

Michael D Flannigan

List of Publications by Year in descending order

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Version: 2024-02-01

125
papers

15,939
citations

18482

62
h-index

20358

116
g-index

130
all docs

130
docs citations

130
times ranked

12400
citing authors

#	ARTICLE	IF	CITATIONS
1	Observed increases in extreme fire weather driven by atmospheric humidity and temperature. <i>Nature Climate Change</i> , 2022, 12, 63-70.	18.8	131
2	Global increase in wildfire risk due to climate-driven declines in fuel moisture. <i>Global Change Biology</i> , 2022, 28, 1544-1559.	9.5	80
3	Future wildfire extent and frequency determined by the longest fire-conductive weather spell. <i>Science of the Total Environment</i> , 2022, 830, 154752.	8.0	6
4	New In-Flame Flammability Testing Method Applied to Monitor Seasonal Changes in Live Fuel. <i>Fire</i> , 2022, 5, 1.	2.8	4
5	Fifty years of wildland fire science in Canada. <i>Canadian Journal of Forest Research</i> , 2021, 51, 283-302.	1.7	40
6	Ignitions explain more than temperature or precipitation in driving Santa Ana wind fires. <i>Science Advances</i> , 2021, 7, .	10.3	11
7	Wildfires in the Siberian taiga. <i>Ambio</i> , 2021, 50, 1953-1974.	5.5	108
8	Characterisation of initial fire weather conditions for large spring wildfires in Alberta, Canada. <i>International Journal of Wildland Fire</i> , 2021, 30, 823-835.	2.4	12
9	One extreme fire weather event determines the extent and frequency of wildland fires. <i>Environmental Research Letters</i> , 2021, 16, 114031.	5.2	7
10	Wildfire management in Canada: Review, challenges and opportunities. <i>Progress in Disaster Science</i> , 2020, 5, 100045.	2.7	131
11	Downscaling fire weather extremes from historical and projected climate models. <i>Climatic Change</i> , 2020, 163, 189-216.	3.6	9
12	Preceding Fall Drought Conditions and Overwinter Precipitation Effects on Spring Wildland Fire Activity in Canada. <i>Fire</i> , 2020, 3, 24.	2.8	4
13	A review of machine learning applications in wildfire science and management. <i>Environmental Reviews</i> , 2020, 28, 478-505.	4.5	305
14	Vegetation fires in the Anthropocene. <i>Nature Reviews Earth & Environment</i> , 2020, 1, 500-515.	29.7	419
15	Seasonality and trends in human- and lightning-caused wildfires > 2 ha in Canada, 1959-2018. <i>International Journal of Wildland Fire</i> , 2020, 29, 473.	2.4	36
16	Wildland fire risk research in Canada. <i>Environmental Reviews</i> , 2020, 28, 164-186.	4.5	69
17	Spatial planning of fire-agency stations as a function of wildfire likelihood in Thasos, Greece. <i>Science of the Total Environment</i> , 2020, 729, 139004.	8.0	21
18	Projected changes in fire size from daily spread potential in Canada over the 21st century. <i>Environmental Research Letters</i> , 2020, 15, 104048.	5.2	31

