Robert Dorrell

List of Publications by Year
in descending order

44 papers	1,455 citations	471061 17 h-index	329751 37 g-index
46 all docs	46 docs citations	46 times ranked	1686 citing authors

#	Article	IF	Citations
1	Autonomous Underwater Vehicles (AUVs): Their past, present and future contributions to the advancement of marine geoscience. Marine Geology, 2014, 352, 451-468.	0.9	669
2	Turbulence Processes Within Turbidity Currents. Annual Review of Fluid Mechanics, 2021, 53, 59-83.	10.8	58
3	Flow dynamics and mixing processes in hydraulic jump arrays: Implications for channel-lobe transition zones. Marine Geology, 2016, 381, 181-193.	0.9	51
4	A 3D forward stratigraphic model of fluvial meander-bend evolution for prediction of point-bar lithofacies architecture. Computers and Geosciences, 2017, 105, 65-80.	2.0	49
5	First direct measurements of hydraulic jumps in an active submarine density current. Geophysical Research Letters, 2013, 40, 5904-5908.	1.5	48
6	An integrated processâ€based model of flutes and tool marks in deepâ€water environments: Implications for palaeohydraulics, the Bouma sequence and hybrid event beds. Sedimentology, 2020, 67, 1601-1666.	1.6	48
7	Hydrodynamics of fossil fishes. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20140703.	1.2	43
8	Driven around the bend: Spatial evolution and controls on the orientation of helical bend flow in a natural submarine gravity current. Journal of Geophysical Research: Oceans, 2014, 119, 898-913.	1.0	35
9	Superelevation and overspill control secondary flow dynamics in submarine channels. Journal of Geophysical Research: Oceans, 2013, 118, 3895-3915.	1.0	33
10	The critical role of stratification in submarine channels: Implications for channelization and long runout of flows. Journal of Geophysical Research: Oceans, 2014, 119, 2620-2641.	1.0	30
11	Particle Size Distribution Controls the Threshold Between Net Sediment Erosion and Deposition in Suspended Load Dominated Flows. Geophysical Research Letters, 2018, 45, 1443-1452.	1.5	30
12	Sedimentation of bidisperse suspensions. International Journal of Multiphase Flow, 2010, 36, 481-490.	1.6	29
13	The structure of the deposit produced by sedimentation of polydisperse suspensions. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	29
14	Polydisperse suspensions: Erosion, deposition, and flow capacity. Journal of Geophysical Research F: Earth Surface, 2013, 118, 1939-1955.	1.0	28
15	Length and Time Scales of Response of Sediment Suspensions to Changing Flow Conditions. Journal of Hydraulic Engineering, 2012, 138, 430-439.	0.7	25
16	Self-sharpening induces jet-like structure in seafloor gravity currents. Nature Communications, 2019, 10, 1381.	5.8	22
17	Pulse propagation in turbidity currents. Sedimentology, 2018, 65, 620-637.	1.6	19
18	The inherent instability of leveed seafloor channels. Geophysical Research Letters, 2015, 42, 4023-4031.	1.5	17

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19	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
20	Hydrodynamic efficiency in sharks: the combined role of riblets and denticles. Bioinspiration and Biomimetics, 2021, 16, 046008.	1.5	16
21	Hydrodynamic studies of floating structures: Comparison of wave-structure interaction modelling. Ocean Engineering, 2022, 249, 110878.	1.9	14
22	A novel mixing mechanism in sinuous seafloor channels: Implications for submarine channel evolution. Geomorphology, 2018, 303, 1-12.	1.1	13
23	Novel 3D sequence stratigraphic numerical model for syn-rift basins: Analysing architectural responses to eustasy, sedimentation and tectonics. Marine and Petroleum Geology, 2018, 92, 270-284.	1.5	12
24	The effect of Schmidt number on gravity current flows: The formation of large-scale three-dimensional structures. Physics of Fluids, 2021, 33, .	1.6	11
25	Satellite data for the offshore renewable energy sector: Synergies and innovation opportunities. Remote Sensing of Environment, 2021, 264, 112588.	4.6	10
26	Inflation of Ponded, Particulate Laden Density Currents. Journal of Sedimentary Research, 2018, 88, 1276-1282.	0.8	9
27	The Structure and Entrainment Characteristics of Partially Confined Gravity Currents. Journal of Geophysical Research: Oceans, 2019, 124, 2110-2125.	1.0	8
28	Scaling Analysis of Multipulsed Turbidity Current Evolution With Application to Turbidite Interpretation. Journal of Geophysical Research: Oceans, 2018, 123, 3668-3684.	1.0	7
29	Quantifying faulting and base level controls on synâ€rift sedimentation using stratigraphic architectures of coeval, adjacent Earlyâ€Middle Pleistocene fan deltas in Lake Corinth, Greece. Basin Research, 2019, 31, 1040-1065.	1.3	7
30	Machine learning for satellite-based sea-state prediction in an offshore windfarm. Ocean Engineering, 2021, 235, 109280.	1.9	7
31	A new modelling approach to sediment bypass prediction applied to the East Coast Basin, New Zealand. Bulletin of the Geological Society of America, 2021, 133, 1734-1748.	1.6	7
32	Optimisation of flow resistance and turbulent mixing over bed forms. Environmental Modelling and Software, 2018, 107, 141-147.	1.9	5
33	Relating the Flow Processes and Bedforms of Steady-State and Waning Density Currents. Frontiers in Earth Science, 2020, 8, .	0.8	5
34	Pulse propagation in gravity currents. Physics of Fluids, 2020, 32, 016603.	1.6	5
35	Observations of large-scale coherent structures in gravity currents: implications for flow dynamics. Experiments in Fluids, 2021, 62, 1.	1.1	5
36	Optimised mixing and flow resistance during shear flow over a rib roughened boundary. International Communications in Heat and Mass Transfer, 2014, 58, 54-62.	2.9	4

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37	Comment on â€œA simple model for vertical profiles of velocity and suspended sediment concentration in straight and curved submarine channelsâ€• by M. Bolla Pittaluga and J. Imran. Journal of Geophysical Research F: Earth Surface, 2014, 119, 2070-2073.	1.0	4
38	Dynamics and deposition of sediment-bearing multi-pulsed flows and geological implication. Journal of Sedimentary Research, 2019, 89, 1127-1139.	0.8	4
39	Equilibrium sediment transport, grade and discharge for suspended-load-dominated flows on Earth, Mars and Titan. Icarus, 2021, 360, 114243.	1.1	4
40	Equilibrium sediment transport by dilute turbidity currents: Comparison of competenceâ€based and capacityâ€based models. Sedimentology, 2022, 69, 624-650.	1.6	4
41	Time-Domain Implementation and Analyses of Multi-Motion Modes of Floating Structures. Journal of Marine Science and Engineering, 2022, 10, 662.	1.2	4
42	Numerical errors at walls: on the sensitivity of RANS models to near-wall cell size. International Journal of Computational Fluid Dynamics, 2020, 34, 204-225.	0.5	3
43	The coupled dynamics of internal waves and hairpin vortices in stratified plane Poiseuille flow. Journal of Fluid Mechanics, 2022, 934, .	1.4	3
44	Graphics processing unit accelerated lattice Boltzmann method simulations of dilute gravity currents. Physics of Fluids, 2022, 34, .	1.6	2