

Ryan Lowe

List of Publications by Citations

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137
papers

6,146
citations

35
h-index

76
g-index

145
ext. papers

7,874
ext. citations

5
avg, IF

5.79
L-index

#	Paper	IF	Citations
137	Global warming and recurrent mass bleaching of corals. <i>Nature</i> , 2017 , 543, 373-377	50.4	1539
136	Spatial and temporal patterns of mass bleaching of corals in the Anthropocene. <i>Science</i> , 2018 , 359, 80-83	33.3	954
135	The Central Role of Dispersal in the Maintenance and Persistence of Seagrass Populations. <i>BioScience</i> , 2012 , 62, 56-65	5.7	210
134	Spectral wave dissipation over a barrier reef. <i>Journal of Geophysical Research</i> , 2005 , 110,		173
133	Wave-Driven Circulation of a Coastal Reef Lagoon System. <i>Journal of Physical Oceanography</i> , 2009 , 39, 873-893	2.4	129
132	The dynamics of infragravity wave transformation over a fringing reef. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		118
131	Oceanic forcing of coral reefs. <i>Annual Review of Marine Science</i> , 2015 , 7, 43-66	15.4	113
130	Numerical modeling of low-frequency wave dynamics over a fringing coral reef. <i>Coastal Engineering</i> , 2013 , 73, 178-190	4.8	110
129	Oscillatory flow through submerged canopies: 1. Velocity structure. <i>Journal of Geophysical Research</i> , 2005 , 110,		100
128	The movement ecology of seagrasses. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2014 , 281,	4.4	92
127	A numerical study of circulation in a coastal reef-lagoon system. <i>Journal of Geophysical Research</i> , 2009 , 114,		91
126	Physical and biological controls on the carbonate chemistry of coral reef waters: effects of metabolism, wave forcing, sea level, and geomorphology. <i>PLoS ONE</i> , 2013 , 8, e53303	3.7	89
125	The non-Boussinesq lock-exchange problem. Part 1. Theory and experiments. <i>Journal of Fluid Mechanics</i> , 2005 , 537, 101	3.7	85
124	Marine heatwave causes unprecedented regional mass bleaching of thermally resistant corals in northwestern Australia. <i>Scientific Reports</i> , 2017 , 7, 14999	4.9	83
123	Hydrodynamics of larval settlement: The influence of turbulent stress events at potential recruitment sites. <i>Limnology and Oceanography</i> , 2002 , 47, 1137-1151	4.8	79
122	Spectral wave flow attenuation within submerged canopies: Implications for wave energy dissipation. <i>Journal of Geophysical Research</i> , 2007 , 112,		71
121	Demographic and genetic connectivity: the role and consequences of reproduction, dispersal and recruitment in seagrasses. <i>Biological Reviews</i> , 2017 , 92, 921-938	13.5	64

