

J-L Dufresne

List of Publications by Year in descending order

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107
papers

14,717
citations

36303

51
h-index

28297

105
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128
all docs

128
docs citations

128
times ranked

12065
citing authors

#	ARTICLE	IF	CITATIONS
1	Climate change projections using the IPSL-CM5 Earth System Model: from CMIP3 to CMIP5. <i>Climate Dynamics</i> , 2013, 40, 2123-2165.	3.8	1,425
2	Marine boundary layer clouds at the heart of tropical cloud feedback uncertainties in climate models. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	961
3	How Well Do We Understand and Evaluate Climate Change Feedback Processes?. <i>Journal of Climate</i> , 2006, 19, 3445-3482.	3.2	849
4	The LMDZ4 general circulation model: climate performance and sensitivity to parametrized physics with emphasis on tropical convection. <i>Climate Dynamics</i> , 2006, 27, 787-813.	3.8	795
5	Spread in model climate sensitivity traced to atmospheric convective mixing. <i>Nature</i> , 2014, 505, 37-42.	27.8	586
6	Presentation and Evaluation of the IPSL-CM6A-LR Climate Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS002010.	3.8	541
7	COSP: Satellite simulation software for model assessment. <i>Bulletin of the American Meteorological Society</i> , 2011, 92, 1023-1043.	3.3	483
8	Potential impact of climate change on marine export production. <i>Global Biogeochemical Cycles</i> , 2001, 15, 81-99.	4.9	428
9	Bounding Global Aerosol Radiative Forcing of Climate Change. <i>Reviews of Geophysics</i> , 2020, 58, e2019RG000660.	23.0	424
10	On the interpretation of inter-model spread in CMIP5 climate sensitivity estimates. <i>Climate Dynamics</i> , 2013, 41, 3339-3362.	3.8	423
11	On dynamic and thermodynamic components of cloud changes. <i>Climate Dynamics</i> , 2004, 22, 71-86.	3.8	373
12	An Assessment of the Primary Sources of Spread of Global Warming Estimates from Coupled Atmosphere-Ocean Models. <i>Journal of Climate</i> , 2008, 21, 5135-5144.	3.2	366
13	Evaluation of cloud and water vapor simulations in CMIP5 climate models using NASA's "Train" satellite observations. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	316
14	Impact of soil moisture-climate feedbacks on CMIP5 projections: First results from the GLACE-CMIP5 experiment. <i>Geophysical Research Letters</i> , 2013, 40, 5212-5217.	4.0	314
15	Positive feedback between future climate change and the carbon cycle. <i>Geophysical Research Letters</i> , 2001, 28, 1543-1546.	4.0	287
16	The GCM-Oriented CALIPSO Cloud Product (CALIPSO-GOCCP). <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	285
17	The "too few, too bright" tropical low-cloud problem in CMIP5 models. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	261
18	How positive is the feedback between climate change and the carbon cycle?. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2003, 55, 692-700.	1.6	256

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19	LMDZ5B: the atmospheric component of the IPSL climate model with revisited parameterizations for clouds and convection. <i>Climate Dynamics</i> , 2013, 40, 2193-2222.	3.8	256
20	Impact of the LMDZ atmospheric grid configuration on the climate and sensitivity of the IPSL-CM5A coupled model. <i>Climate Dynamics</i> , 2013, 40, 2167-2192.	3.8	250
21	SIRTA, a ground-based atmospheric observatory for cloud and aerosol research. <i>Annales Geophysicae</i> , 2005, 23, 253-275.	1.6	240
22	Key features of the IPSL ocean atmosphere model and its sensitivity to atmospheric resolution. <i>Climate Dynamics</i> , 2010, 34, 1-26.	3.8	235
23	Origins of the Solar Radiation Biases over the Southern Ocean in CFMIP2 Models*. <i>Journal of Climate</i> , 2014, 27, 41-56.	3.2	227
24	Radiative forcing by well-mixed greenhouse gases: Estimates from climate models in the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4). <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	211
25	Use of CALIPSO lidar observations to evaluate the cloudiness simulated by a climate model. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	191
26	On the magnitude of positive feedback between future climate change and the carbon cycle. <i>Geophysical Research Letters</i> , 2002, 29, 43-1-43-4.	4.0	178
27	Deciphering the desiccation trend of the South Asian monsoon hydroclimate in a warming world. <i>Climate Dynamics</i> , 2016, 47, 1007-1027.	3.8	168
28	Aerosol and ozone changes as forcing for climate evolution between 1850 and 2100. <i>Climate Dynamics</i> , 2013, 40, 2223-2250.	3.8	157
29	Effective radiative forcing and adjustments in CMIP6 models. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 9591-9618.	4.9	149
30	Estimates of global multicomponent aerosol optical depth and direct radiative perturbation in the Laboratoire de Météorologie Dynamique general circulation model. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	144
31	Simulated Antarctic precipitation and surface mass balance at the end of the twentieth and twenty-first centuries. <i>Climate Dynamics</i> , 2006, 28, 215-230.	3.8	144
32	CGILS: Results from the first phase of an international project to understand the physical mechanisms of low cloud feedbacks in single column models. <i>Journal of Advances in Modeling Earth Systems</i> , 2013, 5, 826-842.	3.8	140
33	Longwave Scattering Effects of Mineral Aerosols. <i>Journals of the Atmospheric Sciences</i> , 2002, 59, 1959-1966.	1.7	107
34	Implementation of the CMIP6 Forcing Data in the IPSL-CM6A-CLM Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS001940.	3.8	95
35	Role of clouds and land-atmosphere coupling in midlatitude continental summer warm biases and climate change amplification in CMIP5 simulations. <i>Geophysical Research Letters</i> , 2014, 41, 6493-6500.	4.0	93
36	Diagnosis of regime-dependent cloud simulation errors in CMIP5 models using <i>CoTrain</i> satellite observations and reanalysis data. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 2762-2780.	3.3	90

