J-L Dufresne

List of Publications by Year
in descending order

107 papers	14,717 citations	36271 51 h-index	28275 105 g-index
128 all docs	128 docs citations	128 times ranked	12065 citing authors

#	Article	IF	Citations
1	Lowâ€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, .	1.5	12
2	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.	1.3	2
3	Enhanced warming constrained by past trends in equatorial Pacific sea surface temperature gradient. Nature Climate Change, 2021, 11, 33-37.	8.1	58
4	The Tuning Strategy of IPSLâ€CM6Aâ€LR. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002340.	1.3	10
5	From the Climates of the Past to the Climates of the Future. Frontiers in Earth Sciences, 2021, , 443-478.	0.1	1
6	10 years of temperature and wind observation on a 45â€‰m tower at Dome C, East Antarctic plateau. Earth System Science Data, 2021, 13, 5731-5746.	3.7	10
7	Bounding Global Aerosol Radiative Forcing of Climate Change. Reviews of Geophysics, 2020, 58, e2019RG000660.	9.0	424
8	Equilibrium Climate Sensitivity Estimated by Equilibrating Climate Models. Geophysical Research Letters, 2020, 47, e2019GL083898.	1.5	84
9	LMDZ6A: The Atmospheric Component of the IPSL Climate Model With Improved and Better Tuned Physics. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001892.	1.3	89
10	Improved Representation of Clouds in the Atmospheric Component LMDZ6A of the IPSLâ€CM6A Earth System Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002046.	1.3	20
11	Improved Nearâ€Surface Continental Climate in IPSLâ€CM6Aâ€LR by Combined Evolutions of Atmospheric and Land Surface Physics. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002005.	1.3	36
12	Presentation and Evaluation of the IPSLâ€CM6Aâ€LR Climate Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002010.	1.3	541
13	Observational Evidence for a Stability Iris Effect in the Tropics. Geophysical Research Letters, 2020, 47, e2020GL089059.	1.5	21
14	Implementation of the CMIP6 Forcing Data in the IPSLâ€CM6Aâ€LR Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001940.	1.3	95
15	Greenhouse Effect: The Relative Contributions of Emission Height and Total Absorption. Journal of Climate, 2020, 33, 3827-3844.	1.2	17
16	New Generation of Climate Models Track Recent Unprecedented Changes in Earth's Radiation Budget Observed by CERES. Geophysical Research Letters, 2020, 47, e2019GL086705.	1.5	39
17	Effective radiative forcing and adjustments in CMIP6 models. Atmospheric Chemistry and Physics, 2020, 20, 9591-9618.	1.9	149
18	IPSL-CM5A2 â€" an Earth system model designed for multi-millennial climate simulations. Geoscientific Model Development, 2020, 13, 3011-3053.	1.3	55

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19	LongRunMIP: Motivation and Design for a Large Collection of Millennial-Length AOGCM Simulations. Bulletin of the American Meteorological Society, 2019, 100, 2551-2570.	1.7	65
20	Accounting for Vertical Subgridâ€Scale Heterogeneity in Lowâ€Level Cloud Fraction Parameterizations. Journal of Advances in Modeling Earth Systems, 2018, 10, 2686-2705.	1.3	7
21	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.	1.3	24
22	Role of Soil Thermal Inertia in Surface Temperature and Soil Moistureâ€Temperature Feedback. Journal of Advances in Modeling Earth Systems, 2017, 9, 2906-2919.	1.3	35
23	nonlinMIP contribution to CMIP6: model intercomparison project for non-linear mechanisms: physical basis, experimental design and analysis principles (v1.0). Geoscientific Model Development, 2016, 9, 4019-4028.	1.3	20
24	The improvement of soil thermodynamics and its effects on land surface meteorology in the IPSL climate model. Geoscientific Model Development, 2016, 9, 363-381.	1.3	30
25	Coupling between lowerâ€tropospheric convective mixing and lowâ€level clouds: Physical mechanisms and dependence on convection scheme. Journal of Advances in Modeling Earth Systems, 2016, 8, 1892-1911.	1.3	66
26	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.	1.7	24
27	Use of A-train satellite observations (CALIPSOâ€"PARASOL) to evaluate tropical cloud properties in the LMDZ5 GCM. Climate Dynamics, 2016, 47, 1263-1284.	1.7	20
28	Deciphering the desiccation trend of the South Asian monsoon hydroclimate in a warming world. Climate Dynamics, 2016, 47, 1007-1027.	1.7	168
29	Positive Feedback in Climate: Stabilization or Runaway, Illustrated by a Simple Experiment. Bulletin of the American Meteorological Society, 2016, 97, 755-765.	1.7	20
30	Air moisture control on ocean surface temperature, hidden key to the warm bias enigma. Geophysical Research Letters, 2015, 42, 10,885.	1.5	39
31	The role of thermal inertia in the representation of mean and diurnal range of surface temperature in semiarid and arid regions. Geophysical Research Letters, 2015, 42, 7572-7580.	1.5	21
32	Radiative flux and forcing parameterization error in aerosolâ€free clear skies. Geophysical Research Letters, 2015, 42, 5485-5492.	1.5	57
33	Nonlinear regional warming with increasing CO2Âconcentrations. Nature Climate Change, 2015, 5, 138-142.	8.1	55
34	Parameterization of convective transport in the boundary layer and its impact on the representation of the diurnal cycle of wind and dust emissions. Atmospheric Chemistry and Physics, 2015, 15, 6775-6788.	1.9	20
35	Evaluating the Diurnal Cycle of Upper-Tropospheric Ice Clouds in Climate Models Using SMILES Observations. Journals of the Atmospheric Sciences, 2015, 72, 1022-1044.	0.6	35
36	Role of clouds and land-atmosphere coupling in midlatitude continental summer warm biases and climate change amplification in CMIP5 simulations. Geophysical Research Letters, 2014, 41, 6493-6500.	1.5	93