120	Nearshore circulation in a tropical fringing reef system. <i>Journal of Geophysical Research</i> , 2011 , 116,		63
119	Modeling flow in coral communities with and without waves: A synthesis of porous media and canopy flow approaches. <i>Limnology and Oceanography</i> , 2008 , 53, 2668-2680	4.8	62
118	Particulate nutrient fluxes over a fringing coral reef: relevant scales of phytoplankton production and mechanisms of supply. <i>Marine Ecology - Progress Series</i> , 2010 , 405, 113-130	2.6	62
117	Seasonal coupling and de-coupling of net calcification rates from coral reef metabolism and carbonate chemistry at Ningaloo Reef, Western Australia. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		61
116	A laboratory study of the velocity structure in an intrusive gravity current. <i>Journal of Fluid Mechanics</i> , 2002 , 456, 33-48	3.7	52
115	Intensity Capping: a simple method to improve cross-correlation PIV results. <i>Experiments in Fluids</i> , 2007 , 42, 225-240	2.5	50
114	A new model for predicting the drag exerted by vegetation canopies. <i>Water Resources Research</i> , 2017 , 53, 3179-3196	5.4	49
113	Feedback between sediment and light for seagrass: Where is it important?. <i>Limnology and Oceanography</i> , 2016 , 61, 1937-1955	4.8	49
112	Evaluation of nearshore wave models in steep reef environments. <i>Ocean Dynamics</i> , 2014 , 64, 847-862	2.3	49
111	Continuous measurements of net production over a shallow reef community using a modified Eulerian approach. <i>Journal of Geophysical Research</i> , 2008 , 113,		49
110	The role of hydrodynamics on seed dispersal in seagrasses. <i>Limnology and Oceanography</i> , 2012 , 57, 1257-1265	4.2	42
109	Oceanographic forcing of nutrient uptake and release over a fringing coral reef. <i>Limnology and Oceanography</i> , 2012 , 57, 401-419	4.8	41
108	Wave Setup over a Fringing Reef with Large Bottom Roughness. <i>Journal of Physical Oceanography</i> , 2016 , 46, 2317-2333	2.4	40
107	Dynamics of Wave Setup over a Steeply Sloping Fringing Reef. <i>Journal of Physical Oceanography</i> , 2015 , 45, 3005-3023	2.4	39
106	Mechanisms of Wave-Driven Water Level Variability on Reef-Fringed Coastlines. <i>Journal of Geophysical Research: Oceans</i> , 2018 , 123, 3811-3831	3.3	37
105	Oscillatory flow through submerged canopies: 2. Canopy mass transfer. <i>Journal of Geophysical Research</i> , 2005 , 110,		37
104	Morphological constraints to wave-driven circulation in coastal reef-lagoon systems: A numerical study. <i>Journal of Geophysical Research</i> , 2010 , 115,		36
103	Nonhydrostatic and surfbeat model predictions of extreme wave run-up in fringing reef environments. <i>Coastal Engineering</i> , 2018 , 137, 11-27	4.8	35

102	Particulate nutrient fluxes over a fringing coral reef: Source-sink dynamics inferred from carbon to nitrogen ratios and stable isotopes. <i>Limnology and Oceanography</i> , 2013 , 58, 409-427	4.8	34
101	Contemporary connectivity is sustained by wind- and current-driven seed dispersal among seagrass meadows. <i>Movement Ecology</i> , 2015 , 3, 9	4.6	32
100	Impact of windage on ocean surface Lagrangian coherent structures. <i>Environmental Fluid Mechanics</i> , 2017 , 17, 473-483	2.2	30
99	The role of the Leeuwin Current and mixed layer depth on the autumn phytoplankton bloom off Ningaloo Reef, Western Australia. <i>Continental Shelf Research</i> , 2012 , 32, 22-35	2.4	30
98	Wave-driven circulation patterns in the lee of groynes. <i>Continental Shelf Research</i> , 2009 , 29, 1961-1974	2.4	30
97	Resilience of coral calcification to extreme temperature variations in the Kimberley region, northwest Australia. <i>Coral Reefs</i> , 2015 , 34, 1151-1163	4.2	27
96	Atmospheric forcing intensifies the effects of regional ocean warming on reef-scale temperature anomalies during a coral bleaching event. <i>Journal of Geophysical Research: Oceans</i> , 2013 , 118, 4600-4616	3.3	26
95	Spectral wave-driven sediment transport across a fringing reef. <i>Coastal Engineering</i> , 2015 , 98, 78-94	4.8	25
94	The intertidal hydraulics of tide-dominated reef platforms. <i>Journal of Geophysical Research: Oceans</i> , 2015 , 120, 4845-4868	3.3	25
93	Plume dispersion on a fringing coral reef system. <i>Limnology and Oceanography</i> , 2008 , 53, 2273-2286	4.8	25
92	Response of a fringing reef coastline to the direct impact of a tropical cyclone. <i>Limnology and Oceanography Letters</i> , 2018 , 3, 31-38	7.9	24
91	Seasonal and interannual variability of the wave climate at a wave energy hotspot off the southwestern coast of Australia. <i>Renewable Energy</i> , 2020 , 146, 2337-2350	8.1	24
90	Sediment transport in the presence of large reef bottom roughness. <i>Journal of Geophysical Research: Oceans</i> , 2017 , 122, 1347-1368	3.3	23
89	Numerical simulations of surf zone wave dynamics using Smoothed Particle Hydrodynamics. <i>Ocean Modelling</i> , 2019 , 144, 101481	3	23
88	A numerical model of wave- and current-driven nutrient uptake by coral reef communities. <i>Ecological Modelling</i> , 2011 , 222, 1456-1470	3	23
87	Global declines in coral reef calcium carbonate production under ocean acidification and warming. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	23
86	Metabolism of a tide-dominated reef platform subject to extreme diel temperature and oxygen variations. <i>Limnology and Oceanography</i> , 2017 , 62, 1701-1717	4.8	22
85	Disturbance Is an Important Driver of Clonal Richness in Tropical Seagrasses. <i>Frontiers in Plant Science</i> , 2017 , 8, 2026	6.2	22