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37	LM Dz6A: The Atmospheric Component of the IPSL Climate Model With Improved and Better Tuned Physics. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS001892.	3.8	89
38	Equilibrium Climate Sensitivity Estimated by Equilibrating Climate Models. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL083898.	4.0	84
39	Sensitivity of TOMS aerosol index to boundary layer height: Implications for detection of mineral aerosol sources. <i>Geophysical Research Letters</i> , 2004, 31, .	4.0	81
40	High resolution simulation of the South Asian monsoon using a variable resolution global climate model. <i>Climate Dynamics</i> , 2013, 41, 173-194.	3.8	80
41	Climate change under aggressive mitigation: the ENSEMBLES multi-model experiment. <i>Climate Dynamics</i> , 2011, 37, 1975-2003.	3.8	75
42	Will marine dimethylsulfide emissions amplify or alleviate global warming? A model study. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , 2004, 61, 826-835.	1.4	68
43	How uncertainties in future climate change predictions translate into future terrestrial carbon fluxes. <i>Global Change Biology</i> , 2005, 11, 959-970.	9.5	67
44	Coupling between lower-tropospheric convective mixing and low-level clouds: Physical mechanisms and dependence on convection scheme. <i>Journal of Advances in Modeling Earth Systems</i> , 2016, 8, 1892-1911.	3.8	66
45	LongRunMIP: Motivation and Design for a Large Collection of Millennial-Length AOGCM Simulations. <i>Bulletin of the American Meteorological Society</i> , 2019, 100, 2551-2570.	3.3	65
46	The radiative impact of clouds on the shift of the Intertropical Convergence Zone. <i>Geophysical Research Letters</i> , 2014, 41, 4308-4315.	4.0	61
47	Enhanced warming constrained by past trends in equatorial Pacific sea surface temperature gradient. <i>Nature Climate Change</i> , 2021, 11, 33-37.	18.8	58
48	Contrasts in the effects on climate of anthropogenic sulfate aerosols between the 20th and the 21st century. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	57
49	Radiative flux and forcing parameterization error in aerosol-free clear skies. <i>Geophysical Research Letters</i> , 2015, 42, 5485-5492.	4.0	57
50	Nonlinear regional warming with increasing CO ₂ concentrations. <i>Nature Climate Change</i> , 2015, 5, 138-142.	18.8	55
51	IPSL-CM5A2 "an Earth system model designed for multi-millennial climate simulations. <i>Geoscientific Model Development</i> , 2020, 13, 3011-3053.	3.6	55
52	Monte Carlo Simulation of Radiation in Gases With a Narrow-Band Model and a Net-Exchange Formulation. <i>Journal of Heat Transfer</i> , 1996, 118, 401-407.	2.1	51
53	Carbon Dioxide and Climate: Perspectives on a Scientific Assessment. , 2013, , 391-413.		48
54	Evaluation of a component of the cloud response to climate change in an intercomparison of climate models. <i>Climate Dynamics</i> , 2006, 26, 145-165.	3.8	47