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19	A high-resolution reanalysis of global fire weather from 1979 to 2018 – overwintering the Drought Code. <i>Earth System Science Data</i> , 2020, 12, 1823-1833.	9.9	23
20	Soil bacterial and fungal response to wildfires in the Canadian boreal forest across a burn severity gradient. <i>Soil Biology and Biochemistry</i> , 2019, 138, 107571.	8.8	139
21	A Regional-Scale Index for Assessing the Exposure of Drinking-Water Sources to Wildfires. <i>Forests</i> , 2019, 10, 384.	2.1	23
22	Scientists’s warning on wildfire – a Canadian perspective. <i>Canadian Journal of Forest Research</i> , 2019, 49, 1015-1023.	1.7	120
23	Could restoration of a landscape to a pre-European historical vegetation condition reduce burn probability?. <i>Ecosphere</i> , 2019, 10, e02584.	2.2	15
24	An Assessment of Surface and Atmospheric Conditions Associated with the Extreme 2014 Wildfire Season in Canada’s Northwest Territories. <i>Atmosphere - Ocean</i> , 2019, 57, 73-90.	1.6	16
25	Short-interval wildfire and drought overwhelm boreal forest resilience. <i>Scientific Reports</i> , 2019, 9, 18796.	3.3	131
26	Fire-regime changes in Canada over the last half century. <i>Canadian Journal of Forest Research</i> , 2019, 49, 256-269.	1.7	261
27	Evaluation of Gridded Precipitation Data and Interpolation Methods for Forest Fire Danger Rating in Alberta, Canada. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 3-17.	3.3	15
28	Did enhanced afforestation cause high severity peat burn in the Fort McMurray Horse River wildfire?. <i>Environmental Research Letters</i> , 2018, 13, 014018.	5.2	41
29	Mapping Canadian wildland fire interface areas. <i>International Journal of Wildland Fire</i> , 2018, 27, 1.	2.4	78
30	Variability and drivers of burn severity in the northwestern Canadian boreal forest. <i>Ecosphere</i> , 2018, 9, e02128.	2.2	95
31	A spatial evaluation of global wildfire-water risks to human and natural systems. <i>Science of the Total Environment</i> , 2018, 610-611, 1193-1206.	8.0	67
32	Potential impacts of climate change on the habitat of boreal woodland caribou. <i>Ecosphere</i> , 2018, 9, e02472.	2.2	39
33	Temporal Patterns of Wildfire Activity in Areas of Contrasting Human Influence in the Canadian Boreal Forest. <i>Forests</i> , 2018, 9, 159.	2.1	29
34	Wildfire as a major driver of recent permafrost thaw in boreal peatlands. <i>Nature Communications</i> , 2018, 9, 3041.	12.8	168
35	Topoedaphic and Forest Controls on Post-Fire Vegetation Assemblies Are Modified by Fire History and Burn Severity in the Northwestern Canadian Boreal Forest. <i>Forests</i> , 2018, 9, 151.	2.1	55
36	cffdrs: an R package for the Canadian Forest Fire Danger Rating System. <i>Ecological Processes</i> , 2017, 6, .	3.9	82

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37	A framework for modeling habitat quality in disturbance-prone areas demonstrated with woodland caribou and wildfire. <i>Ecosphere</i> , 2017, 8, e01787.	2.2	16
38	Evaluation of the Canadian Precipitation Analysis (CaPA) to improve forest fire danger rating. <i>International Journal of Wildland Fire</i> , 2017, 26, 509.	2.4	11
39	An early warning system to forecast the close of the spring burning window from satellite-observed greenness. <i>Scientific Reports</i> , 2017, 7, 14190.	3.3	16
40	Automated prediction of extreme fire weather from synoptic patterns in northern Alberta, Canada. <i>Canadian Journal of Forest Research</i> , 2017, 47, 1175-1183.	1.7	29
41	Spatiotemporal variation in forest fire danger from 1996 to 2010 in Jilin Province, China. <i>Journal of Forestry Research</i> , 2017, 28, 983-996.	3.6	7
42	Importance of fuel treatment for limiting moderate-to-high intensity fire: findings from comparative fire modelling. <i>Landscape Ecology</i> , 2017, 32, 1473-1483.	4.2	22
43	Projected changes in daily fire spread across Canada over the next century. <i>Environmental Research Letters</i> , 2017, 12, 025005.	5.2	85
44	Trend analysis of fire season length and extreme fire weather in North America between 1979 and 2015. <i>International Journal of Wildland Fire</i> , 2017, 26, 1009.	2.4	91
45	Boreal fire records in Northern Hemisphere ice cores: a review. <i>Climate of the Past</i> , 2016, 12, 2033-2059.	3.4	70
46	Ensemble lightning prediction models for the province of Alberta, Canada. <i>International Journal of Wildland Fire</i> , 2016, 25, 421.	2.4	39
47	Spatial and temporal variations of fire regimes in the Canadian Rocky Mountains and Foothills of southern Alberta. <i>International Journal of Wildland Fire</i> , 2016, 25, 1117.	2.4	29
48	The Science of Firescapes: Achieving Fire-Resilient Communities. <i>BioScience</i> , 2016, 66, 130-146.	4.9	157
49	The spatially varying influence of humans on fire probability in North America. <i>Environmental Research Letters</i> , 2016, 11, 075005.	5.2	116
50	Future burn probability in south-central British Columbia. <i>International Journal of Wildland Fire</i> , 2016, 25, 200.	2.4	50
51	Biomass offsets little or none of permafrost carbon release from soils, streams, and wildfire: an expert assessment. <i>Environmental Research Letters</i> , 2016, 11, 034014.	5.2	199
52	Development of a Global Fire Weather Database. <i>Natural Hazards and Earth System Sciences</i> , 2015, 15, 1407-1423.	3.6	86
53	Fire in arctic tundra of Alaska: past fire activity, future fire potential, and significance for land management and ecology. <i>International Journal of Wildland Fire</i> , 2015, 24, 1045.	2.4	53
54	Increasing frequency of extreme fire weather in Canada with climate change. <i>Climatic Change</i> , 2015, 130, 573-586.	3.6	135

