Ryan Lowe

List of Publications by Year in descending order

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Version: 2024-02-01

143	9,218	39	91
papers	citations	h-index	g-index
146	146	146	7322
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Global warming and recurrent mass bleaching of corals. Nature, 2017, 543, 373-377.	13.7	2,363
2	Spatial and temporal patterns of mass bleaching of corals in the Anthropocene. Science, 2018, 359, 80-83.	6.0	1,515
3	The Central Role of Dispersal in the Maintenance and Persistence of Seagrass Populations. BioScience, 2012, 62, 56-65.	2.2	256
4	Spectral wave dissipation over a barrier reef. Journal of Geophysical Research, 2005, 110, .	3. 3	230
5	Wave-Driven Circulation of a Coastal Reef–Lagoon System. Journal of Physical Oceanography, 2009, 39, 873-893.	0.7	172
6	The dynamics of infragravity wave transformation over a fringing reef. Journal of Geophysical Research, 2012, 117, .	3.3	160
7	Marine heatwave causes unprecedented regional mass bleaching of thermally resistant corals in northwestern Australia. Scientific Reports, 2017, 7, 14999.	1.6	159
8	Oceanic Forcing of Coral Reefs. Annual Review of Marine Science, 2015, 7, 43-66.	5.1	154
9	Numerical modeling of low-frequency wave dynamics over a fringing coral reef. Coastal Engineering, 2013, 73, 178-190.	1.7	143
10	Oscillatory flow through submerged canopies: 1. Velocity structure. Journal of Geophysical Research, 2005, 110, .	3.3	139
11	Global declines in coral reef calcium carbonate production under ocean acidification and warming. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118 , .	3.3	132
12	A numerical study of circulation in a coastal reefâ€lagoon system. Journal of Geophysical Research, 2009, 114, .	3.3	126
13	The movement ecology of seagrasses. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20140878.	1.2	124
14	Physical and Biological Controls on the Carbonate Chemistry of Coral Reef Waters: Effects of Metabolism, Wave Forcing, Sea Level, and Geomorphology. PLoS ONE, 2013, 8, e53303.	1.1	111
15	The non-Boussinesq lock-exchange problem. Part 1. Theory and experiments. Journal of Fluid Mechanics, 2005, 537, 101.	1.4	108
16	Hydrodynamics of larval settlement: The influence of turbulent stress events at potential recruitment sites. Limnology and Oceanography, 2002, 47, 1137-1151.	1.6	101
17	Spectral wave flow attenuation within submerged canopies: Implications for wave energy dissipation. Journal of Geophysical Research, 2007, 112, .	3 . 3	95
18	Demographic and genetic connectivity: the role and consequences of reproduction, dispersal and recruitment in seagrasses. Biological Reviews, 2017, 92, 921-938.	4.7	94

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19	Particulate nutrient fluxes over a fringing coral reef: relevant scales of phytoplankton production and mechanisms of supply. Marine Ecology - Progress Series, 2010, 405, 113-130.	0.9	94
20	Modeling flow in coral communities with and without waves: A synthesis of porous media and canopy flow approaches. Limnology and Oceanography, 2008, 53, 2668-2680.	1.6	83
21	A new model for predicting the drag exerted by vegetation canopies. Water Resources Research, 2017, 53, 3179-3196.	1.7	83
22	Nearshore circulation in a tropical fringing reef system. Journal of Geophysical Research, 2011, 116, .	3.3	80
23	Feedback between sediment and light for seagrass: Where is it important?. Limnology and Oceanography, 2016, 61, 1937-1955.	1.6	78
24	Intensity Capping: a simple method to improve cross-correlation PIV results. Experiments in Fluids, 2007, 42, 225-240.	1.1	69
