

# Laurent Terray

## List of Publications by Year in descending order

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122  
papers

8,285  
citations

47006

47  
h-index

49909

87  
g-index

127  
all docs

127  
docs citations

127  
times ranked

8091  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Seasonal Cycle over the Tropical Pacific in Coupled Ocean-Atmosphere General Circulation Models. <i>Monthly Weather Review</i> , 1995, 123, 2825-2838.	1.4	497
2	Evaluation of CMIP6 DECK Experiments With CNRM-CM6-1. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2177-2213.	3.8	494
3	Potential impact of climate change on marine export production. <i>Global Biogeochemical Cycles</i> , 2001, 15, 81-99.	4.9	428
4	Statistical and dynamical downscaling of the Seine basin climate for hydro-meteorological studies. <i>International Journal of Climatology</i> , 2007, 27, 1643-1655.	3.5	416
5	Tropical Atlantic Influence on European Heat Waves. <i>Journal of Climate</i> , 2005, 18, 2805-2811.	3.2	366
6	Evaluation of CNRM Earth System Model, CNRM-ESM2-1: Role of Earth System Processes in Present-Day and Future Climate. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 4182-4227.	3.8	309
7	STOIC: a study of coupled model climatology and variability in tropical ocean regions. <i>Climate Dynamics</i> , 2002, 18, 403-420.	3.8	304
8	ENSIP: the El Niño simulation intercomparison project. <i>Climate Dynamics</i> , 2001, 18, 255-276.	3.8	255
9	North Atlantic Winter Climate Regimes: Spatial Asymmetry, Stationarity with Time, and Oceanic Forcing. <i>Journal of Climate</i> , 2004, 17, 1055-1068.	3.2	233
10	Forced and Internal Components of Winter Air Temperature Trends over North America during the past 50 Years: Mechanisms and Implications*. <i>Journal of Climate</i> , 2016, 29, 2237-2258.	3.2	189
11	Interannual to Decadal Climate Predictability in the North Atlantic: A Multimodel-Ensemble Study. <i>Journal of Climate</i> , 2006, 19, 1195-1203.	3.2	161
12	Impact of Model Resolution on Tropical Cyclone Simulation Using the HighResMIP-PRIMAVERA Multimodel Ensemble. <i>Journal of Climate</i> , 2020, 33, 2557-2583.	3.2	141
13	Application of regularised optimal fingerprinting to attribution. Part I: method, properties and idealised analysis. <i>Climate Dynamics</i> , 2013, 41, 2817-2836.	3.8	139
14	Representing El Niño in Coupled Ocean-Atmosphere GCMs: The Dominant Role of the Atmospheric Component. <i>Journal of Climate</i> , 2004, 17, 4623-4629.	3.2	135
15	Expected impacts of climate change on extreme climate events. <i>Comptes Rendus - Geoscience</i> , 2008, 340, 564-574.	1.2	122
16	Near-Surface Salinity as Nature's Rain Gauge to Detect Human Influence on the Tropical Water Cycle. <i>Journal of Climate</i> , 2012, 25, 958-977.	3.2	122
17	Projected Future Changes in Tropical Cyclones Using the CMIP6 HighResMIP Multimodel Ensemble. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088662.	4.0	119
18	Identifying human influences on atmospheric temperature. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 26-33.	7.1	117

