Mathew G Wells

List of Publications by Year
in descending order

78 papers	1,691 citations	236612 25 h-index	344852 36 g-index
83 all docs	83 docs citations	83 times ranked	1621 citing authors

#	Article	IF	Citations
1	Oriented cell motility and division underlie early limb bud morphogenesis. Development (Cambridge), 2010, 137, 2551-2558.	1.2	109
2	Pumice rafting and faunal dispersion during 2001â€“2002 in the Southwest Pacific: record of a dacitic submarine explosive eruption from Tonga. Earth and Planetary Science Letters, 2004, 227, 135-154.	1.8	95
3	The Relationship between Flux Coefficient and Entrainment Ratio in Density Currents. Journal of Physical Oceanography, 2010, 40, 2713-2727.	0.7	64
4	Biofilm growth on buoyant microplastics leads to changes in settling rates: Implications for microplastic retention in the Great Lakes. Marine Pollution Bulletin, 2021, 170, 112573.	2.3	62
5	Turbulence Processes Within Turbidity Currents. Annual Review of Fluid Mechanics, 2021, 53, 59-83.	10.8	58
6	Influence of the Coriolis force on the velocity structure of gravity currents in straight submarine channel systems. Journal of Geophysical Research, 2010, 115, .	3.3	56
7	A model of tidal flushing of an estuary by dipole formation. Dynamics of Atmospheres and Oceans, 2003, 37, 223-244.	0.7	54
8	A plume head melting under a rifting margin. Earth and Planetary Science Letters, 1998, 161, 161-177.	1.8	45
9	Mixing, stratification, and plankton under lakeâ€ice during winter in a large lake: Implications for spring dissolved oxygen levels. Limnology and Oceanography, 2020, 65, 2713-2729.	1.6	45
10	Highâ€Frequency Observations of Temperature and Dissolved Oxygen Reveal Underâ€ice Convection in a Large Lake. Geophysical Research Letters, 2017, 44, 12,218.	1.5	39
11	Pathways of river water to the surface layers of stratified reservoirs. Limnology and Oceanography, 2014, 59, 233-250.	1.6	38
12	The long-term circulation driven by density currents in a two-layer stratified basin. Journal of Fluid Mechanics, 2007, 572, 37-58.	1.4	37
13	Coriolis forces influence the secondary circulation of gravity currents flowing in largeâ€scale sinuous submarine channel systems. Geophysical Research Letters, 2010, 37, .	1.5	37
14	The Interaction of Large Amplitude Internal Seiches with a Shallow Sloping Lakebed: Observations of Benthic Turbulence in Lake Simcoe, Ontario, Canada. PLoS ONE, 2013, 8, e57444.	1.1	36
15	The Changing Face of Winter: Lessons and Questions From the Laurentian Great Lakes. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2021JG006247.	1.3	35
16	Experimental observations of the splitting of a gravity current at a density step in a stratified water body. Journal of Geophysical Research: Oceans, 2014, 119, 1038-1053.	1.0	32
17	The evolution of submarine channels under the influence of Coriolis forces: experimental observations of flow structures. Terra Nova, 2013, 25, 65-71.	0.9	31
18	A New Thermal Categorization of Iceâ€Covered Lakes. Geophysical Research Letters, 2021, 48, e2020GL091374.	1.5	31