84	Near-inertial ocean response to tropical cyclone forcing on the Australian North-West Shelf. <i>Journal of Geophysical Research: Oceans</i> , 2015 , 120, 7722-7751	3.3	22
83	The effects of tropical cyclone characteristics on the surface wave fields in Australia's North West region. <i>Continental Shelf Research</i> , 2017 , 139, 35-53	2.4	21
82	Seasonal circulation and temperature variability near the North West Cape of Australia. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		21
81	A numerical study of the dynamics of the wave-driven circulation within a fringing reef system. <i>Ocean Dynamics</i> , 2012 , 62, 585-602	2.3	21
80	Uptake of picophytoplankton, bacterioplankton and virioplankton by a fringing coral reef community (Ningaloo Reef, Australia). <i>Coral Reefs</i> , 2011 , 30, 555	4.2	21
79	Early recovery dynamics of turbid coral reefs after recurring bleaching events. <i>Journal of Environmental Management</i> , 2020 , 268, 110666	7.9	20
78	Estimating the settling velocity of bioclastic sediment using common grain-size analysis techniques. <i>Sedimentology</i> , 2017 , 64, 987-1004	3.3	20
77	Dynamics of the summer shelf circulation and transient upwelling off Ningaloo Reef, Western Australia. <i>Journal of Geophysical Research: Oceans</i> , 2013 , 118, 1099-1125	3.3	20
76	Rising sea levels will reduce extreme temperature variations in tide-dominated reef habitats. <i>Science Advances</i> , 2016 , 2, e1600825	14.3	19
75	Internal-Tide Spectroscopy and Prediction in the Timor Sea. <i>Journal of Physical Oceanography</i> , 2015 , 45, 64-83	2.4	18
74	Short-term coherency between gross primary production and community respiration in an algal-dominated reef flat. <i>Coral Reefs</i> , 2011 , 30, 53-58	4.2	18
73	The combined influence of hydrodynamic forcing and calcification on the spatial distribution of alkalinity in a coral reef system. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		18
72	Improving spatial prioritisation for remote marine regions: optimising biodiversity conservation and sustainable development trade-offs. <i>Scientific Reports</i> , 2016 , 6, 32029	4.9	17
71	Wind and tidal mixing controls on stratification and dense water outflows in a large hypersaline bay. <i>Journal of Geophysical Research: Oceans</i> , 2015 , 120, 6034-6056	3.3	17
70	Effects of nonlocal turbulence on the mass transfer of dissolved species to reef corals. <i>Limnology and Oceanography</i> , 2007 , 52, 274-285	4.8	17
69	Physical mechanisms influencing localized patterns of temperature variability and coral bleaching within a system of reef atolls. <i>Coral Reefs</i> , 2019 , 38, 759-771	4.2	16
68	Predicting Bed Shear Stresses in Vegetated Channels. <i>Water Resources Research</i> , 2018 , 54, 9187-9206	5.4	16
67	Towards modelling the future risk of cyclone wave damage to the world's coral reefs. <i>Global Change Biology</i> , 2020 , 26, 4302-4315	11.4	15