25	Seasonal coupling and deâ€coupling of net calcification rates from coral reef metabolism and carbonate chemistry at Ningaloo Reef, Western Australia. Journal of Geophysical Research, 2012, 117, .	3.3	68
26	Evaluation of nearshore wave models in steep reef environments. Ocean Dynamics, 2014, 64, 847-862.	0.9	64
27	A laboratory study of the velocity structure in an intrusive gravity current. Journal of Fluid Mechanics, 2002, 456, 33-48.	1.4	63
28	Wave Setup over a Fringing Reef with Large Bottom Roughness. Journal of Physical Oceanography, 2016, 46, 2317-2333.	0.7	63
29	Continuous measurements of net production over a shallow reef community using a modified Eulerian approach. Journal of Geophysical Research, 2008, 113, .	3.3	58
30	Dynamics of Wave Setup over a Steeply Sloping Fringing Reef. Journal of Physical Oceanography, 2015, 45, 3005-3023.	0.7	56
31	Mechanisms of Waveâ€Driven Water Level Variability on Reefâ€Fringed Coastlines. Journal of Geophysical Research: Oceans, 2018, 123, 3811-3831.	1.0	55
32	Nonhydrostatic and surfbeat model predictions of extreme wave run-up in fringing reef environments. Coastal Engineering, 2018, 137, 11-27.	1.7	55
33	The role of hydrodynamics on seed dispersal in seagrasses. Limnology and Oceanography, 2012, 57, 1257-1265.	1.6	53
34	Oceanographic forcing of nutrient uptake and release over a fringing coral reef. Limnology and Oceanography, 2012, 57, 401-419.	1.6	52
35	Particulate nutrient fluxes over a fringing coral reef: Sourceâ€sink dynamics inferred from carbon to nitrogen ratios and stable isotopes. Limnology and Oceanography, 2013, 58, 409-427.	1.6	50
36	Contemporary connectivity is sustained by wind- and current-driven seed dispersal among seagrass meadows. Movement Ecology, 2015, 3, 9.	1.3	49

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37	Oscillatory flow through submerged canopies: 2. Canopy mass transfer. Journal of Geophysical Research, 2005, 110, .	3.3	47
38	Morphological constraints to waveâ€driven circulation in coastal reefâ€lagoon systems: A numerical study. Journal of Geophysical Research, 2010, 115, .	3.3	47
39	Early recovery dynamics of turbid coral reefs after recurring bleaching events. Journal of Environmental Management, 2020, 268, 110666.	3.8	47
40	Wave-driven circulation patterns in the lee of groynes. Continental Shelf Research, 2009, 29, 1961-1974.	0.9	42
41	Sediment transport in the presence of large reef bottom roughness. Journal of Geophysical Research: Oceans, 2017, 122, 1347-1368.	1.0	38
42	Numerical simulations of surf zone wave dynamics using Smoothed Particle Hydrodynamics. Ocean Modelling, 2019, 144, 101481.	1.0	38
43	The intertidal hydraulics of tide-dominated reef platforms. Journal of Geophysical Research: Oceans, 2015, 120, 4845-4868.	1.0	37
44	Spectral wave-driven sediment transport across a fringing reef. Coastal Engineering, 2015, 98, 78-94.	1.7	37
45	Disturbance Is an Important Driver of Clonal Richness in Tropical Seagrasses. Frontiers in Plant Science, 2017, 8, 2026.	1.7	37
46	The role of the Leeuwin Current and mixed layer depth on the autumn phytoplankton bloom off Ningaloo Reef, Western Australia. Continental Shelf Research, 2012, 32, 22-35.	0.9	36
47	Seasonal and interannual variability of the wave climate at a wave energy hotspot off the southwestern coast of Australia. Renewable Energy, 2020, 146, 2337-2350.	4.3	36
48	Impact of windage on ocean surface Lagrangian coherent structures. Environmental Fluid Mechanics, 2017, 17, 473-483.	0.7	35
49	Response of a fringing reef coastline to the direct impact of a tropical cyclone. Limnology and Oceanography Letters, 2018, 3, 31-38.	1.6	34
50	Resilience of coral calcification to extreme temperature variations in the Kimberley region, northwest Australia. Coral Reefs, 2015, 34, 1151-1163.	0.9	33
