

Mathieu Vrac

List of Publications by Year in descending order

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Version: 2024-02-01

57
papers

2,279
citations

236925

25
h-index

223800

46
g-index

76
all docs

76
docs citations

76
times ranked

3007
citing authors

#	ARTICLE	IF	CITATIONS
1	Seasonal circulation regimes in the North Atlantic: Towards a new seasonality. <i>International Journal of Climatology</i> , 2022, 42, 5848-5870.	3.5	4
2	Combining global climate models using graph cuts. <i>Climate Dynamics</i> , 2022, 59, 2345-2361.	3.8	2
3	Contrasting changes in hydrological processes of the Volta River basin under global warming. <i>Hydrology and Earth System Sciences</i> , 2022, 26, 1481-1506.	4.9	12
4	Restructuring of plankton genomic biogeography in the surface ocean under climate change. <i>Nature Climate Change</i> , 2022, 12, 393-401.	18.8	21
5	Ensemble bias correction of climate simulations: preserving internal variability. <i>Scientific Reports</i> , 2021, 11, 3098.	3.3	32
6	A high-resolution downscaled CMIP5 projections dataset of essential surface climate variables over the globe coherent with the ERA5 reanalysis for climate change impact assessments. <i>Data in Brief</i> , 2021, 35, 106900.	1.0	10
7	Adjusting spatial dependence of climate model outputs with cycle-consistent adversarial networks. <i>Climate Dynamics</i> , 2021, 57, 3323-3353.	3.8	11
8	Observation system simulation experiments in the Atlantic Ocean for enhanced surface ocean <i>p</i><i>CO</i><sub>2</sub</i> reconstructions. <i>Ocean Science</i> , 2021, 17, 1011-1030.	3.4	8
9	Seasonal forecasts of the Saharan heat low characteristics: a multi-model assessment. <i>Weather and Climate Dynamics</i> , 2021, 2, 893-912.	3.5	3
10	Projected Changes in the Atmospheric Dynamics of Climate Extremes in France. <i>Atmosphere</i> , 2021, 12, 1440.	2.3	0
11	Is time a variable like the others in multivariate statistical downscaling and bias correction?. <i>Earth System Dynamics</i> , 2021, 12, 1253-1273.	7.1	1
12	Singular Extreme Events and Their Attribution to Climate Change: A Climate Serviceâ€œCentered Analysis. <i>Weather, Climate, and Society</i> , 2020, 12, 89-101.	1.1	10
13	Copernicus Marine Service Ocean State Report, Issue 4. <i>Journal of Operational Oceanography</i> , 2020, 13, S1-S172.	1.2	47
14	Changes in Future Synoptic Circulation Patterns: Consequences for Extreme Event Attribution. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088002.	4.0	23
15	Robust assessment of the time of emergence of precipitation change in West Africa. <i>Scientific Reports</i> , 2020, 10, 7670.	3.3	32
16	Nonstationary stochastic rain type generation: accounting for climate drivers. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 2841-2854.	4.9	8
17	Emerging climate signals in the Lena River catchment: a non-parametric statistical approach. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 2817-2839.	4.9	7
18	Brief communication: The role of using precipitation or river discharge data when assessing global coastal compound flooding. <i>Natural Hazards and Earth System Sciences</i> , 2020, 20, 1765-1782.	3.6	38

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19	Analyses of the Northern European Summer Heatwave of 2018. <i>Bulletin of the American Meteorological Society</i> , 2020, 101, S35-S40.	3.3	44
20	Conditional and residual trends of singular hot days in Europe. <i>Environmental Research Letters</i> , 2020, 15, 064018.	5.2	11
21	Multivariate bias corrections of climate simulations: which benefits for which losses?. <i>Earth System Dynamics</i> , 2020, 11, 537-562.	7.1	73
22	Statistical downscaling of water vapour satellite measurements from profiles of tropical ice clouds. <i>Earth System Science Data</i> , 2020, 12, 1-20.	9.9	4
23	R<sup>2</sup>D<sup>2</sup>v2.0: accounting for temporal dependences in multivariate bias correction via analogue rank resampling. <i>Geoscientific Model Development</i> , 2020, 13, 5367-5387.	3.6	12
24	Increased probability of compound long-duration dry and hot events in Europe during summer (1950â€“2013). <i>Environmental Research Letters</i> , 2019, 14, 094006.	5.2	103
25	LSCE-FFNN-v1: a two-step neural network model for the reconstruction of surface ocean <i>p</i>CO<sub>2</sub</i> over the global ocean. <i>Geoscientific Model Development</i> , 2019, 12, 2091-2105.	3.6	81
26	Multivariate stochastic bias corrections with optimal transport. <i>Hydrology and Earth System Sciences</i> , 2019, 23, 773-786.	4.9	29
27	A climate projection dataset tailored for the European energy sector. <i>Climate Services</i> , 2019, 16, 100138.	2.5	23
28	Comparison of statistical downscaling methods with respect to extreme events over Europe: Validation results from the perfect predictor experiment of the COST Action VALUE. <i>International Journal of Climatology</i> , 2019, 39, 3846-3867.	3.5	64
29	Trends of atmospheric circulation during singular hot days in Europe. <i>Environmental Research Letters</i> , 2018, 13, 054007.	5.2	21
30	Comparison of spatial downscaling methods of general circulation model results to study climate variability during the Last Glacial Maximum. <i>Geoscientific Model Development</i> , 2018, 11, 2563-2579.	3.6	26
31	Dealing with non-stationarity in sub-daily stochastic rainfall models. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 5919-5933.	4.9	19
32	A bias-corrected CMIP5 dataset for Africa using the CDF-t method â€“ a contribution to agricultural impact studies. <i>Earth System Dynamics</i> , 2018, 9, 313-338.	7.1	75
33	Multivariate bias adjustment of high-dimensional climate simulations: the Rank Resampling for Distributions and Dependences (R<sup>2</sup>D<sup>2</sup>) bias correction. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 3175-3196.	4.9	80
34	Soil Moisture Drought in Europe: A Compound Event of Precipitation and Potential Evapotranspiration on Multiple Time Scales. <i>Journal of Hydrometeorology</i> , 2018, 19, 1255-1271.	1.9	81
35	Recent Trends in the Recurrence of North Atlantic Atmospheric Circulation Patterns. <i>Complexity</i> , 2018, 2018, 1-8.	1.6	8
36	Risky business: The impact of climate and climate variability on human population dynamics in Western Europe during the Last Glacial Maximum. <i>Quaternary Science Reviews</i> , 2017, 164, 217-229.	3.0	47