66	Assessing the drivers of spatial variation in thermal forcing across a nearshore reef system and implications for coral bleaching. <i>Limnology and Oceanography</i> , 2014 , 59, 1241-1255	4.8	15
65	Standing infragravity waves over an alongshore irregular rocky bathymetry. <i>Journal of Geophysical Research: Oceans</i> , 2017 , 122, 4868-4885	3.3	14
64	Localised hydrodynamics influence vulnerability of coral communities to environmental disturbances. <i>Coral Reefs</i> , 2017 , 36, 861-872	4.2	14
63	Differential response of corals to regional mass-warming events as evident from skeletal Sr/Ca and Mg/Ca ratios. <i>Geochemistry, Geophysics, Geosystems</i> , 2017 , 18, 1794-1809	3.6	14
62	Intermittent dense water outflows under variable tidal forcing in Shark Bay, Western Australia. <i>Continental Shelf Research</i> , 2013 , 66, 36-48	2.4	14
61	Simulating the wave-induced response of a submerged wave-energy converter using a non-hydrostatic wave-flow model. <i>Coastal Engineering</i> , 2018 , 140, 189-204	4.8	13
60	Nutrient fluxes into an isolated coral reef atoll by tidally driven internal bores. <i>Limnology and Oceanography</i> , 2019 , 64, 461-473	4.8	13
59	Predicting Current-Induced Drag in Emergent and Submerged Aquatic Vegetation Canopies. <i>Frontiers in Marine Science</i> , 2018 , 5,	4.5	13
58	Spatial Variability of Sediment Transport Processes Over Intratidal and Subtidal Timescales Within a Fringing Coral Reef System. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018 , 123, 1013-1034	3.8	12
57	Seeds in motion: Genetic assignment and hydrodynamic models demonstrate concordant patterns of seagrass dispersal. <i>Molecular Ecology</i> , 2018 , 27, 5019-5034	5.7	11
56	Canopy resistance on oscillatory flows. <i>Coastal Engineering</i> , 2019 , 152, 103502	4.8	10
55	Observations of the shelf circulation dynamics along Ningaloo Reef, Western Australia during the austral spring and summer. <i>Continental Shelf Research</i> , 2015 , 95, 54-73	2.4	10
54	Waves do not contribute to global sea-level rise. <i>Nature Climate Change</i> , 2019 , 9, 2-2	21.4	10
53	Source and supply of sediment to a shoreline salient in a fringing reef environment. <i>Earth Surface Processes and Landforms</i> , 2019 , 44, 552-564	3.7	10
52	Steps to Develop Early Warning Systems and Future Scenarios of Storm Wave-Driven Flooding Along Coral Reef-Lined Coasts. <i>Frontiers in Marine Science</i> , 2020 , 7,	4.5	9
51	Water residence time controls the feedback between seagrass, sediment and light: Implications for restoration. <i>Advances in Water Resources</i> , 2018 , 117, 14-26	4.7	9
50	Summer circulation dynamics within the Perth coastal waters of southwestern Australia. <i>Continental Shelf Research</i> , 2014 , 77, 81-95	2.4	9
49	Wave-current interactions in the continental shelf bottom boundary layer of the Australian North West Shelf during tropical cyclone conditions. <i>Continental Shelf Research</i> , 2018 , 165, 78-92	2.4	8