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55	Wildland Fire Danger Rating and Early Warning Systems. , 2015, , 207-228.		26
56	Ensuring That We Can See the Wood and the Trees. , 2015, , 247-262.		1
57	The potential and realized spread of wildfires across Canada. <i>Global Change Biology</i> , 2014, 20, 2518-2530.	9.5	49
58	An analysis of controls on fire activity in boreal Canada: comparing models built with different temporal resolutions. <i>Ecological Applications</i> , 2014, 24, 1341-1356.	3.8	57
59	Wildfires in boreal ecoregions: Evaluating the power law assumption and intra-annual and interannual variations. <i>Journal of Geophysical Research C: Biogeosciences</i> , 2014, 119, 14-23.	3.0	14
60	Climate Change and Early Warning Systems for Wildland Fire. , 2014, , 127-151.		5
61	Exploring the role of fire, succession, climate, and weather on landscape dynamics using comparative modeling. <i>Ecological Modelling</i> , 2013, 266, 172-186.	2.5	28
62	Anticipating the consequences of climate change for Canada's boreal forest ecosystems. <i>Environmental Reviews</i> , 2013, 21, 322-365.	4.5	414
63	Climate change impacts on future boreal fire regimes. <i>Forest Ecology and Management</i> , 2013, 294, 35-44.	3.2	241
64	Global wildland fire season severity in the 21st century. <i>Forest Ecology and Management</i> , 2013, 294, 54-61.	3.2	534
65	A comparison of Canadian and Russian boreal forest fire regimes. <i>Forest Ecology and Management</i> , 2013, 294, 23-34.	3.2	208
66	An introduction to Canada's boreal zone: ecosystem processes, health, sustainability, and environmental issues. <i>Environmental Reviews</i> , 2013, 21, 207-226.	4.5	247
67	Examining the utility of the Canadian Forest Fire Weather Index System in boreal peatlands. <i>Canadian Journal of Forest Research</i> , 2012, 42, 47-58.	1.7	27
68	Scale-dependent controls on the area burned in the boreal forest of Canada, 1980-2005. , 2011, 21, 789-805.		109
69	Prediction of Seasonal Forest Fire Severity in Canada from Large-Scale Climate Patterns. <i>Journal of Applied Meteorology and Climatology</i> , 2011, 50, 785-799.	1.5	34
70	Interactive effects of vegetation, soil moisture and bulk density on depth of burning of thick organic soils. <i>International Journal of Wildland Fire</i> , 2011, 20, 418.	2.4	148
71	The association between Northern Hemisphere climate patterns and interannual variability in Canadian wildfire activity. <i>Canadian Journal of Forest Research</i> , 2011, 41, 2193-2201.	1.7	20
72	Challenges and Needs in Fire Management: A Landscape Simulation Modeling Perspective. , 2011, , 75-98.		0