51	Nearâ€inertial ocean response to tropical cyclone forcing on the <scp>A</scp> ustralian <scp>N</scp> orthâ€ <scp>W</scp> est <scp>S</scp> helf. Journal of Geophysical Research: Oceans, 2015, 120, 7722-7751.	1.0	33
52	Metabolism of a tideâ€dominated reef platform subject to extreme diel temperature and oxygen variations. Limnology and Oceanography, 2017, 62, 1701-1717.	1.6	33
53	Plume dispersion on a fringing coral reef system. Limnology and Oceanography, 2008, 53, 2273-2286.	1.6	31
54	Towards modelling the future risk of cyclone wave damage to the world's coral reefs. Global Change Biology, 2020, 26, 4302-4315.	4.2	31

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55	Atmospheric forcing intensifies the effects of regional ocean warming on reefâ€scale temperature anomalies during a coral bleaching event. Journal of Geophysical Research: Oceans, 2013, 118, 4600-4616.	1.0	30
56	Hydrodynamics of a Tidally Forced Coral Reef Atoll. Journal of Geophysical Research: Oceans, 2018, 123, 7084-7101.	1.0	30
57	Predicting Bed Shear Stresses in Vegetated Channels. Water Resources Research, 2018, 54, 9187-9206.	1.7	30
58	Uptake of picophytoplankton, bacterioplankton and virioplankton by a fringing coral reef community (Ningaloo Reef, Australia). Coral Reefs, 2011, 30, 555.	0.9	29
59	The effects of tropical cyclone characteristics on the surface wave fields in Australia's North West region. Continental Shelf Research, 2017, 139, 35-53.	0.9	29
60	Physical mechanisms influencing localized patterns of temperature variability and coral bleaching within a system of reef atolls. Coral Reefs, 2019, 38, 759-771.	0.9	29
61	Seasonal circulation and temperature variability near the North West Cape of Australia. Journal of Geophysical Research, 2012, 117, .	3.3	27
62	A numerical study of the dynamics of the wave-driven circulation within a fringing reef system. Ocean Dynamics, 2012, 62, 585-602.	0.9	27
63	Estimating the settling velocity of bioclastic sediment using common grainâ€size analysis techniques. Sedimentology, 2017, 64, 987-1004.	1.6	26
64	A numerical model of wave- and current-driven nutrient uptake by coral reef communities. Ecological Modelling, 2011, 222, 1456-1470.	1.2	25
65	The combined influence of hydrodynamic forcing and calcification on the spatial distribution of alkalinity in a coral reef system. Journal of Geophysical Research, 2012, 117, .	3.3	25
66	Dynamics of the summer shelf circulation and transient upwelling off Ningaloo Reef, Western Australia. Journal of Geophysical Research: Oceans, 2013, 118, 1099-1125.	1.0	24
67	Internal-Tide Spectroscopy and Prediction in the Timor Sea. Journal of Physical Oceanography, 2015, 45, 64-83.	0.7	24
68	Effects of nonlocal turbulence on the mass transfer of dissolved species to reef corals. Limnology and Oceanography, 2007, 52, 274-285.	1.6	23
69	Short-term coherency between gross primary production and community respiration in an algal-dominated reef flat. Coral Reefs, 2011, 30, 53-58.	0.9	23
70	Intermittent dense water outflows under variable tidal forcing in Shark Bay, Western Australia. Continental Shelf Research, 2013, 66, 36-48.	0.9	23
71	Rising sea levels will reduce extreme temperature variations in tide-dominated reef habitats. Science Advances, 2016, 2, e1600825.	4.7	23
72	Improving spatial prioritisation for remote marine regions: optimising biodiversity conservation and sustainable development trade-offs. Scientific Reports, 2016, 6, 32029.	1.6	23

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73	Localised hydrodynamics influence vulnerability of coral communities to environmental disturbances. Coral Reefs, 2017, 36, 861-872.	0.9	23