48	Seasonal Shoreline Variability Induced by Subtidal Water Level Fluctuations at Reef-Fringed Beaches. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018 , 123, 433-447	3.8	7
47	Modeling and reliability characterization of area-array electronics subjected to high-g mechanical shock up to 50,000g 2012 ,		7
46	Understanding coastal impacts by nearshore wave farms using a phase-resolving wave model. <i>Renewable Energy</i> , 2020 , 150, 637-648	8.1	7
45	Toward a universal mass-momentum transfer relationship for predicting nutrient uptake and metabolite exchange in benthic reef communities. <i>Geophysical Research Letters</i> , 2016 , 43, 9764-9772	4.9	7
44	Hydrodynamics of a Tidally Forced Coral Reef Atoll. <i>Journal of Geophysical Research: Oceans</i> , 2018 , 123, 7084-7101	3.3	7
43	Contrasting Heat Budget Dynamics During Two La Niña Marine Heat Wave Events Along Northwestern Australia. <i>Journal of Geophysical Research: Oceans</i> , 2018 , 123, 1563-1581	3.3	6
42	Shoreline variability at a low-energy beach: Contributions of storms, megacusps and sea-breeze cycles. <i>Marine Geology</i> , 2018 , 400, 94-106	3.3	6
41	Predicting the hydrodynamic response of a coastal reef-lagoon system to a tropical cyclone using phase-averaged and surfbeat-resolving wave models. <i>Coastal Engineering</i> , 2019 , 152, 103525	4.8	6
40	Tropical Cyclone-Driven Sediment Dynamics Over the Australian North West Shelf. <i>Journal of Geophysical Research: Oceans</i> , 2017 , 122, 10225-10244	3.3	6
39	Biophysical characteristics of a morphologically-complex macrotidal tropical coastal system during a dry season. <i>Estuarine, Coastal and Shelf Science</i> , 2014 , 149, 96-108	2.9	6
38	Prognostication of accrued damage in board assemblies under thermal and mechanical stresses 2012 ,		6
37	GRAINSIZE, COMPOSITION AND BEDFORM PATTERNS IN A FRINGING REEF SYSTEM 2015 ,		6
36	Ocean Transport Pathways to a World Heritage Fringing Coral Reef: Ningaloo Reef, Western Australia. <i>PLoS ONE</i> , 2016 , 11, e0145822	3.7	6
35	LOW FREQUENCY WAVE RESONANCE IN FRINGING REEF ENVIRONMENTS. <i>Coastal Engineering Proceedings</i> , 2012 , 1, 25	1.4	6
34	Climatic Drivers of Extreme Sea Level Events Along the Coastline of Western Australia. <i>Earths Future</i> , 2021 , 9, e2020EF001620	7.9	6
33	A Numerical Study of Wave-Driven Mean Flows and Setup Dynamics at a Coral Reef-Lagoon System. <i>Journal of Geophysical Research: Oceans</i> , 2021 , 126, e2020JC016811	3.3	6
32	A Numerical Study of Tropical Cyclone-Induced Sediment Dynamics on the Australian North West Shelf. <i>Journal of Geophysical Research: Oceans</i> , 2018 , 123, 5113-5133	3.3	5
31	Optimising cool-water injections to reduce thermal stress on coral reefs of the Great Barrier Reef. <i>PLoS ONE</i> , 2020 , 15, e0239978	3.7	5