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37	Influence of Bias Correcting Predictors on Statistical Downscaling Models. <i>Journal of Applied Meteorology and Climatology</i> , 2017, 56, 5-26.	1.5	23
38	Consequences of rapid ice sheet melting on the Sahelian population vulnerability. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 6533-6538.	7.1	47
39	Multivariate statistical modelling of compound events via pair-copula constructions: analysis of floods in Ravenna (Italy). <i>Hydrology and Earth System Sciences</i> , 2017, 21, 2701-2723.	4.9	206
40	A combined statistical bias correction and stochastic downscaling method for precipitation. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 1693-1719.	4.9	62
41	A statistical framework for conditional extreme event attribution. <i>Advances in Statistical Climatology, Meteorology and Oceanography</i> , 2017, 3, 17-31.	0.9	32
42	Sensitivity analysis of runoff modeling to statistical downscaling models in the western Mediterranean. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 1031-1047.	4.9	19
43	Bias correction of precipitation through Singularity Stochastic Removal: Because occurrences matter. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 5237-5258.	3.3	70
44	Intercomparison of statistical and dynamical downscaling models under the EURO- and MED-CORDEX initiative framework: present climate evaluations. <i>Climate Dynamics</i> , 2016, 46, 1301-1329.	3.8	100
45	Mixture model-based atmospheric air mass classification: a probabilistic view of thermodynamic profiles. <i>Advances in Statistical Climatology, Meteorology and Oceanography</i> , 2016, 2, 115-136.	0.9	4
46	Multivariate "Intervariable, Spatial, and Temporal" Bias Correction*. <i>Journal of Climate</i> , 2015, 28, 218-237.	3.2	147
47	Assessing climate change impacts on European wind energy from ENSEMBLES high-resolution climate projections. <i>Climatic Change</i> , 2015, 128, 99-112.	3.6	171
48	Stochastic Model Output Statistics for Bias Correcting and Downscaling Precipitation Including Extremes. <i>Journal of Climate</i> , 2014, 27, 6940-6959.	3.2	52
49	Exploring the impact of climate variability during the Last Glacial Maximum on the pattern of human occupation of Iberia. <i>Journal of Human Evolution</i> , 2014, 73, 35-46.	2.6	51
50	Trends and variability of seasonal weather regimes. <i>International Journal of Climatology</i> , 2014, 34, 472-480.	3.5	21
51	Climate variability and trends in downscaled high-resolution simulations and projections over Metropolitan France. <i>Climate Dynamics</i> , 2013, 41, 1419-1437.	3.8	22
52	Ensemble reconstruction of the atmospheric column from surface pressure using analogues. <i>Climate Dynamics</i> , 2013, 41, 1333-1344.	3.8	33
53	Mapping Weather-Type Influence on Senegal Precipitation Based on a Spatial "Temporal Statistical Model". <i>Journal of Climate</i> , 2013, 26, 8189-8209.	3.2	17
54	Are regional climate models relevant for crop yield prediction in West Africa?. <i>Environmental Research Letters</i> , 2011, 6, 014008.	5.2	74

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55	Quantifying Differences in Circulation Patterns Based on Probabilistic Models: IPCC AR4 Multimodel Comparison for the North Atlantic*. Journal of Climate, 2010, 23, 6573-6589.	3.2	24
56	Weather regimes designed for local precipitation modeling: Application to the Mediterranean basin. Journal of Geophysical Research, 2010, 115, .	3.3	21
57	Sensitivity of bias adjustment methods to low-frequency internal climate variability over the reference period: an ideal model study. , 0, , .		1