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55	Net exchange parameterization of thermal infrared radiative transfer in Venus' atmosphere. Journal of Geophysical Research, 2009, 114, .	3.3	46
56	Simulation of absorbing aerosol indices for African dust. Journal of Geophysical Research, 2005, 110, .	3.3	42
57	Monte Carlo method and sensitivity estimations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 75, 529-538.	2.3	41
58	Declining Aerosols in CMIP5 Projections: Effects on Atmospheric Temperature Structure and Midlatitude Jets. Journal of Climate, 2014, 27, 6960-6977.	3.2	40
59	Air moisture control on ocean surface temperature, hidden key to the warm bias enigma. Geophysical Research Letters, 2015, 42, 10,885.	4.0	39
60	New Generation of Climate Models Track Recent Unprecedented Changes in Earth's Radiation Budget Observed by CERES. Geophysical Research Letters, 2020, 47, e2019GL086705.	4.0	39
61	Impact of different convective cloud schemes on the simulation of the tropical seasonal cycle in a coupled ocean-atmosphere model. Climate Dynamics, 2007, 29, 501-520.	3.8	37
62	Global response of the terrestrial biosphere to CO ₂ and climate change using a coupled climate-carbon cycle model. Global Biogeochemical Cycles, 2002, 16, 31-1-31-15.	4.9	36
63	Improved Near-Surface Continental Climate in IPSL-CM6A-LR by Combined Evolutions of Atmospheric and Land Surface Physics. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002005.	3.8	36
64	Evaluating the Diurnal Cycle of Upper-Tropospheric Ice Clouds in Climate Models Using SMILES Observations. Journals of the Atmospheric Sciences, 2015, 72, 1022-1044.	1.7	35
65	Role of Soil Thermal Inertia in Surface Temperature and Soil Moisture-Temperature Feedback. Journal of Advances in Modeling Earth Systems, 2017, 9, 2906-2919.	3.8	35
66	A net-exchange Monte Carlo approach to radiation in optically thick systems. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 74, 563-584.	2.3	30
67	The improvement of soil thermodynamics and its effects on land surface meteorology in the IPSL climate model. Geoscientific Model Development, 2016, 9, 363-381.	3.6	30
68	Causes and impacts of changes in the Arctic freshwater budget during the twentieth and twenty-first centuries in an AOGCM. Climate Dynamics, 2007, 30, 37-58.	3.8	28
69	Radiative Net Exchange Formulation Within One-Dimensional Gas Enclosures With Reflective Surfaces. Journal of Heat Transfer, 1998, 120, 275-278.	2.1	25
70	Impacts of greenhouse gases and aerosol direct and indirect effects on clouds and radiation in atmospheric GCM simulations of the 1930-1989 period. Climate Dynamics, 2004, 23, 779-789.	3.8	25
71	Interpreting the inter-model spread in regional precipitation projections in the tropics: role of surface evaporation and cloud radiative effects. Climate Dynamics, 2016, 47, 2801-2815.	3.8	24
72	An interactive ocean surface albedo scheme (OSAv1.0): formulation and evaluation in ARPEGE-Climat (V6.1) and LMDZ (V5A). Geoscientific Model Development, 2018, 11, 321-338.	3.6	24

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73	INVERSE GAUSSIAN k-DISTRIBUTIONS. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1999, 61, 433-441.	2.3	23
74	Variations in the characteristics of cyclonic activity and cloudiness in the atmosphere of extratropical latitudes of the Northern Hemisphere based from model calculations compared with the data of the reanalysis and satellite data. <i>Doklady Earth Sciences</i> , 2009, 424, 147-150.	0.7	23
75	Constraining predictions of the carbon cycle using data. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011, 369, 1955-1966.	3.4	22
76	Radiative forcing estimates of sulfate aerosol in coupled climate-chemistry models with emphasis on the role of the temporal variability. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 5583-5602.	4.9	22
77	Net Exchange Reformulation of Radiative Transfer in the CO ₂ 15- $\hat{1}$ / ₄ m Band on Mars. <i>Journals of the Atmospheric Sciences</i> , 2005, 62, 3303-3319.	1.7	21
78	The respective roles of surface temperature driven feedbacks and tropospheric adjustment to CO ₂ in CMIP5 transient climate simulations. <i>Climate Dynamics</i> , 2013, 41, 3103-3126.	3.8	21
79	The role of thermal inertia in the representation of mean and diurnal range of surface temperature in semiarid and arid regions. <i>Geophysical Research Letters</i> , 2015, 42, 7572-7580.	4.0	21
80	Observational Evidence for a Stability Iris Effect in the Tropics. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089059.	4.0	21
81	A boundary-based net-exchange Monte Carlo method for absorbing and scattering thick media. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2005, 91, 27-46.	2.3	20
82	Parameterization of convective transport in the boundary layer and its impact on the representation of the diurnal cycle of wind and dust emissions. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 6775-6788.	4.9	20
83	nonlinMIP contribution to CMIP6: model intercomparison project for non-linear mechanisms: physical basis, experimental design and analysis principles (v1.0). <i>Geoscientific Model Development</i> , 2016, 9, 4019-4028.	3.6	20
84	Use of A-train satellite observations (CALIPSO–PARASOL) to evaluate tropical cloud properties in the LMDZ5 GCM. <i>Climate Dynamics</i> , 2016, 47, 1263-1284.	3.8	20
85	Positive Feedback in Climate: Stabilization or Runaway, Illustrated by a Simple Experiment. <i>Bulletin of the American Meteorological Society</i> , 2016, 97, 755-765.	3.3	20
86	Improved Representation of Clouds in the Atmospheric Component LMDZ6A of the IPSL–CM6A Earth System Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2020MS002046.	3.8	20
87	A process oriented characterization of tropical oceanic clouds for climate model evaluation, based on a statistical analysis of daytime A-train observations. <i>Climate Dynamics</i> , 2012, 39, 2091-2108.	3.8	19
88	Fast Temperature and True Airspeed Measurements with the Airborne Ultrasonic Anemometer–Thermometer (AUSAT). <i>Journal of Atmospheric and Oceanic Technology</i> , 2000, 17, 1020-1039.	1.3	17
89	Why climate sensitivity may not be so unpredictable. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	17
90	Greenhouse Effect: The Relative Contributions of Emission Height and Total Absorption. <i>Journal of Climate</i> , 2020, 33, 3827-3844.	3.2	17

