David R Fuhrman

List of Publications by Year
in descending order

80	3,420	172386 29	138417 58
papers	citations	h-index	g-index

83	83	83	1834
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A wave generation toolbox for the openâ€source CFD library: OpenFoamÂ®. International Journal for Numerical Methods in Fluids, 2012, 70, 1073-1088.	0.9	720
2	On the solitary wave paradigm for tsunamis. Journal of Geophysical Research, 2008, 113, .	3.3	278
3	On the over-production of turbulence beneath surface waves in Reynolds-averaged Navierâ€“Stokes models. Journal of Fluid Mechanics, 2018, 853, 419-460.	1.4	156
4	Topology optimization of turbulent flows. Computer Methods in Applied Mechanics and Engineering, 2018, 331, 363-393.	3.4	138
5	A Boussinesq-type method for fully nonlinear waves interacting with a rapidly varying bathymetry. Coastal Engineering, 2006, 53, 487-504.	1.7	129
6	Density based topology optimization of turbulent flow heat transfer systems. Structural and Multidisciplinary Optimization, 2018, 57, 1905-1918.	1.7	116
7	Numerical simulation of wave-induced scour and backfilling processes beneath submarine pipelines. Coastal Engineering, 2014, 94, 10-22.	1.7	100
8	Numerical investigation of flow and scour around a vertical circular cylinder. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140104.	1.6	98
9	Tsunami generation, propagation, and run-up with a high-order Boussinesq model. Coastal Engineering, 2009, 56, 747-758.	1.7	92
10	Run-up of tsunamis and long waves in terms of surf-similarity. Coastal Engineering, 2008, 55, 209-223.	1.7	90
11	Flow and sediment transport induced by a plunging solitary wave. Journal of Geophysical Research, 2011, 116, .	3.3	86
12	Performance of interFoam on the simulation of progressive waves. Coastal Engineering Journal, 2019, 61, 380-400.	0.7	81
13	Simulation of nonlinear wave run-up with a high-order Boussinesq model. Coastal Engineering, 2008, 55, 139-154.	1.7	71
14	Numerical simulation of scour and backfilling processes around a circular pile in waves. Coastal Engineering, 2017, 122, 87-107.	1.7	69
15	RANS-based simulation of turbulent wave boundary layer and sheet-flow sediment transport processes. Coastal Engineering, 2013, 73, 151-166.	1.7	62
16	Tsunami-induced scour around monopile foundations. Coastal Engineering, 2017, 129, 36-49.	1.7	59
17	Numerical solutions of fully non-linear and highly dispersive Boussinesq equations in two horizontal dimensions. International Journal for Numerical Methods in Fluids, 2004, 44, 231-255.	0.9	54
18	Numerical simulation of lowest-order short-crested wave instabilities. Journal of Fluid Mechanics, 2006, 563, 415.	1.4	53

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19	Third-order theory for bichromatic bi-directional water waves. Journal of Fluid Mechanics, 2006, 557, 369.	1.4	52
20	Bed slope effects on turbulent wave boundary layers: 2. Comparison with skewness, asymmetry, and other effects. Journal of Geophysical Research, 2009, 114, .	3.3	51
21	Laboratory observations of flow and sediment transport induced by plunging regular waves. Journal of Geophysical Research: Oceans, 2013, 118, 6161-6182.	1.0	50
22	Third-order theory for multi-directional irregular waves. Journal of Fluid Mechanics, 2012, 698, 304-334.	1.4	48
23	Numerical simulation of tsunami-scale wave boundary layers. Coastal Engineering, 2016, 110, 17-31.	1.7	48
24	Velocity potential formulations of highly accurate Boussinesq-type models. Coastal Engineering, 2009, 56, 467-478.	1.7	43
25	Experimental study of tsunami-induced scour around a monopile foundation. Coastal Engineering, 2018, 138, 9-21.	1.7	40
26	A numerical study of crescent waves. Journal of Fluid Mechanics, 2004, 513, 309-341.	1.4	39
27	Numerical investigation of wave-plus-current induced scour beneath two submarine pipelines in tandem. Coastal Engineering, 2020, 156, 103619.	1.7	38
28	Physically-consistent wall boundary conditions for the k-Ï‰ turbulence model. Journal of Hydraulic Research/De Recherches Hydrauliques, 2010, 48, 793-800.	0.7	31
29	Surf Similarity and Solitary Wave Runup. Journal of Waterway, Port, Coastal and Ocean Engineering, 2008, 134, 195-198.	0.5	30
30	Nonlinear waveâ€“structure interactions with a high-order Boussinesq model. Coastal Engineering, 2005, 52, 655-672.	1.7	28
31	A numerical study of nonlinear wave run-up on a vertical plate. Coastal Engineering, 2006, 53, 929-945.	1.7	28
32	CFD investigations of scour beneath a submarine pipeline with the effect of upward seepage. Coastal Engineering, 2020, 156, 103624.	1.7	26
33	Bed slope effects on turbulent wave boundary layers: 1. Model validation and quantification of roughâ€turbulent results. Journal of Geophysical Research, 2009, 114, .	3.3	25
34	Influence of turbulent horseshoe vortex and associated bed shear stress on sediment transport in front of a cylinder. Experimental Thermal and Fluid Science, 2018, 97, 444-457.	1.5	25
35	Short-crested waves in deep water: a numerical investigation of recent laboratory experiments. Journal of Fluid Mechanics, 2006, 559, 391.	1.4	24
36	Simulation of Wave-Plus-Current Scour beneath Submarine Pipelines. Journal of Waterway, Port, Coastal and Ocean Engineering, 2016, 142, .	0.5	21