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19	Projected changes in components of the hydrological cycle in French river basins during the 21st century. <i>Water Resources Research</i> , 2009, 45, .	4.2	105
20	Sea surface temperature associations with the late Indian summer monsoon. <i>Climate Dynamics</i> , 2003, 21, 593-618.	3.8	103
21	Natural forcing of climate during the last millennium: fingerprint of solar variability. <i>Climate Dynamics</i> , 2011, 36, 1349-1364.	3.8	103
22	A simple statistical-dynamical downscaling scheme based on weather types and conditional resampling. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	100
23	Twentieth century Sahel rainfall variability as simulated by the ARPEGE AGCM, and future changes. <i>Climate Dynamics</i> , 2010, 35, 75-94.	3.8	91
24	Intrinsic Variability of Sea Level from Global Ocean Simulations: Spatiotemporal Scales. <i>Journal of Climate</i> , 2015, 28, 4279-4292.	3.2	90
25	Evidence for multiple drivers of North Atlantic multi-decadal climate variability. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	89
26	Application of regularised optimal fingerprinting to attribution. Part II: application to global near-surface temperature. <i>Climate Dynamics</i> , 2013, 41, 2837-2853.	3.8	87
27	Attributing the U.S. Southwest's Recent Shift Into Drier Conditions. <i>Geophysical Research Letters</i> , 2018, 45, 6251-6261.	4.0	82
28	Oceanic Forcing of the Wintertime Low-Frequency Atmospheric Variability in the North Atlantic European Sector: A Study with the ARPEGE Model. <i>Journal of Climate</i> , 2001, 14, 4266-4291.	3.2	81
29	Toward a New Estimate of "Time of Emergence" of Anthropogenic Warming: Insights from Dynamical Adjustment and a Large Initial-Condition Model Ensemble. <i>Journal of Climate</i> , 2017, 30, 7739-7756.	3.2	81
30	Respective roles of direct GHG radiative forcing and induced Arctic sea ice loss on the Northern Hemisphere atmospheric circulation. <i>Climate Dynamics</i> , 2017, 49, 3693-3713.	3.8	77
31	Internal variability and model uncertainty components in future hydrometeorological projections: The Alpine Durance basin. <i>Water Resources Research</i> , 2014, 50, 3317-3341.	4.2	75
32	Uncertainties in summer evapotranspiration changes over Europe and implications for regional climate change. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	71
33	Summer Sea Surface Temperature Conditions in the North Atlantic and Their Impact upon the Atmospheric Circulation in Early Winter. <i>Journal of Climate</i> , 2004, 17, 3349-3363.	3.2	70
34	Dual influence of Atlantic and Pacific SST anomalies on the North Atlantic/Europe winter climate. <i>Geophysical Research Letters</i> , 2001, 28, 3195-3198.	4.0	69
35	Impact of Higher Spatial Atmospheric Resolution on Precipitation Extremes Over Land in Global Climate Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD032184.	3.3	69
36	Tropical Atlantic Sea Surface Temperature Forcing of Quasi-Decadal Climate Variability over the North Atlantic "European Region. <i>Journal of Climate</i> , 2002, 15, 3170-3187.	3.2	64

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37	A multi-model ensemble approach for assessment of climate change impact on surface winds in France. <i>Climate Dynamics</i> , 2009, 32, 615-634.	3.8	62
38	A Weather-Type Approach to Analyzing Winter Precipitation in France: Twentieth-Century Trends and the Role of Anthropogenic Forcing. <i>Journal of Climate</i> , 2008, 21, 3118-3133.	3.2	61
39	Quantifying 21st-century France climate change and related uncertainties. <i>Comptes Rendus - Geoscience</i> , 2013, 345, 136-149.	1.2	59
40	Sensitivity of the Atlantic Meridional Overturning Circulation to Model Resolution in CMIP6 HighResMIP Simulations and Implications for Future Changes. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS002014.	3.8	59
41	Multi-model evaluation of the sensitivity of the global energy budget and hydrological cycle to resolution. <i>Climate Dynamics</i> , 2019, 52, 6817-6846.	3.8	57
42	An assessment of a multi-model ensemble of decadal climate predictions. <i>Climate Dynamics</i> , 2015, 44, 2787-2806.	3.8	56
43	Future summer mega-heatwave and record-breaking temperatures in a warmer France climate. <i>Environmental Research Letters</i> , 2017, 12, 074025.	5.2	54
44	Intrinsic and Atmospherically Forced Variability of the AMOC: Insights from a Large-Ensemble Ocean Hindcast. <i>Journal of Climate</i> , 2018, 31, 1183-1203.	3.2	52
45	Human Influence on Winter Precipitation Trends (1921â€“2015) over North America and Eurasia Revealed by Dynamical Adjustment. <i>Geophysical Research Letters</i> , 2019, 46, 3426-3434.	4.0	52
46	Observed southern upper-ocean warming over 2005â€“2014 and associated mechanisms. <i>Environmental Research Letters</i> , 2016, 11, 124023.	5.2	51
47	Mid latitude Atlantic SST influence on European winter climate variability in the NCEP Reanalysis. <i>Climate Dynamics</i> , 2001, 18, 331-344.	3.8	50
48	Northern Hemisphere blocking simulation in current climate models: evaluating progress from the Climate Model Intercomparison Project Phase 5 to 6 and sensitivity to resolution. <i>Weather and Climate Dynamics</i> , 2020, 1, 277-292.	3.5	49
49	Simulation of Late-Twenty-First-Century Changes in Wintertime Atmospheric Circulation over Europe Due to Anthropogenic Causes. <i>Journal of Climate</i> , 2004, 17, 4630-4635.	3.2	48
50	Impact of climate change on the hydrogeology of two basins in northern France. <i>Climatic Change</i> , 2013, 121, 771-785.	3.6	48
51	Quantifying uncertainties on regional sea level change induced by multidecadal intrinsic oceanic variability. <i>Geophysical Research Letters</i> , 2016, 43, 8151-8159.	4.0	48
52	The seasonal cycle in coupled ocean-atmosphere general circulation models. <i>Climate Dynamics</i> , 2000, 16, 775-787.	3.8	47
53	Influence of small-scale North Atlantic sea surface temperature patterns on the marine boundary layer and free troposphere: a study using the atmospheric ARPEGE model. <i>Climate Dynamics</i> , 2016, 46, 1699-1717.	3.8	47
54	Drift dynamics in a coupled model initialized for decadal forecasts. <i>Climate Dynamics</i> , 2016, 46, 1819-1840.	3.8	47