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37	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.	0.6	3
38	Origins of the Solar Radiation Biases over the Southern Ocean in CFMIP2 Models*. Journal of Climate, 2014, 27, 41-56.	1.2	227
39	Spread in model climate sensitivity traced to atmospheric convective mixing. Nature, 2014, 505, 37-42.	13.7	586
40	The radiative impact of clouds on the shift of the Intertropical Convergence Zone. Geophysical Research Letters, 2014, 41, 4308-4315.	1.5	61
41	Declining Aerosols in CMIP5 Projections: Effects on Atmospheric Temperature Structure and Midlatitude Jets. Journal of Climate, 2014, 27, 6960-6977.	1.2	40
42	Regional hydrological cycle changes in response to an ambitious mitigation scenario. Climatic Change, 2013, 120, 389-403.	1.7	2
43	Disconcerting learning on climate sensitivity and the uncertain future of uncertainty. Climatic Change, 2013, 119, 585-601.	1.7	16
44	On the interpretation of inter-model spread in CMIP5 climate sensitivity estimates. Climate Dynamics, 2013, 41, 3339-3362.	1.7	423
45	The respective roles of surface temperature driven feedbacks and tropospheric adjustment to CO2 in CMIP5 transient climate simulations. Climate Dynamics, 2013, 41, 3103-3126.	1.7	21
46	Climate change projections using the IPSL-CM5 Earth System Model: from CMIP3 to CMIP5. Climate Dynamics, 2013, 40, 2123-2165.	1.7	1,425
47	Impact of the LMDZ atmospheric grid configuration on the climate and sensitivity of the IPSL-CM5A coupled model. Climate Dynamics, 2013, 40, 2167-2192.	1.7	250
48	LMDZ5B: the atmospheric component of the IPSL climate model with revisited parameterizations for clouds and convection. Climate Dynamics, 2013, 40, 2193-2222.	1.7	256
49	The effects of aggressive mitigation on steric sea level rise and sea ice changes. Climate Dynamics, 2013, 40, 531-550.	1.7	9
50	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.	0.6	7
51	Aerosol and ozone changes as forcing for climate evolution between 1850 and 2100. Climate Dynamics, 2013, 40, 2223-2250.	1.7	157
52	Carbon Dioxide and Climate: Perspectives on a Scientific Assessment. , 2013, , 391-413.		48
53	High resolution simulation of the South Asian monsoon using a variable resolution global climate model. Climate Dynamics, 2013, 41, 173-194.	1.7	80
54	Impact of soil moistureâ€climate feedbacks on CMIP5 projections: First results from the GLACEâ€CMIP5 experiment. Geophysical Research Letters, 2013, 40, 5212-5217.	1.5	314