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73	The impact of spatial resolution on area burned and fire occurrence projections in Portugal under climate change. <i>Climatic Change</i> , 2010, 98, 177-197.	3.6	86
74	Correlations between forest fires in British Columbia, Canada, and sea surface temperature of the Pacific Ocean. <i>Ecological Modelling</i> , 2010, 221, 122-129.	2.5	18
75	Relationship between fire, climate oscillations, and drought in British Columbia, Canada, 1920â€“2000. <i>Global Change Biology</i> , 2010, 16, 977-989.	9.5	39
76	Variation in local weather explains differences in fire regimes within a Québec south-eastern boreal forest landscape. <i>International Journal of Wildland Fire</i> , 2010, 19, 1073.	2.4	18
77	Forest fire occurrence and climate change in Canada. <i>International Journal of Wildland Fire</i> , 2010, 19, 253.	2.4	331
78	Predicted changes in fire weather suggest increases in lightning fire initiation and future area burned in the mixedwood boreal forest. <i>Climatic Change</i> , 2009, 92, 83-97.	3.6	104
79	Impacts of climate change on fire activity and fire management in the circumboreal forest. <i>Global Change Biology</i> , 2009, 15, 549-560.	9.5	559
80	Assessing the response of area burned to changing climate in western boreal North America using a Multivariate Adaptive Regression Splines (MARS) approach. <i>Global Change Biology</i> , 2009, 15, 578-600.	9.5	340
81	Vulnerability of carbon storage in North American boreal forests to wildfires during the 21st century. <i>Global Change Biology</i> , 2009, 15, 1491-1510.	9.5	185
82	Effects of climate on occurrence and size of large fires in a northern hardwood landscape: historical trends, forecasts, and implications for climate change in Tâ€™miscamingue, Québec. <i>Applied Vegetation Science</i> , 2009, 12, 261-272.	1.9	20
83	Implications of changing climate for global wildland fire. <i>International Journal of Wildland Fire</i> , 2009, 18, 483.	2.4	1,061
84	Characterization of wildfire regimes in Canadian boreal terrestrial ecosystems. <i>International Journal of Wildland Fire</i> , 2009, 18, 992.	2.4	20
85	Potential changes in monthly fire risk in the eastern Canadian boreal forest under future climate change. <i>Canadian Journal of Forest Research</i> , 2009, 39, 2369-2380.	1.7	39
86	Future emissions from Canadian boreal forest fires. <i>Canadian Journal of Forest Research</i> , 2009, 39, 383-395.	1.7	126
87	Relative importance of fuel management, ignition management and weather for area burned: evidence from five landscape - fire - succession models. <i>International Journal of Wildland Fire</i> , 2009, 18, 147.	2.4	96
88	Fire and the relative roles of weather, climate and landscape characteristics in the Great Lakesâ€™St. Lawrence forest of Canada. <i>Journal of Vegetation Science</i> , 2008, 19, 57-66.	2.2	35
89	Fire activity in Portugal and its relationship to weather and the Canadian Fire Weather Index System. <i>International Journal of Wildland Fire</i> , 2008, 17, 328.	2.4	129
90	Forest Fires and Climate Change in the Northwest Territories. , 2008, , 403-417.		1