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55	Inverse Cascades of Kinetic Energy as a Source of Intrinsic Variability: A Global OGCM Study. <i>Journal of Physical Oceanography</i> , 2018, 48, 1385-1408.	1.7	46
56	Uncertainties in European summer precipitation changes: role of large scale circulation. <i>Climate Dynamics</i> , 2009, 33, 265-276.	3.8	44
57	Impact of climate change on surface winds in France using a statistical-dynamical downscaling method with mesoscale modelling. <i>International Journal of Climatology</i> , 2011, 31, 415-430.	3.5	44
58	A mechanism for the multidecadal modulation of ENSO teleconnection with Europe. <i>Climate Dynamics</i> , 2015, 45, 867-880.	3.8	44
59	A tale of two futures: contrasting scenarios of future precipitation for West Africa from an ensemble of regional climate models. <i>Environmental Research Letters</i> , 2020, 15, 064007.	5.2	44
60	Model study of the North Atlantic region atmospheric response to autumn tropical Atlantic sea-surface-temperature anomalies. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2003, 129, 2591-2611.	2.7	43
61	Development of a probabilistic ocean modelling system based on NEMO 3.5: application at eddying resolution. <i>Geoscientific Model Development</i> , 2017, 10, 1091-1106.	3.6	43
62	An intercomparison between the surface heat flux feedback in five coupled models, COADS and the NCEP reanalysis. <i>Climate Dynamics</i> , 2004, 22, 373-388.	3.8	42
63	Land-sea contrast, soil-atmosphere and cloud-temperature interactions: interplays and roles in future summer European climate change. <i>Climate Dynamics</i> , 2014, 42, 683-699.	3.8	42
64	Simulation des changements climatiques au cours du XXI <sup>e</sup> siècle incluant l'ozone stratosphérique. <i>Comptes Rendus - Geoscience</i> , 2002, 334, 147-154.	1.2	40
65	A statistical-dynamical scheme for reconstructing ocean forcing in the Atlantic. Part I: weather regimes as predictors for ocean surface variables. <i>Climate Dynamics</i> , 2011, 36, 19-39.	3.8	40
66	The effect of Congo River freshwater discharge on Eastern Equatorial Atlantic climate variability. <i>Climate Dynamics</i> , 2012, 39, 2109-2125.	3.8	38
67	Climatology and interannual variability simulated by the ARPEGE-OPA coupled model. <i>Climate Dynamics</i> , 1995, 11, 487-505.	3.8	37
68	A global probabilistic study of the ocean heat content low-frequency variability: Atmospheric forcing versus oceanic chaos. <i>Geophysical Research Letters</i> , 2017, 44, 5580-5589.	4.0	35
69	On North American Decadal Climate for 2011-20. <i>Journal of Climate</i> , 2011, 24, 4519-4528.	3.2	34
70	The role of lateral ocean physics in the upper ocean thermal balance of a coupled ocean-atmosphere GCM. <i>Climate Dynamics</i> , 2001, 17, 589-599.	3.8	33
71	Mechanisms of tropical Pacific interannual-to-decadal variability in the ARPEGE/ORCA global coupled model. <i>Climate Dynamics</i> , 2005, 24, 823-842.	3.8	31
72	Rectification of ENSO Variability by Interdecadal Changes in the Equatorial Background Mean State in a CGCM Simulation. <i>Journal of Climate</i> , 2007, 20, 2002-2021.	3.2	31

