.	5.3	199
29	Sensitivity analysis of model output. , 1997, , .		165
30	Trends in sensitivity analysis practice in the last decade. Science of the Total Environment, 2016, 568, 666-670.	8.0	163
31	What is wrong with evidence based policy, and how can it be improved?. Futures, 2017, 91, 62-71.	2.5	158
32	Sensitivity analysis in model calibration: GSA-GLUE approach. Computer Physics Communications, 2001, 136, 212-224.	7.5	141
33	Sensitivity analysis of model output. Computational Statistics and Data Analysis, 1993, 15, 211-238.	1.2	140
34	Sensitivity analysis: Could better methods be used?. Journal of Geophysical Research, 1999, 104, 3789-3793.	3.3	139
35	Questioning the Ecological Footprint. Ecological Indicators, 2016, 69, 224-232.	6.3	100
36	What is scienceâ€™s crisis really about?. Futures, 2017, 91, 5-11.	2.5	99

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37	Local and Global Uncertainty Analyses of a Methane Flame Model. Journal of Physical Chemistry A, 2005, 109, 9795-9807.	2.5	90
38	Guest editorial: The role of sensitivity analysis in the corroboration of models and itslink to model structural and parametric uncertainty. Reliability Engineering and System Safety, 1997, 57, 1-4.	8.9	86
39	Tackling quantitatively large dimensionality problems. Computer Physics Communications, 1999, 117, 75-85.	7.5	86
40	An estimate of potential threats levels to soil biodiversity in <scp>EU</scp>. Global Change Biology, 2013, 19, 1538-1548.	9.5	85
41	Uncertainty, sensitivity analysis and the role of data based mechanistic modeling in hydrology. Hydrology and Earth System Sciences, 2007, 11, 1249-1266.	4.9	84
42	Footprints to nowhere. Ecological Indicators, 2014, 46, 610-621.	6.3	82
43	Sensitivity Analysis for Hydraulic Models. Journal of Hydraulic Engineering, 2009, 135, 959-969.	1.5	78
44	Comparison of global sensitivity analysis techniques and importance measures in PSA. Reliability Engineering and System Safety, 2003, 79, 175-185.	8.9	76
45	Sensitivity analysis and uncertainty estimation for tephra dispersal models. Journal of Geophysical Research, 2008, 113, .	3.3	75
46	Update 1 of: Sensitivity Analysis for Chemical Models. Chemical Reviews, 2012, 112, PR1-PR21.	47.7	73
47	Uncertainty and global sensitivity analysis of road transport emission estimates. Atmospheric Environment, 2004, 38, 6609-6620.	4.1	72
48	The technique is never neutral. How methodological choices condition the generation of narratives for sustainability. Environmental Science and Policy, 2020, 106, 87-98.	4.9	69
49	Modelling formation and growth of H2SO4-H2O aerosols: Uncertainty analysis and experimental evaluation. Journal of Aerosol Science, 1992, 23, 759-771.	3.8	68
50	Can global sensitivity analysis steer the implementation of models for environmental assessments and decision-making?. Stochastic Environmental Research and Risk Assessment, 2002, 16, 63-76.	4.0	66
51	Americium Filtration in Glauconitic Sand Columns. Nuclear Technology, 1984, 67, 245-254.	1.2	64
52	Trace element reference values in tissues from inhabitants of the European Community. II. Examples of strategy adopted and trace element analysis of blood, lymph nodes and cerebrospinal fluid of Italian subjects. Science of the Total Environment, 1992, 120, 39-61.	8.0	63
53	Title is missing!. Journal of Atmospheric Chemistry, 1999, 32, 327-356.	3.2	63
54	Quantitative Storytelling in the Making of a Composite Indicator. Social Indicators Research, 2020, 149, 775-802.	2.7	61

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55	A short comment on statistical versus mathematical modelling. Nature Communications, 2019, 10, 3870.	12.8	60
56	Uncertainty and sensitivity analyses of OH-initiated dimethyl sulphide (DMS) oxidation kinetics. Journal of Atmospheric Chemistry, 1995, 21, 187-221.	3.2	59