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55	CGILS: Results from the first phase of an international project to understand the physical mechanisms of low cloud feedbacks in single column models. Journal of Advances in Modeling Earth Systems, 2013, 5, 826-842.	1.3	140
56	Diagnosis of regimeâ€dependent cloud simulation errors in CMIP5 models using â€œAâ€Trainâ€•satellite observations and reanalysis data. Journal of Geophysical Research D: Atmospheres, 2013, 118, 2762-2780.	1.2	90
57	Radiative forcing estimates of sulfate aerosol in coupled climate-chemistry models with emphasis on the role of the temporal variability. Atmospheric Chemistry and Physics, 2012, 12, 5583-5602.	1.9	22
58	The â€˜too few, too brightâ€™ tropical lowâ€cloud problem in CMIP5 models. Geophysical Research Letters, 2012, 39, .	1.5	261
59	Evaluation of cloud and water vapor simulations in CMIP5 climate models using NASA â€œAâ€Trainâ€• satellite observations. Journal of Geophysical Research, 2012, 117, .	3.3	316
60	A process oriented characterization of tropical oceanic clouds for climate model evaluation, based on a statistical analysis of daytime A-train observations. Climate Dynamics, 2012, 39, 2091-2108.	1.7	19
61	Constraining predictions of the carbon cycle using data. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 1955-1966.	1.6	22
62	Climate change under aggressive mitigation: the ENSEMBLES multi-model experiment. Climate Dynamics, 2011, 37, 1975-2003.	1.7	75
63	COSP: Satellite simulation software for model assessment. Bulletin of the American Meteorological Society, 2011, 92, 1023-1043.	1.7	483
64	Key features of the IPSL ocean atmosphere model and its sensitivity to atmospheric resolution. Climate Dynamics, 2010, 34, 1-26.	1.7	235
65	The GCMâ€Oriented CALIPSO Cloud Product (CALIPSOâ€GOCCP). Journal of Geophysical Research, 2010, 115, .	3.3	285
66	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. Doklady Earth Sciences, 2009, 424, 147-150.	0.2	23
67	Why climate sensitivity may not be so unpredictable. Geophysical Research Letters, 2009, 36, .	1.5	17
68	Net exchange parameterization of thermal infrared radiative transfer in Venus' atmosphere. Journal of Geophysical Research, 2009, 114, .	3.3	46
69	Use of CALIPSO lidar observations to evaluate the cloudiness simulated by a climate model. Geophysical Research Letters, 2008, 35, .	1.5	191
70	An Assessment of the Primary Sources of Spread of Global Warming Estimates from Coupled Atmosphereâ€“Ocean Models. Journal of Climate, 2008, 21, 5135-5144.	1.2	366
71	Simulation de lâ€™Ã©volution du climat aux Ã©chelles globales et rÃ©gionales. Houille Blanche, 2008, 94, 33-37.	0.3	0
72	Impact of different convective cloud schemes on the simulation of the tropical seasonal cycle in a coupled oceanâ€“atmosphere model. Climate Dynamics, 2007, 29, 501-520.	1.7	37

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73	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.	1.7	28
74	Radiative forcing by well-mixed greenhouse gases: Estimates from climate models in the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4). Journal of Geophysical Research, 2006, 111, .	3.3	211
75	How Well Do We Understand and Evaluate Climate Change Feedback Processes?. Journal of Climate, 2006, 19, 3445-3482.	1.2	849
76	Simulation du climat rÃ©cent et futur par les modÃ¨les du CNRM et de l'IPSL. La MÃ©tÃ©orologie, 2006, 8, 45.	0.5	13
77	Evaluation of a component of the cloud response to climate change in an intercomparison of climate models. Climate Dynamics, 2006, 26, 145-165.	1.7	47
78	The LMDZ4 general circulation model: climate performance and sensitivity to parametrized physics with emphasis on tropical convection. Climate Dynamics, 2006, 27, 787-813.	1.7	795
79	Simulated Antarctic precipitation and surface mass balance at the end of the twentieth and twenty-first centuries. Climate Dynamics, 2006, 28, 215-230.	1.7	144
80	Net Exchange Reformulation of Radiative Transfer in the CO2 15-Î¼m Band on Mars. Journals of the Atmospheric Sciences, 2005, 62, 3303-3319.	0.6	21
81	A boundary-based net-exchange Monte Carlo method for absorbing and scattering thick media. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 91, 27-46.	1.1	20
82	How uncertainties in future climate change predictions translate into future terrestrial carbon fluxes. Global Change Biology, 2005, 11, 959-970.	4.2	67
83	SIRTA, a ground-based atmospheric observatory for cloud and aerosol research. Annales Geophysicae, 2005, 23, 253-275.	0.6	240
84	Estimates of global multicomponent aerosol optical depth and direct radiative perturbation in the Laboratoire de MÃ©tÃ©orologie Dynamique general circulation model. Journal of Geophysical Research, 2005, 110, .	3.3	144
85	Simulation of absorbing aerosol indices for African dust. Journal of Geophysical Research, 2005, 110, .	3.3	42
86	Contrasts in the effects on climate of anthropogenic sulfate aerosols between the 20th and the 21st century. Geophysical Research Letters, 2005, 32, .	1.5	57
87	Marine boundary layer clouds at the heart of tropical cloud feedback uncertainties in climate models. Geophysical Research Letters, 2005, 32, .	1.5	961
88	On dynamic and thermodynamic components of cloud changes. Climate Dynamics, 2004, 22, 71-86.	1.7	373
89	Impacts of greenhouse gases and aerosol direct and indirect effects on clouds and radiation in atmospheric GCM simulations of the 1930â€"1989 period. Climate Dynamics, 2004, 23, 779-789.	1.7	25
90	Will marine dimethylsulfide emissions amplify or alleviate global warming? A model study. Canadian Journal of Fisheries and Aquatic Sciences, 2004, 61, 826-835.	0.7	68