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73	Chaotic Variability of Ocean: Heat Content Climate-Relevant Features and Observational Implications. <i>Oceanography</i> , 2018, 31, .	1.0	30
74	The dynamical link between surface cyclones, upper-tropospheric Rossby wave breaking and the life cycle of the Scandinavian blocking. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	29
75	Sensitivity of Climate Drift to Atmospheric Physical Parameterizations in a Coupled Ocean-Atmosphere General Circulation Model. <i>Journal of Climate</i> , 1998, 11, 1633-1658.	3.2	27
76	Transient CO <sub>2</sub> Experiment using the ARPEGE/OPAICE non flux corrected coupled model. <i>Geophysical Research Letters</i> , 1998, 25, 2277-2280.	4.0	25
77	Large-scale atmospheric dynamics and local intense precipitation episodes. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	24
78	Emergence of human influence on summer record-breaking temperatures over Europe. <i>Geophysical Research Letters</i> , 2016, 43, 404-412.	4.0	24
79	Interaction between Near-Annual and ENSO Modes in a CGCM Simulation: Role of the Equatorial Background Mean State. <i>Journal of Climate</i> , 2007, 20, 1035-1052.	3.2	23
80	Impact of increased resolution on long-standing biases in HighResMIP-PRIMAVERA climate models. <i>Geoscientific Model Development</i> , 2022, 15, 269-289.	3.6	22
81	Quasi-decadal and inter-decadal climate fluctuations in the Pacific Ocean from a CGCM. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	4.0	21
82	Projected 21st century snowfall changes over the French Alps and related uncertainties. <i>Climatic Change</i> , 2014, 122, 583-594.	3.6	20
83	Contributions of Atmospheric Forcing and Chaotic Ocean Variability to Regional Sea Level Trends Over 1993-2015. <i>Geophysical Research Letters</i> , 2018, 45, 13,405.	4.0	20
84	The Moisture Budget of Tropical Cyclones in HighResMIP Models: Large-Scale Environmental Balance and Sensitivity to Horizontal Resolution. <i>Journal of Climate</i> , 2020, 33, 8457-8474.	3.2	19
85	Évolution potentielle du régime des crues de la Seine sous changement climatique. <i>Houille Blanche</i> , 2011, 97, 51-57.	0.3	17
86	A statistical method to estimate PM <sub>2.5</sub> concentrations from meteorology and its application to the effect of climate change. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 3537-3585.	3.3	16
87	Boreal-winter teleconnections with tropical Indo-Pacific rainfall in HighResMIP historical simulations from the PRIMAVERA project. <i>Climate Dynamics</i> , 2020, 55, 1843-1873.	3.8	15
88	OASIS : le couplage océan-atmosphère. <i>La Météorologie</i> , 1995, 8, 50.	0.5	15
89	Intra-seasonal atmospheric variability and extreme precipitation events in the European-Mediterranean region. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	13
90	Can oceanic reanalyses be used to assess recent anthropogenic changes and low-frequency internal variability of upper ocean temperature?. <i>Climate Dynamics</i> , 2012, 38, 877-896.	3.8	13

