

Petr Stepanek

List of Publications by Year in descending order

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104
papers

4,445
citations

101496

36
h-index

118793

62
g-index

118
all docs

118
docs citations

118
times ranked

5116
citing authors

#	ARTICLE	IF	CITATIONS
1	Observational evidence for soil-moisture impact on hot extremes in southeastern Europe. <i>Nature Geoscience</i> , 2011, 4, 17-21.	5.4	607
2	Benchmarking homogenization algorithms for monthly data. <i>Climate of the Past</i> , 2012, 8, 89-115.	1.3	286
3	An intercomparison of a large ensemble of statistical downscaling methods over Europe: Results from the VALUE perfect predictor cross-validation experiment. <i>International Journal of Climatology</i> , 2019, 39, 3750-3785.	1.5	164
4	20th-century glacier recession and regional hydroclimatic changes in northwestern Patagonia. <i>Global and Planetary Change</i> , 2008, 60, 85-100.	1.6	157
5	Climate of the Carpathian Region in the period 1961-2010: climatologies and trends of 10 variables. <i>International Journal of Climatology</i> , 2015, 35, 1322-1341.	1.5	152
6	Monthly precipitation trends on the Mediterranean fringe of the Iberian Peninsula during the second half of the twentieth century (1951-2000). <i>International Journal of Climatology</i> , 2009, 29, 1415-1429.	1.5	144
7	Performance of the standardised precipitation evapotranspiration index at various lags for agricultural drought risk assessment in the Czech Republic. <i>Agricultural and Forest Meteorology</i> , 2015, 202, 26-38.	1.9	139
8	Devastating outbreak of bark beetles in the Czech Republic: Drivers, impacts, and management implications. <i>Forest Ecology and Management</i> , 2021, 490, 119075.	1.4	134
9	Observed spatiotemporal characteristics of drought on various time scales over the Czech Republic. <i>Theoretical and Applied Climatology</i> , 2014, 115, 563-581.	1.3	130
10	A complete daily precipitation database for northeast Spain: reconstruction, quality control, and homogeneity. <i>International Journal of Climatology</i> , 2010, 30, 1146-1163.	1.5	119
11	Seasonal precipitation trends in the Mediterranean Iberian Peninsula in second half of 20th century. <i>International Journal of Climatology</i> , 2009, 29, 1312-1323.	1.5	107
12	Data quality control and homogenization of air temperature and precipitation series in the area of the Czech Republic in the period 1961-2007. <i>Advances in Science and Research</i> , 2009, 3, 23-26.	1.0	90
13	Pollution control enhanced spruce growth in the "Black Triangle" near the Czech-Polish border. <i>Science of the Total Environment</i> , 2015, 538, 703-711.	3.9	82
14	Temperature and precipitation fluctuations in the Czech Republic during the period of instrumental measurements. <i>Theoretical and Applied Climatology</i> , 2012, 110, 17-34.	1.3	72
15	Drought trends over part of Central Europe between 1961 and 2014. <i>Climate Research</i> , 2016, 70, 143-160.	0.4	69
16	Droughts in the Czech Lands, 1090-2012 AD. <i>Climate of the Past</i> , 2013, 9, 1985-2002.	1.3	68
17	Soil moisture trends in the Czech Republic between 1961 and 2012. <i>International Journal of Climatology</i> , 2015, 35, 3733-3747.	1.5	61
18	Projection of drought-inducing climate conditions in the Czech Republic according to Euro-CORDEX models. <i>Climate Research</i> , 2016, 70, 179-193.	0.4	60