57	Global Sensitivity Analysis: The Primer by Andrea Saltelli, Marco Ratto, Terry Andres, Francesca Campolongo, Jessica Cariboni, Debora Gatelli, Michaela Saisana, Stefano Tarantola. International Statistical Review, 2008, 76, 452-452.	1.9	59
58	Winding Stairs: A sampling tool to compute sensitivity indices. Statistics and Computing, 2000, 10, 187-196.	1.5	57
59	What do I make of your latinorumc Sensitivity auditing of mathematical modelling. International Journal of Foresight and Innovation Policy, 2013, 9, 213.	0.2	57
60	Sensitivity analysis for model output. Computational Statistics and Data Analysis, 1992, 13, 73-94.	1.2	53
61	Sensitivity analysis of model output. Performance of the iterated fractional factorial design method. Computational Statistics and Data Analysis, 1995, 20, 387-407.	1.2	53
62	New narratives for innovation. Journal of Cleaner Production, 2018, 197, 1849-1853.	9.3	52
63	Cargo-cult Statistics and Scientific Crisis. Significance, 2018, 15, 40-43.	0.4	46
64	Partial order investigation of multiple indicator systems using variance-based sensitivity analysis. Environmental Modelling and Software, 2011, 26, 950-958.	4.5	44
65	Scenario and parametric uncertainty in GESAMAC: A methodological study in nuclear waste disposal risk assessment. Computer Physics Communications, 1999, 117, 142-155.	7.5	43
66	A role for sensitivity analysis in presenting the results from MCDA studies to decision makers. Journal of Multi-Criteria Decision Analysis, 1999, 8, 139-145.	1.9	43
67	Rankings and Ratings: Instructions for Use. Hague Journal on the Rule of Law, 2011, 3, 247-268.	2.0	43
68	Irrigated areas drive irrigation water withdrawals. Nature Communications, 2021, 12, 4525.	12.8	42
69	Do PISA data justify PISA-based education policy?. International Journal of Comparative Education and Development, 2017, 19, 20-34.	1.1	38
70	Sensitivity analysis didnâ€™t help. A practitionerâ€™s critique of the Stern review. Global Environmental Change, 2010, 20, 298-302.	7.8	36
71	Current Models Underestimate Future Irrigated Areas. Geophysical Research Letters, 2020, 47, e2020GL087360.	4.0	36
72	Screening important inputs in models with strong interaction properties. Reliability Engineering and System Safety, 2009, 94, 1149-1155.	8.9	34

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73	Introduction to Sensitivity Analysis. , 2017, , 1103-1122.		34
74	Sensitivity analysis: A discipline coming of age. Environmental Modelling and Software, 2021, 146, 105226.	4.5	30
75	The delusive accuracy of global irrigation water withdrawal estimates. Nature Communications, 2022, 13, .	12.8	30
76	Use of Sobol's Quasirandom Sequence Generator for Integration of Modified Uncertainty Importance Measure. Journal of Nuclear Science and Technology, 1995, 32, 1164-1173.	1.3	24
77	Sensitivity Analysis of Model Output: SAMO 2004. Reliability Engineering and System Safety, 2006, 91, 1105-1108.	8.9	24
78	Cloud Condensation Nuclei from Dimethyl Sulphide in the Natural Marine Boundary Layer: Remote VS. In-Situ Production. , 1993, , 311-322.		24
79	Transfer rate of some tervalent cations in the biphasic system HClO4, water-dinonylnaphthalenesulfonic acid, tolueneâ€"I. Journal of Inorganic and Nuclear Chemistry, 1976, 38, 1687-1693.	0.5	22
80	Transfer rate of K+ ions from aqueous picrate solutions into 1,2 dichloroethane solutions of the macrocyclic polyether dibenzo-18-crown-6. Journal of Inorganic and Nuclear Chemistry, 1978, 40, 1119-1123.	0.5	22
81	Why scienceâ€™s crisis should not become a political battling ground. Futures, 2018, 104, 85-90.	2.5	22
82	Variance-based sensitivity analysis: The quest for better estimators and designs between explorativity and economy. Reliability Engineering and System Safety, 2021, 206, 107300.	8.9	22