74	Nutrient fluxes into an isolated coral reef atoll by tidally driven internal bores. Limnology and Oceanography, 2019, 64, 461-473.	1.6	23
75	Canopy resistance on oscillatory flows. Coastal Engineering, 2019, 152, 103502.	1.7	22
76	A Numerical Study of Waveâ€Driven Mean Flows and Setup Dynamics at a Coral Reefâ€Lagoon System. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC016811.	1.0	22
77	Wind and tidal mixing controls on stratification and dense water outflows in a large hypersaline bay. Journal of Geophysical Research: Oceans, 2015, 120, 6034-6056.	1.0	21
78	Spatial Variability of Sediment Transport Processes Over Intratidal and Subtidal Timescales Within a Fringing Coral Reef System. Journal of Geophysical Research F: Earth Surface, 2018, 123, 1013-1034.	1.0	21
79	Predicting Current-Induced Drag in Emergent and Submerged Aquatic Vegetation Canopies. Frontiers in Marine Science, $2018, 5, .$	1.2	21
80	Climatic Drivers of Extreme Sea Level Events Along the Coastline of Western Australia. Earth's Future, 2021, 9, e2020EF001620.	2.4	21
81	Standing infragravity waves over an alongshore irregular rocky bathymetry. Journal of Geophysical Research: Oceans, 2017, 122, 4868-4885.	1.0	19
82	Waveâ€Driven Mean Flow Dynamics in Submerged Canopies. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015935.	1.0	19
83	Steps to Develop Early Warning Systems and Future Scenarios of Storm Wave-Driven Flooding Along Coral Reef-Lined Coasts. Frontiers in Marine Science, 2020, 7, .	1.2	19
84	Assessing the drivers of spatial variation in thermal forcing across a nearshore reef system and implications for coral bleaching. Limnology and Oceanography, 2014, 59, 1241-1255.	1.6	18
85	Interannual Response of Reef Islands to Climate-Driven Variations in Water Level and Wave Climate. Remote Sensing, 2020, 12, 4089.	1.8	18
86	Seeds in motion: Genetic assignment and hydrodynamic models demonstrate concordant patterns of seagrass dispersal. Molecular Ecology, 2018, 27, 5019-5034.	2.0	17
87	Simulating the wave-induced response of a submerged wave-energy converter using a non-hydrostatic wave-flow model. Coastal Engineering, 2018, 140, 189-204.	1.7	17
88	Water residence time controls the feedback between seagrass, sediment and light: Implications for restoration. Advances in Water Resources, 2018, 117, 14-26.	1.7	16
89	Differential response of corals to regional massâ∈warming events as evident from skeletal Sr/Ca and Mg/Ca ratios. Geochemistry, Geophysics, Geosystems, 2017, 18, 1794-1809.	1.0	15
90	Hydrodynamic Modeling of a Reef-Fringed Pocket Beach Using a Phase-Resolved Non-Hydrostatic Model. Journal of Marine Science and Engineering, 2020, 8, 877.	1.2	14

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91	Tropical Cycloneâ€Driven Sediment Dynamics Over the Australian North West Shelf. Journal of Geophysical Research: Oceans, 2017, 122, 10225-10244.	1.0	13
92	Source and supply of sediment to a shoreline salient in a fringing reef environment. Earth Surface Processes and Landforms, 2019, 44, 552-564.	1.2	13
93	Future-proofing conservation priorities for sea level rise in coastal urban ecosystems. Biological Conservation, 2021, 260, 109190.	1.9	13
94	Identifying Metocean Drivers of Turbidity Using 18 Years of MODIS Satellite Data: Implications for Marine Ecosystems under Climate Change. Remote Sensing, 2021, 13, 3616.	1.8	13
95	Waves do not contribute to global sea-level rise. Nature Climate Change, 2019, 9, 2-2.	8.1	12
96	The Contribution of Currents, Seaâ€Swell Waves, and Infragravity Waves to Suspendedâ€Sediment Transport Across a Coral Reefâ€Lagoon System. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC017010.	1.0	12