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19	Environmental factors exert strong control over the climate-growth relationships of <i>Picea abies</i> in Central Europe. <i>Science of the Total Environment</i> , 2017, 609, 506-516.	3.9	57
20	Expected changes in agroclimatic conditions in Central Europe. <i>Climatic Change</i> , 2011, 108, 261-289.	1.7	55
21	Could the changes in regional crop yields be a pointer of climatic change?. <i>Agricultural and Forest Meteorology</i> , 2012, 166-167, 62-71.	1.9	55
22	Czech Drought Monitor System for monitoring and forecasting agricultural drought and drought impacts. <i>International Journal of Climatology</i> , 2020, 40, 5941-5958.	1.5	55
23	Changing climate and the phenological response of great tit and collared flycatcher populations in floodplain forest ecosystems in Central Europe. <i>International Journal of Biometeorology</i> , 2010, 54, 99-111.	1.3	54
24	The extreme drought episode of August 2011–May 2012 in the Czech Republic. <i>International Journal of Climatology</i> , 2015, 35, 3335-3352.	1.5	53
25	Estimating the impact of climate change on the occurrence of selected pests at a high spatial resolution: a novel approach. <i>Journal of Agricultural Science</i> , 2011, 149, 185-195.	0.6	51
26	Increasing moisture limitation of Norway spruce in Central Europe revealed by forward modelling of tree growth in tree-ring network. <i>Agricultural and Forest Meteorology</i> , 2017, 247, 56-64.	1.9	49
27	Discerning environmental factors affecting current tree growth in Central Europe. <i>Science of the Total Environment</i> , 2016, 573, 541-554.	3.9	47
28	Evidence of climate-induced stress of Norway spruce along elevation gradient preceding the current dieback in Central Europe. <i>Trees - Structure and Function</i> , 2021, 35, 103-119.	0.9	47
29	Reflections of global warming in trends of temperature characteristics in the Czech Republic, 1961–2019. <i>International Journal of Climatology</i> , 2021, 41, 1211-1229.	1.5	46
30	Determination of areas with the most significant shift in persistence of pests in Europe under climate change. <i>Pest Management Science</i> , 2014, 70, 708-715.	1.7	44
31	Post-disturbance recovery of forest carbon in a temperate forest landscape under climate change. <i>Agricultural and Forest Meteorology</i> , 2018, 263, 308-322.	1.9	44
32	Climate warming induced synchronous growth decline in Norway spruce populations across biogeographical gradients since 2000. <i>Science of the Total Environment</i> , 2021, 752, 141794.	3.9	44
33	Changing regional weather-crop yield relationships across Europe between 1901 and 2012. <i>Climate Research</i> , 2016, 70, 195-214.	0.4	44
34	Long-term changes in drought indices in eastern and central Europe. <i>International Journal of Climatology</i> , 2022, 42, 225-249.	1.5	41
35	Is rainfed crop production in central Europe at risk? Using a regional climate model to produce high resolution agroclimatic information for decision makers. <i>Journal of Agricultural Science</i> , 2010, 148, 639-656.	0.6	39
36	Documentary and instrumental-based drought indices for the Czech Lands back to AD 1501. <i>Climate Research</i> , 2016, 70, 103-117.	0.4	38

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37	Drivers of soil drying in the Czech Republic between 1961 and 2012. <i>International Journal of Climatology</i> , 2015, 35, 2664-2675.	1.5	37
38	An assessment of the role of homogenization protocol in the performance of daily temperature series and trends: application to northeastern Spain. <i>International Journal of Climatology</i> , 2013, 33, 87-108.	1.5	36
39	Predicting sulphur and nitrogen deposition using a simple statistical method. <i>Atmospheric Environment</i> , 2016, 140, 456-468.	1.9	36
40	Tree-Ring Amplification of the Early Nineteenth-Century Summer Cooling in Central Europea. <i>Journal of Climate</i> , 2015, 28, 5272-5288.	1.2	33
41	Climatic drivers of forest productivity in Central Europe. <i>Agricultural and Forest Meteorology</i> , 2017, 234-235, 258-273.	1.9	33
42	Observed changes in precipitation during recent warming: The Czech Republic, 1961–2019. <i>International Journal of Climatology</i> , 2021, 41, 3881-3902.	1.5	33
43	Increased spruce tree growth in Central Europe since 1960s. <i>Science of the Total Environment</i> , 2018, 619-620, 1637-1647.	3.9	29
44	Past (1971–2018) and future (2021–2100) pan evaporation rates in the Czech Republic. <i>Journal of Hydrology</i> , 2020, 590, 125390.	2.3	29
45	Comparative validation of statistical and dynamical downscaling models on a dense grid in central Europe: temperature. <i>Theoretical and Applied Climatology</i> , 2015, 120, 533-553.	1.3	28
46	Drought reconstruction based on grape harvest dates for the Czech Lands, 1499-2012. <i>Climate Research</i> , 2016, 70, 119-132.	0.4	26
47	Climate-driven changes of production regions in Central Europe. <i>Plant, Soil and Environment</i> , 2009, 55, 257-266.	1.0	24
48	Comparison of homogenization methods for daily temperature series against an observation-based benchmark dataset. <i>Theoretical and Applied Climatology</i> , 2020, 140, 285-301.	1.3	23
49	Circulation and Climate Variability in the Czech Republic between 1961 and 2020: A Comparison of Changes for Two “Normal” Periods. <i>Atmosphere</i> , 2022, 13, 137.	1.0	23
50	A 200-year climate record in Central Europe: implications for agriculture. <i>Agronomy for Sustainable Development</i> , 2011, 31, 631-641.	2.2	20
51	Benchmarking homogenization algorithms for monthly data. <i>AIP Conference Proceedings</i> , 2013, , .	0.3	20
52	Observed changes in the agroclimatic zones in the Czech Republic between 1961 and 2019. <i>Plant, Soil and Environment</i> , 2021, 67, 154-163.	1.0	20
53	Spatial Patterns of Heat-Related Cardiovascular Mortality in the Czech Republic. <i>International Journal of Environmental Research and Public Health</i> , 2016, 13, 284.	1.2	19
54	The impacts of key adverse weather events on the field-grown vegetable yield variability in the Czech Republic from 1961 to 2014. <i>International Journal of Climatology</i> , 2017, 37, 1648-1664.	1.5	18