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19	The Intrusion Depth of Density Currents Flowing into Stratified Water Bodies. Journal of Physical Oceanography, 2009, 39, 1935-1947.	0.7	30
20	Latitudinal variations in submarine channel sedimentation patterns: the role of Coriolis forces. Journal of the Geological Society, 2015, 172, 161-174.	0.9	30
21	Two-dimensional density currents in a confined basin. Geophysical and Astrophysical Fluid Dynamics, 2005, 99, 199-218.	0.4	29
22	Temperature variability in the nearshore benthic boundary layer of Lake Opeongo is due to wind-driven upwelling events. Canadian Journal of Fisheries and Aquatic Sciences, 2012, 69, 282-296.	0.7	29
23	A comparison of the shear stress distribution in the bottom boundary layer of experimental density and turbidity currents. European Journal of Mechanics, B/Fluids, 2012, 32, 70-79.	1.2	29
24	Persistent weak thermal stratification inhibits mixing in the epilimnion of north-temperate Lake Opeongo, Canada. Aquatic Sciences, 2014, 76, 187-201.	0.6	28
25	Enhanced sedimentation beneath particleâ€laden flows in lakes and the ocean due to doubleâ€diffusive convection. Geophysical Research Letters, 2016, 43, 10,883.	1.5	28
26	Characterisation of water temperature variability within a harbour connected to a large lake. Journal of Great Lakes Research, 2015, 41, 1010-1023.	0.8	25
27	The possible role of Coriolis forces in structuring large-scale sinuous patterns of submarine channelâ€“levee systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120366.	1.6	24
28	Flow processes and sedimentation in contourite channels on the northwestern South China Sea margin: A joint 3D seismic and oceanographic perspective. Marine Geology, 2017, 393, 176-193.	0.9	21
29	Telemetry-Determined Habitat Use Informs Multi-Species Habitat Management in an Urban Harbour. Environmental Management, 2017, 59, 118-128.	1.2	20
30	How Coriolis forces can limit the spatial extent of sediment deposition of a large-scale turbidity current. Sedimentary Geology, 2009, 218, 1-5.	1.0	19
31	Summer water circulation in Frenchman's Bay, a shallow coastal embayment connected to Lake Ontario. Journal of Great Lakes Research, 2009, 35, 548-559.	0.8	19
32	The dilution and dispersion of ballast water discharged into Goderich Harbor. Marine Pollution Bulletin, 2011, 62, 1288-1296.	2.3	19
33	Movements of the thermocline lead to high variability in benthic mixing in the nearshore of a large lake. Water Resources Research, 2016, 52, 3019-3039.	1.7	19
34	The thermal variability of the waters of Fathom Five National Marine Park, Lake Huron. Journal of Great Lakes Research, 2010, 36, 570-576.	0.8	18
35	Competition between distributed and localized buoyancy fluxes in a confined volume. Journal of Fluid Mechanics, 1999, 391, 319-336.	1.4	17
36	Vortices in oscillating spin-up. Journal of Fluid Mechanics, 2007, 573, 339-369.	1.4	17

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37	Influence of Coriolis forces on turbidity currents and sediment deposition. , 2007, , 331-343.		17
38	Influence of Coriolis Force Upon Bottom Boundary Layers in a Largeâ€Scale Gravity Current Experiment: Implications for Evolution of Sinuous Deepâ€Water Channel Systems. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015284.	1.0	17
39	Internal waves pump waters in and out of a deep coastal embayment of a large lake. Limnology and Oceanography, 2020, 65, 205-223.	1.6	16
40	Intense variability of dissolved oxygen and temperature in the internal swash zone of Hamilton Harbour, Lake Ontario. Inland Waters, 2021, 11, 162-179.	1.1	16
41	Global (latitudinal) variation in submarine channel sinuosity: REPLY. Geology, 2013, 41, e288-e288.	2.0	15
42	Wash-zone dynamics of the thermocline in Lake Simcoe, Ontario. Journal of Great Lakes Research, 2017, 43, 689-699.	0.8	15
43	Water circulation in Toronto Harbour. Aquatic Ecosystem Health and Management, 2018, 21, 234-244.	0.3	15
44	Dynamics of settlingâ€driven convection beneath a sedimentâ€laden buoyant overflow: Implications for the lengthâ€scale of deposition in lakes and the coastal ocean. Sedimentology, 2020, 67, 699-720.	1.6	15
45	Interaction of salt finger convection with intermittent turbulence. Journal of Geophysical Research, 2003, 108, .	3.3	14
46	Observations and environmental implications of variability in the vertical turbulent mixing in Lake Simcoe. Journal of Great Lakes Research, 2015, 41, 995-1009.	0.8	14
47	No-slip walls as vorticity sources in two-dimensional bounded turbulence. Dynamics of Atmospheres and Oceans, 2005, 40, 3-21.	0.7	13
48	Circulation in Lake Vostok: A laboratory analogue study. Geophysical Research Letters, 2008, 35, .	1.5	13
49	Comparative thermal biology and depth distribution of largemouth bass (Micropterus salmoides) and northern pike (Esox lucius) in an urban harbour of the Laurentian Great Lakes. Canadian Journal of Zoology, 2016, 94, 767-776.	0.4	12
50	Modelling grass carp egg transport using a 3-D hydrodynamic river model: the role of egg retention in dead zones on spawning success. Canadian Journal of Fisheries and Aquatic Sciences, 2020, 77, 1379-1392.	0.7	12
51	Physical dispersion and dilution of ballast water discharge in the St. Clair River: Implications for biological invasions. Water Resources Research, 2013, 49, 2395-2407.	1.7	11
52	Internal waves and mixing in the epilimnion of a lake affects spatial patterns of zooplankton in a bodyâ€size dependent manner. Limnology & Oceanography Fluids & Environments, 2013, 3, 279-294.	1.7	11
53	Seasonal changes in the diel vertical migration ofChaoborus punctipennislarval instars. Canadian Journal of Fisheries and Aquatic Sciences, 2014, 71, 665-674.	0.7	11
54	Assessment of Asian carp spawning potential in tributaries to the Canadian Lake Ontario basin. Journal of Great Lakes Research, 2019, 45, 1332-1339.	0.8	11