97	Modeling and reliability characterization of area-array electronics subjected to high-g mechanical shock up to 50,000g. , 2012, , .		11
98	Observations of the shelf circulation dynamics along Ningaloo Reef, Western Australia during the austral spring and summer. Continental Shelf Research, 2015, 95, 54-73.	0.9	11
99	Contrasting Heat Budget Dynamics During Two La Niña Marine Heat Wave Events Along Northwestern Australia. Journal of Geophysical Research: Oceans, 2018, 123, 1563-1581.	1.0	11
100	Wave-current interactions in the continental shelf bottom boundary layer of the Australian North West Shelf during tropical cyclone conditions. Continental Shelf Research, 2018, 165, 78-92.	0.9	11
101	Prognostication of accrued damage in board assemblies under thermal and mechanical stresses. , 2012,		10
102	Summer circulation dynamics within the Perth coastal waters of southwestern Australia. Continental Shelf Research, 2014, 77, 81-95.	0.9	10
103	Shoreline variability at a low-energy beach: Contributions of storms, megacusps and sea-breeze cycles. Marine Geology, 2018, 400, 94-106.	0.9	10
104	A novel adaptation facilitates seed establishment under marine turbulent flows. Scientific Reports, 2019, 9, 19693.	1.6	10
105	When is flow re-entrainment important for the flushing time in coastal reef systems?. Continental Shelf Research, 2020, 206, 104194.	0.9	10
106	Ocean Transport Pathways to a World Heritage Fringing Coral Reef: Ningaloo Reef, Western Australia. PLoS ONE, 2016, 11, e0145822.	1.1	10
107	Maximising resilience to sea-level rise in urban coastal ecosystems through systematic conservation planning. Landscape and Urban Planning, 2022, 221, 104374.	3.4	10
108	A Numerical Study of Tropical Cycloneâ€Induced Sediment Dynamics on the Australian North West Shelf. Journal of Geophysical Research: Oceans, 2018, 123, 5113-5133.	1.0	9

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109	Predicting the hydrodynamic response of a coastal reef-lagoon system to a tropical cyclone using phase-averaged and surfbeat-resolving wave models. Coastal Engineering, 2019, 152, 103525.	1.7	9
110	Understanding coastal impacts by nearshore wave farms using a phase-resolving wave model. Renewable Energy, 2020, 150, 637-648.	4.3	9
111	Optimising cool-water injections to reduce thermal stress on coral reefs of the Great Barrier Reef. PLoS ONE, 2020, 15, e0239978.	1.1	9
112	Toward a universal massâ€momentum transfer relationship for predicting nutrient uptake and metabolite exchange in benthic reef communities. Geophysical Research Letters, 2016, 43, 9764-9772.	1.5	8
113	Predicting coastal impacts by wave farms: A comparison of wave-averaged and wave-resolving models. Renewable Energy, 2022, 183, 764-780.	4.3	8
114	Smoothed Particle Hydrodynamics simulations of reef surf zone processes driven by plunging irregular waves. Ocean Modelling, 2022, 171, 101945.	1.0	8
115	Biophysical characteristics of a morphologically-complex macrotidal tropical coastal system during a dry season. Estuarine, Coastal and Shelf Science, 2014, 149, 96-108.	0.9	7
116	Seasonal Shoreline Variability Induced by Subtidal Water Level Fluctuations at Reefâ€Fringed Beaches. Journal of Geophysical Research F: Earth Surface, 2018, 123, 433-447.	1.0	7
117	Shoreline Variability at a Reef-Fringed Pocket Beach. Frontiers in Marine Science, 2020, 7, .	1.2	7
118	GRAINSIZE, COMPOSITION AND BEDFORM PATTERNS IN A FRINGING REEF SYSTEM., 2015, , .		7
119	Wave and Tidally Driven Flow Dynamics Within a Coral Reef Atoll off Northwestern Australia. Journal of Geophysical Research: Oceans, 2022, 127, .	1.0	7