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55	The variability of maximum wind gusts in the Czech Republic between 1961 and 2014. <i>International Journal of Climatology</i> , 2017, 37, 1961-1978.	1.5	18
56	Projected changes in the evolution of drought on various timescales over the Czech Republic according to Euro-CCORDEX models. <i>International Journal of Climatology</i> , 2018, 38, e939.	1.5	18
57	Temporal changes in years of life lost associated with heat waves in the Czech Republic. <i>Science of the Total Environment</i> , 2020, 716, 137093.	3.9	18
58	Homogenization of monthly precipitation time series in Croatia. <i>International Journal of Climatology</i> , 2014, 34, 3671-3682.	1.5	17
59	Risk occurrences of damaging frosts during the growing season of vegetables in the Elbe River lowland, the Czech Republic. <i>Natural Hazards</i> , 2014, 71, 1-19.	1.6	16
60	Projected shift of Köppen-Geiger zones in the central Europe: A first insight into the implications for ecosystems and the society. <i>International Journal of Climatology</i> , 2018, 38, 3595-3606.	1.5	16
61	Differences in wind speeds according to measured and homogenized series in the Czech Republic, 1961-2015. <i>International Journal of Climatology</i> , 2019, 39, 235-250.	1.5	16
62	Links between circulation types and precipitation in Central Europe in the observed data and regional climate model simulations. <i>International Journal of Climatology</i> , 2014, 34, 2885-2898.	1.5	15
63	Distinct types of landslides in moraines associated with the post-LIA glacier thinning: Observations from the Kinzl Glacier, Huascarán, Peru. <i>Science of the Total Environment</i> , 2020, 739, 139997.	3.9	15
64	Long-term variability of temperature and precipitation in the Czech Lands: an attribution analysis. <i>Climatic Change</i> , 2014, 125, 253-264.	1.7	14
65	The Effects of Climate Change on Variability of the Growing Seasons in the Elbe River Lowland, Czech Republic. <i>Advances in Meteorology</i> , 2015, 2015, 1-16.	0.6	14
66	Total water content thresholds for shallow landslides, Outer Western Carpathians. <i>Landslides</i> , 2016, 13, 337-347.	2.7	14
67	Participatory Climate Change Impact Assessment in Three Czech Cities: The Case of Heatwaves. <i>Sustainability</i> , 2018, 10, 1906.	1.6	14
68	Precipitation in the Czech Republic in Light of Subjective and Objective Classifications of Circulation Types. <i>Atmosphere</i> , 2021, 12, 1536.	1.0	12
69	Temperature extremes and circulation types in the Czech Republic, 1961-2020. <i>International Journal of Climatology</i> , 2022, 42, 4808-4829.	1.5	12
70	Soil drought and circulation types in a longitudinal transect over central Europe. <i>International Journal of Climatology</i> , 2021, 41, E2834.	1.5	11
71	Evaluation of the Homogenization Adjustments Applied to European Temperature Records in the Global Historical Climatology Network Dataset. <i>Atmosphere</i> , 2022, 13, 285.	1.0	11
72	Statistical characteristics of detectable inhomogeneities in observed meteorological time series. <i>Studia Geophysica Et Geodaetica</i> , 2009, 53, 239-260.	0.3	10