83	Science, the endless frontier of regulatory capture. Futures, 2022, 135, 102860.	2.5	22
84	Footworking in circles. Ecological Indicators, 2014, 46, 260-263.	6.3	21
85	A sensitivity analysis of the PAWN sensitivity index. Environmental Modelling and Software, 2020, 127, 104679.	4.5	21
86	Neptunium migration in oxidizing clayey sand. Applied Geochemistry, 1987, 2, 275-284.	3.0	20
87	Presenting Results from Model Based Studies to Decision-Makers: Can Sensitivity Analysis Be a Defogging Agent?. Risk Analysis, 1998, 18, 799-803.	2.7	20
88	Design of surface Brillouin scattering experiments by sensitivity analysis. Surface Science, 2000, 468, 37-50.	1.9	20
89	Indicators for European Union Policies. Business as Usual?. Social Indicators Research, 2011, 102, 197-207.	2.7	19
90	Ethics of quantification or quantification of ethics?. Futures, 2020, 116, 102509.	2.5	19

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91	Ethics of quantification: illumination, obfuscation and performative legitimation. Palgrave Communications, 2020, 6, .	4.7	19
92	Creating Composite Indicators with DEA and Robustness Analysis: The Case of the Technology Achievement Index. SSRN Electronic Journal, 2006, , .	0.4	18
93	Hydrocarbon exploration risk evaluation through uncertainty and sensitivity analyses techniques. Reliability Engineering and System Safety, 2006, 91, 1155-1162.	8.9	17
94	Use of Sobol's Quasirandom Sequence Generator for Integration of Modified Uncertainty Importance Measure.. Journal of Nuclear Science and Technology, 1995, 32, 1164-1173.	1.3	15
95	Introduction to Sensitivity Analysis. , 2015, , 1-20.		14
96	Post-normal institutional identities: Quality assurance, reflexivity and ethos of care. Futures, 2017, 91, 53-61.	2.5	14
97	Weights and Importance in Composite Indicators: Mind the Gap. , 2017, , 1187-1216.		14
98	Susceptibility to the Intergranular Corrosion of Alloy 800. Corrosion, 1981, 37, 498-505.	1.1	13
99	An assessment of carburization-decarburizatton behaviour of Fe-9Cr-Mo steels in a sodium environment. Journal of Nuclear Materials, 1982, 110, 1-10.	2.7	13
100	How to avoid a perfunctory sensitivity analysis. Procedia, Social and Behavioral Sciences, 2010, 2, 7592-7594.	0.5	13
101	Random and quasi-random designs in variance-based sensitivity analysis for partially ordered sets. Reliability Engineering and System Safety, 2012, 107, 184-189.	8.9	13
102	Silver as a Constraint for a Large-Scale Development of Solar Photovoltaics? Scenario-Making to the Year 2050 Supported by Expert Engagement and Global Sensitivity Analysis. Frontiers in Energy Research, 2019, 7, .	2.3	13
103	Observations on the structural characterization of the di-.mu.-hydroxo-octaaquodiiron(III) dimer. Inorganic Chemistry, 1981, 20, 3564-3565.	4.0	11
104	The future of public trust in science. Nature, 2015, 524, 161-161.	27.8	11
105	Problematic Quantifications: a Critical Appraisal of Scenario Making for a Global â€˜Sustainableâ€™ Food Production. Food Ethics, 2017, 1, 173-179.	1.9	11
106	Is VARS more intuitive and efficient than Sobolâ€™ indices?. Environmental Modelling and Software, 2021, 137, 104960.	4.5	11
107	From sociology of quantification to ethics of quantification. Humanities and Social Sciences Communications, 2020, 7, .	2.9	11
108	Large variations in global irrigation withdrawals caused by uncertain irrigation efficiencies. Environmental Research Letters, 2022, 17, 044014.	5.2	11

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109	The Precautionary Principle: Implications for Risk Management Strategies. Human and Ecological Risk Assessment (HERA), 2005, 11, 69-83.	3.4	9