120	The combined effect of transient windâ€driven upwelling and eddies on vertical nutrient fluxes and phytoplankton dynamics along Ningaloo Reef, Western Australia. Journal of Geophysical Research: Oceans, 2016, 121, 4994-5016.	1.0	6
121	Spectral Wave-Driven Bedload Transport Across a Coral Reef Flat/Lagoon Complex. Frontiers in Marine Science, 2020, 7, .	1.2	6
122	LOW FREQUENCY WAVE RESONANCE IN FRINGING REEF ENVIRONMENTS. Coastal Engineering Proceedings, 2012, 1, 25.	0.1	6
123	Diel Variations in Density and Diversity of Micro-Phytoplankton Community in and around a Barachois-Based Oyster Culture Farm. Journal of Sustainability Science and Management, 2020, 15, 2-17.	0.2	6
124	High-G shock reliability of ceramic area-array packages. , 2012, , .		5
125	Prognostication of solder-joint reliability of 0.4mm and 0.5mm pitch bgas subjected to mechanical shocks up to 10,000G., 2015,,.		5
126	Benthic uptake of phytoplankton and oceanâ€reef exchange of particulate nutrients on a tideâ€dominated reef. Limnology and Oceanography, 2018, 63, 1545-1561.	1.6	5

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127	Tidal and seasonal forcing of dissolved nutrient fluxes in reef communities. Biogeosciences, 2019, 16, 1921-1935.	1.3	5
128	Free and Forced Components of Shoaling Long Waves in the Absence of Short-Wave Breaking. Journal of Physical Oceanography, 2021, 51, 1465-1487.	0.7	5
129	An efficient method to calculate depth-integrated, phase-averaged momentum balances in non-hydrostatic models. Ocean Modelling, 2021, 165, 101846.	1.0	5
130	Nature-based solutions for atoll habitability. Philosophical Transactions of the Royal Society B: Biological Sciences, 2022, 377, 20210124.	1.8	5
131	Modelling wave attenuation through submerged vegetation canopies using a subgrid canopy flow model. Coastal Engineering, 2022, 176, 104153.	1.7	5
132	Investigating transport in a tidally driven coral atoll flow using Lagrangian coherent structures. Limnology and Oceanography, 2021, 66, 4017-4027.	1.6	4
133	A novel flume for simulating the effects of wave- and tide-driven water motion on the biogeochemistry of benthic reef communities. Limnology and Oceanography: Methods, 2006, 4, 68-79.	1.0	3
134	Infragravity Wave Energy Partitioning in the Surf Zone in Response to Wind-Sea and Swell Forcing. Journal of Marine Science and Engineering, 2019, 7, 383.	1.2	3
135	Thirty critical research needs for managing an ecologically and culturally unique remote marine environment: The Kimberley region of Western Australia. Ocean and Coastal Management, 2021, 212, 105771.	2.0	3
136	Population genetic structure of a broadcastâ€spawning coral across a tropical–temperate transition zone reveals regional differentiation and high″atitude reef isolation. Journal of Biogeography, 2021, 48, 3185-3195.	1.4	3
137	Seagrass Meadows Reduce Wind-Wave Driven Sediment Resuspension in a Sheltered Environment. Frontiers in Marine Science, 2022, 8, .	1.2	3
138	Uncovering Fine-Scale Wave-Driven Transport Features in a Fringing Coral Reef System via Lagrangian Coherent Structures. Fluids, 2020, 5, 190.	0.8	2
139	HYDRODYNAMIC DRIVERS OF SEDIMENT TRANSPORT ACROSS A FRINGING REEF. Coastal Engineering Proceedings, 2015, 1, 37.	0.1	1
140	Nearshore submerged wave farm optimisation: A multi-objective approach. Applied Ocean Research, 2022, 124, 103225.	1.8	1
141	MECHANICS OF SEDIMENT SUSPENSION AND TRANSPORT WITHIN A FRINGING REEF. , 2015, , .		0
142	Thank You to Our 2017 Peer Reviewers. Journal of Geophysical Research: Oceans, 2018, 123, 6042-6052.	1.0	0
143	Thank You to Our 2019 Reviewers. Journal of Geophysical Research: Oceans, 2020, 125, e2020JC016312.	1.0	0