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73	Drought Prediction System for Central Europe and Its Validation. <i>Geosciences (Switzerland)</i> , 2018, 8, 104.	1.0	10
74	Observed and estimated consequences of climate change for the fire weather regime in the moist-temperate climate of the Czech Republic. <i>Agricultural and Forest Meteorology</i> , 2021, 310, 108583.	1.9	10
75	Increasing available water capacity as a factor for increasing drought resilience or potential conflict over water resources under present and future climate conditions. <i>Agricultural Water Management</i> , 2022, 264, 107460.	2.4	10
76	Paraglacial Rock Slope Stability Under Changing Environmental Conditions, Safuna Lakes, Cordillera Blanca Peru. <i>Frontiers in Earth Science</i> , 2021, 9, .	0.8	9
77	Drought stress impact on vegetable crop yields in the Elbe River lowland between 1961 and 2014. <i>Cuadernos De Investigacion Geografica</i> , 2016, 42, 127-143.	0.6	9
78	Simulation of summer temperature extremes over the Czech Republic in regional climate models. <i>Meteorologische Zeitschrift</i> , 2008, 17, 645-661.	0.5	8
79	Observed and expected changes in wildfire-conducive weather and fire events in peri-urban zones and key nature reserves of the Czech Republic. <i>Climate Research</i> , 2020, 82, 33-54.	0.4	8
80	Projection of 21st century irrigation water requirements for sensitive agricultural crop commodities across the Czech Republic. <i>Agricultural Water Management</i> , 2022, 262, 107337.	2.4	8
81	Impact of volcanic stratospheric aerosols on diurnal temperature range in Europe over the past 2000 years: Observations versus model simulations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 9064-9077.	1.2	7
82	Spatial and temporal variability of mean daily wind speeds in the Czech Republic, 1961-2015. <i>Climate Research</i> , 2017, 72, 197-216.	0.4	7
83	Potential impacts of climate change on damaging frost during growing season of vegetables. <i>Scientia Agriculturae Bohemica</i> , 2014, 45, 26-35.	0.3	7
84	Analysis of rainfall intensities using very dense network measurements and radar information for the Brno area during the period 2003-2009. <i>Meteorologische Zeitschrift</i> , 2012, 21, 29-35.	0.5	6
85	Phenological differences among selected residents and long-distance migrant bird species in central Europe. <i>International Journal of Biometeorology</i> , 2014, 58, 809-817.	1.3	6
86	Climate variability and potential distribution of selected pest species in south Moravia and north-east Austria in the past 200 years – lessons for the future. <i>Journal of Agricultural Science</i> , 2014, 152, 225-237.	0.6	6
87	Climatic Changes and Their Relation to Weather Types in a Transboundary Mountainous Region in Central Europe. <i>Sustainability</i> , 2018, 10, 2049.	1.6	6
88	Effects of Climatic and Soil Data on Soil Drought Monitoring Based on Different Modelling Schemes. <i>Atmosphere</i> , 2021, 12, 913.	1.0	5
89	Analysing changes in land cover in relation to environmental factors in the districts of Znojmo and Tábor (Czech Republic). <i>European Journal of Environmental Sciences</i> , 2017, 7, 108-118.	0.6	5
90	Changes in forest nitrogen cycling across deposition gradient revealed by $\delta^{15}N$ in tree rings. <i>Environmental Pollution</i> , 2022, 304, 119104.	3.7	5

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91	Long-term comparison of temperature measurements by the multi-plate shield and Czech-Slovak thermometer screen. <i>Meteorologische Zeitschrift</i> , 2012, 21, 125-133.	0.5	4
92	The December 2014 glaze event in the Czech Republic: predictability and impacts. <i>Weather</i> , 2018, 73, 375-382.	0.6	4
93	Analysis of Sub-Daily Precipitation for the PannEx Region. <i>Atmosphere</i> , 2021, 12, 838.	1.0	4
94	Climatic factors and their influence on onset and duration of phenological phases of chosen plants at locations south Moravia during 1961-2007. <i>Acta Universitatis Agriculturae Et Silviculturae Mendelianae Brunensis</i> , 2014, 58, 35-44.	0.2	4
95	Pest occurrence model in current climate - validation study for European domain. <i>Acta Universitatis Agriculturae Et Silviculturae Mendelianae Brunensis</i> , 2013, 61, 205-214.	0.2	4
96	Droughts and Drought Management in the Czech Republic in a Changing Climate. <i>Drought and Water Crises</i> , 2017, , 461-480.	0.1	4
97	The 1921 European drought: impacts, reconstruction and drivers. <i>Climate of the Past</i> , 2021, 17, 2201-2221.	1.3	4
98	The analysis of long-term phenological data of apricot tree (<i>Prunus armeniaca</i> L.) in southern Moravia during 1927-2009. <i>Acta Universitatis Agriculturae Et Silviculturae Mendelianae Brunensis</i> , 2013, 60, 9-18.	0.2	4
99	Phenological Response of Flood Plain Forest Ecosystem Species to Climate Change during 1961–2021. <i>Atmosphere</i> , 2022, 13, 978.	1.0	4
100	Forcings and projections of past and future wind speed over the Czech Republic. <i>Climate Research</i> , 2019, 77, 1-21.	0.4	3
101	Comparison of two methods of erosive rains determination. <i>Contributions To Geophysics and Geodesy</i> , 2014, 44, 253-269.	0.2	2
102	Changes in a river's regime of a watercourse after a small water reservoir construction. <i>Soil and Water Research</i> , 2020, 15, 55-65.	0.7	2
103	Assess hydrological responses to a warming climate at the Lysina Critical Zone Observatory in Central Europe. <i>Hydrological Processes</i> , 2021, 35, e14281.	1.1	2
104	The dynamics of annual and seasonal precipitation totals in the Czech Republic during 1961–2019. <i>Acta Hydrologica Slovaca</i> , 2020, 21, 197-204.	0.1	0