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91	Dendroclimatic inference of wildfire activity in Quebec over the 20th century and implications for natural disturbance-based forest management at the northern limit of the commercial forest. <i>International Journal of Wildland Fire</i> , 2008, 17, 348.	2.4	26
92	The Nature and Impacts of Thunderstorms in a Northern Climate. , 2008, , 383-402.		1
93	Historical fire regime shifts related to climate teleconnections in the Waswanipi area, central Quebec, Canada. <i>International Journal of Wildland Fire</i> , 2007, 16, 607.	2.4	64
94	Climate-induced boreal forest change: Predictions versus current observations. <i>Global and Planetary Change</i> , 2007, 56, 274-296.	3.5	619
95	Using cumulative NOAA-AVHRR spectral indices for estimating fire danger codes in northern boreal forests. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2007, 9, 335-342.	2.8	11
96	Impact of climate change on area burned in Alberta's boreal forest. <i>International Journal of Wildland Fire</i> , 2007, 16, 153.	2.4	76
97	Understanding Global Fire Dynamics by Classifying and Comparing Spatial Models of Vegetation and Fire. , 2007, , 139-148.		2
98	Fire-growth modelling using meteorological data with random and systematic perturbations. <i>International Journal of Wildland Fire</i> , 2007, 16, 174.	2.4	29
99	Preface to 'Fire and Forest Meteorology'. <i>International Journal of Wildland Fire</i> , 2007, 16, iii.	2.4	0
100	Can forest management based on natural disturbances maintain ecological resilience?. <i>Canadian Journal of Forest Research</i> , 2006, 36, 2285-2299.	1.7	338
101	Predicting slow-drying fire weather index fuel moisture codes with NOAA's AVHRR images in Canada's northern boreal forests. <i>International Journal of Remote Sensing</i> , 2006, 27, 3881-3902.	2.9	19
102	Forest Fire-Conductive Drought Variability in the Southern Canadian Boreal Forest and Associated Climatology Inferred from Tree Rings. <i>Canadian Water Resources Journal</i> , 2006, 31, 275-296.	1.2	13
103	Past, current, and future fire frequencies in Quebec's commercial forests: implications for the cumulative effects of harvesting and fire on age-class structure and natural disturbance-based management. <i>Canadian Journal of Forest Research</i> , 2006, 36, 2737-2744.	1.7	141
104	Temporal variability in area burned for the province of Ontario, Canada, during the past 200 years inferred from tree rings. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	18
105	A 229-year dendroclimatic-inferred record of forest fire activity for the Boreal Shield of Canada. <i>International Journal of Wildland Fire</i> , 2006, 15, 375.	2.4	62
106	BIOTIC AND ABIOTIC REGULATION OF LIGHTNING FIRE INITIATION IN THE MIXEDWOOD BOREAL FOREST. <i>Ecology</i> , 2006, 87, 458-468.	3.2	152
107	Synoptic-Scale Atmospheric Circulation and Boreal Canada Summer Drought Variability of the Past Three Centuries. <i>Journal of Climate</i> , 2006, 19, 1922-1947.	3.2	71
108	Comparison of the Sensitivity of Landscape-fire-succession Models to Variation in Terrain, Fuel Pattern, Climate and Weather. <i>Landscape Ecology</i> , 2006, 21, 121-137.	4.2	158

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109	Forest Fires and Climate Change in the 21ST Century. Mitigation and Adaptation Strategies for Global Change, 2006, 11, 847-859.	2.1	228
110	Vulnerability of land systems to fire: Interactions among humans, climate, the atmosphere, and ecosystems. Mitigation and Adaptation Strategies for Global Change, 2006, 12, 33-53.	2.1	154
111	Future Area Burned in Canada. Climatic Change, 2005, 72, 1-16.	3.6	709
112	A classification of landscape fire succession models: spatial simulations of fire and vegetation dynamics. Ecological Modelling, 2004, 179, 3-27.	2.5	233
113	Multicentury reconstruction of the Canadian Drought Code from eastern Canada and its relationship with paleoclimatic indices of atmospheric circulation. Climate Dynamics, 2004, 23, 99-115.	3.8	56
114	Trends and periodicities in the Canadian Drought Code and their relationships with atmospheric circulation for the southern Canadian boreal forest. Canadian Journal of Forest Research, 2004, 34, 103-119.	1.7	73
115	Crown fire behaviour in a northern jack pine – black spruce forest. Canadian Journal of Forest Research, 2004, 34, 1548-1560.	1.7	142
116	Fire weather index system components for large fires in the Canadian boreal forest. International Journal of Wildland Fire, 2004, 13, 391.	2.4	106
117	Lightning and lightning fire, central cordillera, Canada. International Journal of Wildland Fire, 2002, 11, 41.	2.4	86
118	A 500 hPa synoptic wildland fire climatology for large Canadian forest fires, 1959-1996. Theoretical and Applied Climatology, 2002, 71, 157-169.	2.8	123
119	Climate Change and Forest Disturbances. BioScience, 2001, 51, 723.	4.9	1,682
120	An analysis of the daily radial activity of 7 boreal tree species, northwestern Quebec. Environmental Monitoring and Assessment, 2001, 67, 141-160.	2.7	78
121	Third Millennium Forestry: What climate change might mean to forests and forest management in Ontario. Forestry Chronicle, 2000, 76, 445-463.	0.6	65
122	Climate change and forest fires. Science of the Total Environment, 2000, 262, 221-229.	8.0	716
123	Long-distance transport of pollen into the Arctic. Nature, 1999, 399, 29-30.	27.8	121
124	The effects of climate change on landscape diversity: an example in Ontario forests. Environmental Monitoring and Assessment, 1998, 49, 213-233.	2.7	44
125	Lightning-ignited forest fires in northwestern Ontario. Canadian Journal of Forest Research, 1991, 21, 277-287.	1.7	118