Petri RÃ¤isÃ¤nen

List of Publications by Year
in descending order

75 papers	2,485 citations	218592 26 h-index	233338 45 g-index
106 all docs	106 docs citations	106 times ranked	3655 citing authors

#	Article	IF	Citations
1	Long-wave optical properties of water clouds and rain. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 50, 1.	0.8	7
2	Evaluation of Northern Hemisphere snow water equivalent in CMIP6 models during 1982â€“2014. Cryosphere, 2022, 16, 1007-1030.	1.5	11
3	Continuous bidirectional reflectance (BRF) measurement of snow using monochromatic camera. Cold Regions Science and Technology, 2022, 196, 103514.	1.6	0
4	Technical note: Parameterising cloud base updraft velocity of marine stratocumuli. Atmospheric Chemistry and Physics, 2022, 22, 4523-4537.	1.9	5
5	Effect of small-scale snow surface roughness on snow albedo and reflectance. Cryosphere, 2021, 15, 793-820.	1.5	15
6	How Asian aerosols impact regional surface temperatures across the globe. Atmospheric Chemistry and Physics, 2021, 21, 5865-5881.	1.9	9
7	Aerosol optical depth comparison between GAW-PFR and AERONET-Cimel radiometers from long-term (2005â€“2015) 1â€‰min synchronous measurements. Atmospheric Measurement Techniques, 2019, 12, 4309-4337.	1.2	25
8	On the Computation of Apparent Direct Solar Radiation. Journals of the Atmospheric Sciences, 2019, 76, 2761-2780.	0.6	14
9	Role of climate model dynamics in estimated climate responses to anthropogenic aerosols. Atmospheric Chemistry and Physics, 2019, 19, 9969-9987.	1.9	12
10	Anthropogenic aerosol forcing â€“ insights from multiple estimates from aerosol-climate models with reduced complexity. Atmospheric Chemistry and Physics, 2019, 19, 6821-6841.	1.9	33
11	Future Changes in Incident Surface Solar Radiation and Contributing Factors in India in CMIP5 Climate Model Simulations. Journal of Applied Meteorology and Climatology, 2019, 58, 19-35.	0.6	10
12	The Influence of Eurasian Snow Extent on the Northern Extratropical Stratosphere in a QBO Resolving Model. Journal of Geophysical Research D: Atmospheres, 2018, 123, 315-328.	1.2	13
13	Seasonal soil moisture and drought occurrence in Europe in CMIP5 projections for the 21st century. Climate Dynamics, 2018, 50, 1177-1192.	1.7	137
14	The regional climate model REMO (v2015) coupled with the 1-D freshwater lake model FLake (v1): Fenno-Scandinavian climate and lakes. Geoscientific Model Development, 2018, 11, 1321-1342.	1.3	24
15	Disk and circumsolar radiances in the presence of ice clouds. Atmospheric Chemistry and Physics, 2017, 17, 6865-6882.	1.9	12
16	Effects of snow grain shape on climate simulations: sensitivity tests with the Norwegian Earth System Model. Cryosphere, 2017, 11, 2919-2942.	1.5	20
17	Nudging service providers and assessing service trade-offs to reduce the social inefficiencies of payments for ecosystem services schemes. Environmental Science and Policy, 2016, 55, 228-237.	2.4	23
18	Turbulent structure and scaling of the inertial subrange in a stratocumulus-topped boundary layer observed by a Doppler lidar. Atmospheric Chemistry and Physics, 2015, 15, 5873-5885.	1.9	12