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91	Disconcerting learning on climate sensitivity and the uncertain future of uncertainty. Climatic Change, 2013, 119, 585-601.	3.6	16
92	Long-wave radiative analysis of cloudy scattering atmospheres using a net exchange formulation. Atmospheric Research, 2004, 72, 239-261.	4.1	13
93	Simulation du climat récent et futur par les modèles du CNRM et de l'IPSL. La Météorologie, 2006, 8, 45.	0.5	13
94	Low-Level Marine Tropical Clouds in Six CMIP6 Models Are Too Few, Too Bright but Also Too Compact and Too Homogeneous. Geophysical Research Letters, 2022, 49, .	4.0	12
95	The Tuning Strategy of IPSL-CM6. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002340.	3.8	10
96	10 years of temperature and wind observation on a 45m tower at Dome C, East Antarctic plateau. Earth System Science Data, 2021, 13, 5731-5746.	9.9	10
97	The effects of aggressive mitigation on steric sea level rise and sea ice changes. Climate Dynamics, 2013, 40, 531-550.	3.8	9
98	A Formal Analysis of the Feedback Concept in Climate Models. Part I: Exclusive and Inclusive Feedback Analyses*. Journals of the Atmospheric Sciences, 2013, 70, 3940-3958.	1.7	7
99	Accounting for Vertical Subgrid-Scale Heterogeneity in Low-Level Cloud Fraction Parameterizations. Journal of Advances in Modeling Earth Systems, 2018, 10, 2686-2705.	3.8	7
100	Simulations couplées globales des changements climatiques associées à une augmentation de la teneur atmosphérique en CO ₂ . Comptes Rendus De L'Académie Des Sciences Earth & Planetary Sciences Série II, Sciences De La Terre Et Des Planètes =, 1998, 326, 677-684.	0.2	4
101	A Formal Analysis of the Feedback Concept in Climate Models. Part II: Tangent Linear Systems in GCMs. Journals of the Atmospheric Sciences, 2014, 71, 3350-3375.	1.7	3
102	Regional hydrological cycle changes in response to an ambitious mitigation scenario. Climatic Change, 2013, 120, 389-403.	3.6	2
103	Computation of longwave radiative flux and vertical heating rate with 4A-Flux v1.0 as an integral part of the radiative transfer code 4A/OP v1.5. Geoscientific Model Development, 2022, 15, 5211-5231.	3.6	2
104	Méthode de Monte-Carlo par échantillons pour le calcul des bilans radiatifs au sein d'une cavité 2D remplie de gaz. Comptes Rendus De L'Académie Des Sciences - Series IIB - Mechanics-Physics-Chemistry-Astronomy, 1998, 326, 33-38.	0.1	1
105	From the Climates of the Past to the Climates of the Future. Frontiers in Earth Sciences, 2021, , 443-478.	0.1	1
106	Simulation de l'évolution du climat aux échelles globales et régionales. Houille Blanche, 2008, 94, 33-37.	0.3	0
107	Procédure d'identification inclusive d'un système thermique. Etude de cas : caractérisation d'un capteur solaire à air en régime dynamique. Revue De Physique Appliquée, 1990, 25, 1139-1160.	0.4	0