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91	Sensitivity of TOMS aerosol index to boundary layer height: Implications for detection of mineral aerosol sources. Geophysical Research Letters, 2004, 31, .	1.5	81
92	Long-wave radiative analysis of cloudy scattering atmospheres using a net exchange formulation. Atmospheric Research, 2004, 72, 239-261.	1.8	13
93	How positive is the feedback between climate change and the carbon cycle?. Tellus, Series B: Chemical and Physical Meteorology, 2003, 55, 692-700.	0.8	256
94	Longwave Scattering Effects of Mineral Aerosols. Journals of the Atmospheric Sciences, 2002, 59, 1959-1966.	0.6	107
95	Global response of the terrestrial biosphere to CO2and climate change using a coupled climate-carbon cycle model. Global Biogeochemical Cycles, 2002, 16, 31-1-31-15.	1.9	36
96	On the magnitude of positive feedback between future climate change and the carbon cycle. Geophysical Research Letters, 2002, 29, 43-1-43-4.	1.5	178
97	A net-exchange Monte Carlo approach to radiation in optically thick systems. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 74, 563-584.	1.1	30
98	Monte Carlo method and sensitivity estimations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 75, 529-538.	1.1	41
99	Potential impact of climate change on marine export production. Global Biogeochemical Cycles, 2001, 15, 81-99.	1.9	428
100	Positive feedback between future climate change and the carbon cycle. Geophysical Research Letters, 2001, 28, 1543-1546.	1.5	287
101	Fast Temperature and True Airspeed Measurements with the Airborne Ultrasonic Anemometerâ€"Thermometer (AUSAT). Journal of Atmospheric and Oceanic Technology, 2000, 17, 1020-1039.	0.5	17
102	INVERSE GAUSSIAN k-DISTRIBUTIONS. Journal of Quantitative Spectroscopy and Radiative Transfer, 1999, 61, 433-441.	1.1	23
103	MÃ©thode de Monte-Carlo par Ã©changes pour le calcul des bilans radiatifs au sein d'une cavitÃ© 2D remplie de gaz. Comptes Rendus De L'AcadÃ©mie Des Sciences - Series IIB - Mechanics-Physics-Chemistry-Astronomy, 1998, 326, 33-38.	0.1	1
104	Simulations couplÃ©es globales des changements climatiques associÃ©s Ã une augmentation de la teneur atmosphÃ©rique en CO2. Comptes Rendus De L'AcadÃ©mie Des Sciences Earth & Planetary Sciences SÃ©rie II, Sciences De La Terre Et Des PlanÃ¨tes =, 1998, 326, 677-684.	0.2	4
105	Radiative Net Exchange Formulation Within One-Dimensional Gas Enclosures With Reflective Surfaces. Journal of Heat Transfer, 1998, 120, 275-278.	1.2	25
106	Monte Carlo Simulation of Radiation in Gases With a Narrow-Band Model and a Net-Exchange Formulation. Journal of Heat Transfer, 1996, 118, 401-407.	1.2	51
107	ProcÃ©dure d'identification inclusive d'un systÃ¨me thermique. Etude de cas : caractÃ©risation d'un capteur solaire Ã air en rÃ©gime dynamique. Revue De Physique AppliquÃ©e, 1990, 25, 1139-1160.	0.4	0