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19	Explicit representation of subgrid variability in cloud microphysics yields weaker aerosol indirect effect in the ECHAM5-HAM2 climate model. Atmospheric Chemistry and Physics, 2015, 15, 703-714.	1.9	21
20	Retrieving microphysical properties of dust-like particles using ellipsoids: the case of refractive index. Atmospheric Chemistry and Physics, 2015, 15, 11117-11132.	1.9	21
21	Measurements and modelling of snow particle size and shortwave infrared albedo over a melting Antarctic ice sheet. Cryosphere, 2015, 9, 2357-2381.	1.5	22
22	Estimates of global dew collection potential on artificial surfaces. Hydrology and Earth System Sciences, 2015, 19, 601-613.	1.9	40
23	Parameterization of single-scattering properties of snow. Cryosphere, 2015, 9, 1277-1301.	1.5	36
24	Strategies for reducing the climate noise in model simulations: ensemble runs versus a long continuous run. Climate Dynamics, 2015, 44, 1367-1379.	1.7	5
25	Improved power-law estimates from multiple samples provided by millennium climate simulations. Theoretical and Applied Climatology, 2015, 119, 667-677.	1.3	8
26	Climate impacts of changing aerosol emissions since 1996. Geophysical Research Letters, 2014, 41, 4711-4718.	1.5	30
27	Evaluation of North Eurasian snow-off dates in the ECHAM5.4 atmospheric general circulation model. Geoscientific Model Development, 2014, 7, 3037-3057.	1.3	5
28	Spatial distributions and seasonal cycles of aerosol climate effects in India seen in a global climateâ€“aerosol model. Atmospheric Chemistry and Physics, 2014, 14, 10177-10192.	1.9	12
29	Diagnosing the average spatio-temporal impact of convective systems â€“ Part 2: A model intercomparison using satellite data. Atmospheric Chemistry and Physics, 2014, 14, 8701-8721.	1.9	3
30	Impact of dust particle nonâ€sphericity on climate simulations. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 2222-2232.	1.0	20
31	Seasonal Changes in Solar Radiation and Relative Humidity in Europe in Response to Global Warming*. Journal of Climate, 2013, 26, 2467-2481.	1.2	43
32	Warming-induced increase in aerosol number concentration likely to moderate climate change. Nature Geoscience, 2013, 6, 438-442.	5.4	282
33	On the possibilities to use atmospheric reanalyses to evaluate the warming structure in the Arctic. Atmospheric Chemistry and Physics, 2013, 13, 11209-11219.	1.9	30
34	Spectral albedo of seasonal snow during intensive melt period at SodankylÃ, beyond the Arctic Circle. Atmospheric Chemistry and Physics, 2013, 13, 3793-3810.	1.9	54
35	Monte Carlo-based subgrid parameterization of vertical velocity and stratiform cloud microphysics in ECHAM5.5-HAM2. Atmospheric Chemistry and Physics, 2013, 13, 7551-7565.	1.9	10
36	Brightening of the global cloud field by nitric acid and the associated radiative forcing. Atmospheric Chemistry and Physics, 2012, 12, 7625-7633.	1.9	10

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37	Quasiperiodic climate variability with a period of 50â€“80Âyears: Fourier analysis of measurements and Earth System Model simulations. Climate Dynamics, 2012, 39, 1999-2011.	1.7	13
38	Climate effects of northern hemisphere volcanic eruptions in an Earth System Model. Atmospheric Research, 2012, 114-115, 107-118.	1.8	5
39	The Continual Intercomparison of Radiation Codes: Results from Phase I. Journal of Geophysical Research, 2012, 117, .	3.3	112
40	Effect of aerosol size distribution changes on AOD, CCN and cloud droplet concentration: Case studies from Erfurt and Melpitz, Germany. Journal of Geophysical Research, 2012, 117, .	3.3	14
41	Sensitivity of the shortwave radiative effect of dust on particle shape: Comparison of spheres and spheroids. Journal of Geophysical Research, 2012, 117, .	3.3	17
42	Origin of the Arctic warming in climate models. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	27
43	The influence of observed cirrus microphysical properties on shortwave radiation: A case study over Oklahoma. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	10
44	Cloud base vertical velocity statistics: a comparison between an atmospheric mesoscale model and remote sensing observations. Atmospheric Chemistry and Physics, 2011, 11, 9207-9218.	1.9	23
45	Large methane releases lead to strong aerosol forcing and reduced cloudiness. Atmospheric Chemistry and Physics, 2011, 11, 6961-6969.	1.9	14
46	Spatial distributions and seasonal cycles of aerosols in India and China seen in global climate-aerosol model. Atmospheric Chemistry and Physics, 2011, 11, 7975-7990.	1.9	45
47	Soil carbon model alternatives for ECHAM5/JSBACH climate model: Evaluation and impacts on global carbon cycle estimates. Journal of Geophysical Research, 2011, 116, .	3.3	35
48	Evaluation of the statistical cloud scheme in the ECHAM5 model using satellite data. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 2079-2091.	1.0	15
49	Estimation of ECHAM5 climate model closure parameters with adaptive MCMC. Atmospheric Chemistry and Physics, 2010, 10, 9993-10002.	1.9	44
50	Impact of cloud and radiation scheme modifications on climate simulated by the ECHAM5 atmospheric GCM. Quarterly Journal of the Royal Meteorological Society, 2010, 136, 1733-1752.	1.0	18
51	The Monte Carlo Independent Column Approximation: an assessment using several global atmospheric models. Quarterly Journal of the Royal Meteorological Society, 2008, 134, 1463-1478.	1.0	86
52	A method to account for surface albedo heterogeneity in singleâ€column radiative transfer calculations under overcast conditions. Journal of Geophysical Research, 2008, 113, .	3.3	9
53	Correction to â€œA method to account for surface albedo heterogeneity in single-column radiative transfer calculations under overcast conditionsâ€• Journal of Geophysical Research, 2008, 113, .	3.3	0
54	Noise due to the Monte Carlo independent-column approximation: short-term and long-term impacts in ECHAM5. Quarterly Journal of the Royal Meteorological Society, 2008, 134, 481-495.	1.0	19