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91	A dynamical adjustment perspective on extreme event attribution. <i>Weather and Climate Dynamics</i> , 2021, 2, 971-989.	3.5	13
92	West African monsoon response to greenhouse gas and sulphate aerosol forcing under two emission scenarios. <i>Climate Dynamics</i> , 2006, 26, 531-547.	3.8	12
93	Statistical issues about solar-climate relations. <i>Climate of the Past</i> , 2010, 6, 565-573.	3.4	12
94	Quantifying the impact of early 21st century volcanic eruptions on global-mean surface temperature. <i>Environmental Research Letters</i> , 2017, 12, 054010.	5.2	12
95	Influence of model resolution on bomb cyclones revealed by HighResMIP-PRIMAVERA simulations. <i>Environmental Research Letters</i> , 2020, 15, 084001.	5.2	12
96	Modes of low-frequency climate variability and their relationships with land precipitation and surface temperature: application to the Northern Hemisphere winter climate. <i>Stochastic Environmental Research and Risk Assessment</i> , 2000, 14, 0339-0369.	4.0	11
97	Can metric-based approaches really improve multi-model climate projections? The case of summer temperature change in France. <i>Climate Dynamics</i> , 2015, 45, 1913-1928.	3.8	11
98	A statistical-dynamical scheme for reconstructing ocean forcing in the Atlantic. Part II: methodology, validation and application to high-resolution ocean models. <i>Climate Dynamics</i> , 2011, 36, 401-417.	3.8	10
99	Decadal prediction skill using a high-resolution climate model. <i>Climate Dynamics</i> , 2017, 49, 3527-3550.	3.8	9
100	Extratropical Transition of Tropical Cyclones in a Multiresolution Ensemble of Atmosphere-Only and Fully Coupled Global Climate Models. <i>Journal of Climate</i> , 2022, 35, 5283-5306.	3.2	9
101	Régimes de temps et désaggrégation d'été. <i>Houille Blanche</i> , 2008, 94, 45-51.	0.3	8
102	Impact of climate change on groundwater point discharge: backflooding of karstic springs (Loiret, France). <i>Journal of Hydrology</i> , 2019, 579, 126512.	4.9	10
103	Detection of anthropogenic influence on the evolution of record-breaking temperatures over Europe. <i>Climate Dynamics</i> , 2016, 46, 2717-2735.	3.8	8
104	Distributed Ocean-Atmosphere Modeling and Sensitivity to the Coupling Flux Precision: The CATHODE Project. <i>Monthly Weather Review</i> , 1998, 126, 1035-1053.	1.4	7
105	Influence of increased greenhouse gases and sulphate aerosols concentration upon diurnal temperature range over Africa at the end of the 20th century. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	7
106	Estimating the Anthropogenic Sea Surface Temperature Response Using Pattern Scaling. <i>Journal of Climate</i> , 2015, 28, 3751-3763.	3.2	7
107	Tracking Changes in Climate Sensitivity in CNRM Climate Models. <i>Journal of Advances in Modeling Earth Systems</i> , 2021, 13, e2020MS002190.	3.8	7
108	Quantum Monte Carlo study of a proton in an electron gas. <i>Journal of Statistical Physics</i> , 1988, 52, 1221-1232.	1.2	6

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109	Climatology and interannual variability simulated by the ARPEGE-OPA coupled model. <i>Climate Dynamics</i> , 1995, 11, 487-505.	3.8	6
110	Past long-term summer warming over western Europe in new generation climate models: role of large-scale atmospheric circulation. <i>Environmental Research Letters</i> , 2020, 15, 084038.	5.2	5
111	Simulations couplées globales des changements climatiques associées à une augmentation de la teneur atmosphérique en CO <sub>2</sub> . <i>Comptes Rendus De L'Académie Des Sciences Earth &amp; Planetary Sciences Série II, Sciences De La Terre Et Des Planètes</i> , 1998, 326, 677-684.	0.2	4
112	Mechanisms for European summer temperature response to solar forcing over the last millennium. <i>Climate of the Past</i> , 2012, 8, 1487-1495.	3.4	4
113	Imprint of intrinsic ocean variability on decadal trends of regional sea level and ocean heat content using synthetic profiles. <i>Environmental Research Letters</i> , 2022, 17, 044063.	5.2	4
114	La prévision du climat : de l'échelle saisonnière à l'échelle décennale. <i>Comptes Rendus - Geoscience</i> , 2002, 334, 1115-1127.	1.2	2
115	Changes in Variability Associated with Climate Change. , 2013, , 249-271.		2
116	Investigating Parametric Dependence of Climate Feedbacks in the Atmospheric Component of CNRM-CM6. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	2
117	CoPIVEP: a theory-based analysis of coupled processes and interannual variability in the Equatorial Pacific in four coupled GCMs. <i>Climate Dynamics</i> , 2000, 16, 917-933.	3.8	0
118	Impacts of climate change on the hydrological cycle: Application to France's river basins. <i>IOP Conference Series: Earth and Environmental Science</i> , 2009, 6, 292052.	0.3	0
119	Comparaison de deux méthodes de désagrégation pour l'étude du climat et du changement climatique sur les zones de montagne en France. <i>Houille Blanche</i> , 2013, , 22-29.	0.3	0
120	The dependence of the northern extratropical climate response to external forcing on the phase of Atlantic Multidecadal Variability. <i>Climate Dynamics</i> , 2020, 55, 487-502.	3.8	0
121	Le lien entre circulation atmosphérique de grande échelle et canicules pour la prévision à longue échelle et l'impact du changement climatique. <i>Houille Blanche</i> , 2010, 96, 67-71.	0.3	0
122	Coupled Ocean-Atmosphere Simulations. , 1995, , 115-123.		0