30	Hydrodynamic Modeling of a Reef-Fringed Pocket Beach Using a Phase-Resolved Non-Hydrostatic Model. <i>Journal of Marine Science and Engineering</i> , 2020 , 8, 877	2.4	5
29	Interannual Response of Reef Islands to Climate-Driven Variations in Water Level and Wave Climate. <i>Remote Sensing</i> , 2020 , 12, 4089	5	5
28	The combined effect of transient wind-driven upwelling and eddies on vertical nutrient fluxes and phytoplankton dynamics along Ningaloo Reef, Western Australia. <i>Journal of Geophysical Research: Oceans</i> , 2016 , 121, 4994-5016	3.3	5
27	Tidal and seasonal forcing of dissolved nutrient fluxes in reef communities. <i>Biogeosciences</i> , 2019 , 16, 1921-1935	4.6	4
26	Shoreline Variability at a Reef-Fringed Pocket Beach. <i>Frontiers in Marine Science</i> , 2020 , 7,	4.5	4
25	High-G shock reliability of ceramic area-array packages 2012 ,		4
24	A novel adaptation facilitates seed establishment under marine turbulent flows. <i>Scientific Reports</i> , 2019 , 9, 19693	4.9	4
23	Identifying Metocean Drivers of Turbidity Using 18 Years of MODIS Satellite Data: Implications for Marine Ecosystems under Climate Change. <i>Remote Sensing</i> , 2021 , 13, 3616	5	4
22	When is flow re-entrainment important for the flushing time in coastal reef systems?. <i>Continental Shelf Research</i> , 2020 , 206, 104194	2.4	3
21	Wave-Driven Mean Flow Dynamics in Submerged Canopies. <i>Journal of Geophysical Research: Oceans</i> , 2020 , 125, e2019JC015935	3.3	3
20	Benthic uptake of phytoplankton and ocean-reef exchange of particulate nutrients on a tide-dominated reef. <i>Limnology and Oceanography</i> , 2018 , 63, 1545-1561	4.8	3
19	Predicting coastal impacts by wave farms: A comparison of wave-averaged and wave-resolving models. <i>Renewable Energy</i> , 2022 , 183, 764-780	8.1	3
18	Spectral Wave-Driven Bedload Transport Across a Coral Reef Flat/Lagoon Complex. <i>Frontiers in Marine Science</i> , 2020 , 7,	4.5	3
17	Smoothed Particle Hydrodynamics simulations of reef surf zone processes driven by plunging irregular waves. <i>Ocean Modelling</i> , 2022 , 171, 101945	3	2
16	The Contribution of Currents, Sea-Swell Waves, and Infragravity Waves to Suspended-Sediment Transport Across a Coral Reef-Lagoon System. <i>Journal of Geophysical Research: Oceans</i> , 2021 , 126, e2020JC017010	3.3	2
15	Future-proofing conservation priorities for sea level rise in coastal urban ecosystems. <i>Biological Conservation</i> , 2021 , 260, 109190	6.2	2
14	An efficient method to calculate depth-integrated, phase-averaged momentum balances in non-hydrostatic models. <i>Ocean Modelling</i> , 2021 , 165, 101846	3	2
13	Maximising resilience to sea-level rise in urban coastal ecosystems through systematic conservation planning. <i>Landscape and Urban Planning</i> , 2022 , 221, 104374	7.7	2

12	Uncovering Fine-Scale Wave-Driven Transport Features in a Fringing Coral Reef System via Lagrangian Coherent Structures. <i>Fluids</i> , 2020 , 5, 190	1.6	1
11	HYDRODYNAMIC DRIVERS OF SEDIMENT TRANSPORT ACROSS A FRINGING REEF. <i>Coastal Engineering Proceedings</i> , 2015 , 1, 37	1.4	1
10	Prognostication of solder-joint reliability of 0.4mm and 0.5mm pitch bgas subjected to mechanical shocks up to 10,000G 2015 ,		1
9	A novel flume for simulating the effects of wave- and tide-driven water motion on the biogeochemistry of benthic reef communities. <i>Limnology and Oceanography: Methods</i> , 2006 , 4, 68-79	2.6	1
8	Population genetic structure of a broadcast-spawning coral across a tropical-temperate transition zone reveals regional differentiation and high-latitude reef isolation. <i>Journal of Biogeography</i> ,	4.1	1
7	Free and Forced Components of Shoaling Long Waves in the Absence of Short-Wave Breaking. <i>Journal of Physical Oceanography</i> , 2021 , 51, 1465-1487	2.4	1
6	Thirty critical research needs for managing an ecologically and culturally unique remote marine environment: The Kimberley region of Western Australia. <i>Ocean and Coastal Management</i> , 2021 , 212, 105771	3.9	1
5	Nature-based solutions for atoll habitability.. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2022 , 377, 20210124	5.8	1
4	Investigating transport in a tidally driven coral atoll flow using Lagrangian coherent structures. <i>Limnology and Oceanography</i> , 2021 , 66, 4017	4.8	0
3	Infragravity Wave Energy Partitioning in the Surf Zone in Response to Wind-Sea and Swell Forcing. <i>Journal of Marine Science and Engineering</i> , 2019 , 7, 383	2.4	0
2	Modelling wave attenuation through submerged vegetation canopies using a subgrid canopy flow model. <i>Coastal Engineering</i> , 2022 , 104153	4.8	
1	Nearshore submerged wave farm optimisation: A multi-objective approach. <i>Applied Ocean Research</i> , 2022 , 124, 103225	3.4	