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55	Tests of Monte Carlo Independent Column Approximation in the ECHAM5 Atmospheric GCM. Journal of Climate, 2007, 20, 4995-5011.	1.2	23
56	Mie simulations as an error source in mineral aerosol radiative forcing calculations. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 299-307.	1.0	71
57	On the (in)accuracy of the spherical particle approximation in mineral aerosol radiative forcing simulations. , 2007, , .		0
58	Radiative sensitivities for cloud structural properties that are unresolved by conventional GCMs. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 3103-3122.	1.0	40
59	The Monte Carlo Independent Column Approximationâ€™s Conditional Random Noise: Impact on Simulated Climate. Journal of Climate, 2005, 18, 4715-4730.	1.2	35
60	Accounting for unresolved clouds in a 1-D solar radiative-transfer model. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 1607-1629.	1.0	38
61	Neglect by GCMs of subgrid-scale horizontal variations in cloud-droplet effective radius: A diagnostic radiative analysis. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 1905-1920.	1.0	11
62	Evaluation and optimization of sampling errors for the Monte Carlo Independent Column Approximation. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 2069-2085.	1.0	41
63	Stochastic generation of subgrid-scale cloudy columns for large-scale models. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 2047-2067.	1.0	154
64	Solar radiative transfer for stratiform clouds with horizontal variations in liquid-water path and droplet effective radius. Quarterly Journal of the Royal Meteorological Society, 2003, 129, 2135-2149.	1.0	25
65	Scattering of light by large Saharan dust particles in a modified ray optics approximation. Journal of Geophysical Research, 2003, 108, AAC 12-1.	3.3	76
66	Two-stream approximations revisited: A new improvement and tests with GCM data. Quarterly Journal of the Royal Meteorological Society, 2002, 128, 2397-2416.	1.0	32
67	Comparison of surface radiative flux parameterizations. Atmospheric Research, 2001, 58, 1-18.	1.8	173
68	Comparison of surface radiative flux parameterizations. Atmospheric Research, 2001, 58, 141-154.	1.8	64
69	Effect of vertical resolution on cloudy-sky radiation calculations: Tests with two schemes. Journal of Geophysical Research, 1999, 104, 27407-27419.	3.3	10
70	Parameterization of Water and Ice Cloud Near-Infrared Single-Scattering Co-Albedo in Broadband Radiation Schemes. Journals of the Atmospheric Sciences, 1999, 56, 626-641.	0.6	7
71	Long-wave optical properties of water clouds and rain. Tellus, Series A: Dynamic Meteorology and Oceanography, 1998, 50, 1-11.	0.8	17
72	Effective Longwave Cloud Fraction and Maximum-Random Overlap of Clouds:A Problem and a Solution. Monthly Weather Review, 1998, 126, 3336-3340.	0.5	49

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73	Short-wave optical properties of precipitating water clouds. Quarterly Journal of the Royal Meteorological Society, 1997, 123, 883-899.	1.0	44
74	The effect of vertical resolution on clear-sky radiation calculations: tests with two schemes. Tellus, Series A: Dynamic Meteorology and Oceanography, 1996, 48, 403-423.	0.8	11
75	The HIRLAM fast radiation scheme for mesoscale numerical weather prediction models. Advances in Science and Research, 0, 14, 195-215.	1.0	5