110	Technoscience, policy and the new media. Nexus or vortex?. Futures, 2020, 115, 102491.	2.5	9
111	Sensitivity Analysis for Chemical Models. ChemInform, 2005, 36, no.	0.0	8
112	Expert Panel Opinion and Global Sensitivity Analysis for Composite Indicators. Lecture Notes in Computational Science and Engineering, 2008, , 251-275.	0.3	7
113	PSACOIN level 0 intercomparison-an international verification exercise on a hypothetical safety assessment case study. , 0, , .		5
114	Settings and methods for global sensitivity analysis â€“ a short guide. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 2140013-2140014.	0.2	5
115	Climate costing is politics not science. Nature, 2016, 532, 177-177.	27.8	5
116	Changes in the Global Competitiveness Index 4.0 Methodology: The Improved Approach of Competitiveness Benchmarking. Journal of Competitiveness, 2022, 14, 118-135.	3.0	5
117	Fixing statistics is more than a technical issue. Nature, 2018, 553, 281-281.	27.8	4
118	Weights and Importance in Composite Indicators: Mind the Gap. , 2015, , 1-30.		3
119	Views from a continent in flux. Nature, 2019, 569, 481-484.	27.8	3
120	Doing the Sum Right or the Right Sums? Techno-Optimist Numbers in Food Security Scenarios. Frontiers in Sustainable Food Systems, 2018, 2, .	3.9	2
121	Variable Selection in Regression Models Using Global Sensitivity Analysis. Journal of Time Series Econometrics, 2021, .	0.4	2
122	Recommended practices in global sensitivity analysis. NATO Science for Peace and Security Series C: Environmental Security, 2009, , 183-202.	0.2	2
123	About the corrosion mechanism for the stainless steel exposed in high temperature flowing sodium by a computer simulation approach. Journal of Nuclear Materials, 1979, 87, 203-206.	2.7	1
124	Science, the Endless Frontier of Regulatory Capture. SSRN Electronic Journal, 0, , .	0.4	1
125	The opening of Central and Eastern European countries to free trade: A critical assessment. Structural Change and Economic Dynamics, 2021, 58, 23-34.	4.5	1
126	Modelling of the Sulphur Cycle. From DMS to Cloud Particles. , 1993, , 355-373.		1

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127	Presenting Results from Model Based Studies to Decision-Makers: Can Sensitivity Analysis be a Defogging Agent?. Risk Analysis, 1998, 18, 799-803.	2.7	1
128	Pandemic Luhmann. SSRN Electronic Journal, 0, , .	0.4	1
129	Improving the reliability of cohesion policy databases. PLoS ONE, 2022, 17, e0266823.	2.5	1
130	A role for sensitivity analysis in presenting the results from MCDA studies to decision makers. Journal of Multi-Criteria Decision Analysis, 1999, 8, 139-145.	1.9	1
131	An Experimental and Modelling Approach of the Near Field Release and Transport Processes. Materials Research Society Symposia Proceedings, 1983, 26, 605.	0.1	0
132	About the modelling of transport with chemical reaction. Chemical Engineering Science, 1986, 41, 3227-3229.	3.8	0
133	Young statistician, you shall live in adventurous times. Significance, 2016, 13, 38-41.	0.4	0
134	Is Time Ripe for an Ethic of Quantification?. SSRN Electronic Journal, 0, , .	0.4	0
135	An Efficient Approach to Deal with the Curse of Dimensionality in Sensitivity Analysis Computations. Lecture Notes in Computer Science, 2002, , 196-205.	1.3	0
136	Global Uncertainty and Sensitivity Analysis and Neighbourhoods. , 2004, , 277-283.		0
137	Modelling for The Carburization of The Alloy - 800 in Liquid Sodium. , 1982, , 533-542.		0
138	Techniques for Uncertainty and Sensitivity Analyses. , 1989, , 69-95.		0
139	The Role of the Code Intercomparison Exercises: Activities of The Probabilistic System Assessment Codes Group. , 1989, , 129-160.		0
140	Derivation of Elastic Properties of Thin Films from Measured Acoustic Velocities. , 2001, , 152-167.		0