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55	Numerical investigation of split flows by gravity currents into two-layered stratified water bodies. Journal of Geophysical Research: Oceans, 2015, 120, 5254-5271.	1.0	10
56	Tracking bowfin with acoustic telemetry: Insight into the ecology of a living fossil. Ecology of Freshwater Fish, 2018, 27, 225-236.	0.7	9
57	Assessing occupancy of freshwater fishes in urban boat slips of Toronto Harbour. Aquatic Ecosystem Health and Management, 2018, 21, 331-341.	0.3	9
58	Frequency of episodic stratification in the near surface of Lake Opeongo and other small lakes. Water Quality Research Journal of Canada, 2012, 47, 227-237.	1.2	8
59	Asian carp spawning success: Predictions from a 3-D hydrodynamic model for a Laurentian Great Lake tributary. Journal of Great Lakes Research, 2021, 47, 37-47.	0.8	8
60	Speed of sound gradients due to summer thermal stratification can reduce the detection range of acoustic fish tags: results from a field study in Hamilton Harbour, Ontario. Canadian Journal of Fisheries and Aquatic Sciences, 2021, 78, 269-285.	0.7	8
61	Vertical oscillations of the thermocline caused by internal waves modify coldwater pelagic fish distribution: Results from a large stratified lake. Journal of Great Lakes Research, 2021, 47, 1386-1399.	0.8	8
62	Pressure sensor calibrations of acoustic telemetry transmitters. Animal Biotelemetry, 2016, 4, .	0.8	7
63	An oscillating bottom boundary layer connects the littoral and pelagic regions of Lake Opeongo, Canada. Water Quality Research Journal of Canada, 2012, 47, 215-226.	1.2	6
64	Strong thermal stratification reduces detection efficiency and range of acoustic telemetry in a large freshwater lake. Animal Biotelemetry, 2021, 9, .	0.8	6
65	Amplification of long-period waves in shallow coastal embayments of the Great Lakes. Environmental Fluid Mechanics, 2015, 15, 1181-1213.	0.7	5
66	Flow splitting in numerical simulations of oceanic dense-water outflows. Ocean Modelling, 2017, 113, 66-84.	1.0	5
67	Lateral dispersion of dye and drifters in the center of a very large lake. Limnology and Oceanography, 2020, 65, 336-348.	1.6	5
68	Internal seiches as drivers of fish depth use in lakes. Limnology and Oceanography, 2022, 67, 1040-1051.	1.6	4
69	Physical Circulation in the Coastal Zone of a Large Lake Controls the Benthic Biological Distribution. Water Resources Research, 2022, 58, .	1.7	4
70	Intrusions of sediment laden rivers into density stratified water columns could be an unrecognized source of mixing in many lakes and coastal oceans. Sedimentology, 2022, 69, 2228-2245.	1.6	4
71	The state of Toronto and Regionâ€™s ecosystem: Synthesis and highlights. Aquatic Ecosystem Health and Management, 2018, 21, 362-367.	0.3	3
72	Surface Mixed Layers in Lakes. , 2022, , 546-561.		3

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73	Localized stirring in a field of salt-fingers. Dynamics of Atmospheres and Oceans, 2002, 35, 327-350.	0.7	2
74	The intrusion of density currents into stratified water bodies. Verhandlungen Der Internationalen Vereinigung Fur Theoretische Und Angewandte Limnologie International Association of Theoretical and Applied Limnology, 2009, 30, 731-733.	0.1	1
75	Oriented cell motility and division underlie early limb bud morphogenesis. Journal of Cell Science, 2010, 123, e1-e1.	1.2	1
76	Dispersion and Mixing in Quasi-two-dimensional Rotating Flows. , 2008, , 119-136.		0
77	The application of life-history and predation allometry to population dynamics to predict the critical density of extinction. Ecological Modelling, 2015, 312, 136-149.	1.2	0
78	The possible role of Coriolis forces in structuring large-scale sinuous patterns of submarine channel-levee systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120366.	1.6	0