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37	Full-scale CFD simulation of tsunamis. Part 1: Model validation and run-up. Coastal Engineering, 2019, 151, 22-41.	1.7	21
38	Numerical modeling of flow and morphology induced by a solitary wave on a sloping beach. Applied Ocean Research, 2019, 82, 259-273.	1.8	21
39	Experimental and numerical study of wave-induced backfilling beneath submarineÂpipelines. Coastal Engineering, 2016, 118, 63-75.	1.7	19
40	Full-scale CFD simulation of tsunamis. Part 2: Boundary layers and bed shear stresses. Coastal Engineering, 2019, 151, 42-57.	1.7	19
41	Span shoulder migration in three-dimensional current-induced scour beneath submerged pipelines. Coastal Engineering, 2021, 164, 103776.	1.7	18
42	Three-dimensional numerical simulation of wave-induced scour around a pile on a sloping beach. Ocean Engineering, 2021, 233, 109174.	1.9	17
43	Instability of the realizable kâ€“ Îµ turbulence model beneath surface waves. Physics of Fluids, 2020, 32, .	1.6	16
44	Data assimilation of local model error forecasts in a deterministic model. International Journal for Numerical Methods in Fluids, 2002, 39, 887-918.	0.9	15
45	Linear and non-linear stability analysis for finite difference discretizations of high-order Boussinesq equations. International Journal for Numerical Methods in Fluids, 2004, 45, 751-773.	0.9	15
46	Stabilized RANS simulation of surf zone kinematics and boundary layer processes beneath large-scale plunging waves over a breaker bar. Ocean Modelling, 2020, 155, 101705.	1.0	15
47	Turbulence in Coastal and Civil Engineering. Advanced Series on Ocean Engineering, 2020, , .	0.1	14
48	RANS-based simulation of wave-induced sheet-flow transport of graded sediments. Coastal Engineering, 2017, 121, 90-102.	1.7	13
49	Reynolds stress turbulence modelling of surf zone breaking waves. Journal of Fluid Mechanics, 2022, 937, .	1.4	10
50	Roughness-induced streaming in turbulent wave boundary layers. Journal of Geophysical Research, 2011, 116, .	3.3	9
51	HIGH-ORDER BOUSSINESQ-TYPE MODELLING OF NONLINEAR WAVE PHENOMENA IN DEEP AND SHALLOW WATER. Series on Quality, Reliability and Engineering Statistics, 2010, , 245-285.	0.2	8
52	On the statistical properties of surface elevation, velocities and accelerations in multi-directional irregular water waves. Journal of Fluid Mechanics, 2021, 910, .	1.4	8
53	Trough instabilities in Boussinesq formulations for water waves. Journal of Fluid Mechanics, 2020, 889, .	1.4	7
54	Simulation of threeâ€dimensional nonlinear water waves using a pseudospectral volumetric method with an artificial boundary condition. International Journal for Numerical Methods in Fluids, 2021, 93, 1843-1870.	0.9	7

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55	On the statistical properties of inertia and drag forces in nonlinear multi-directional irregular water waves. Journal of Fluid Mechanics, 2021, 916, .	1.4	6
56	Computational Fluid Dynamics Simulation of Deep-Water Wave Instabilities Involving Wave Breaking. Journal of Offshore Mechanics and Arctic Engineering, 2022, 144, .	0.6	6
57	Enhanced solution of 2D incompressible Navierâ€“Stokes equations based on an immersed-boundary generalized harmonic polynomial cell method. European Journal of Mechanics, B/Fluids, 2021, 89, 29-44.	1.2	5
58	Generalized time scale for wave-induced backfilling beneath submarine pipelines. Coastal Engineering, 2019, 143, 113-122.	1.7	4
59	A new Ïƒâ€transform based Fourierâ€Legendreâ€Galerkin model for nonlinear water waves. International Journal for Numerical Methods in Fluids, 2021, 93, 220-248.	0.9	3
60	Analytical and numerical models for tsunami run-up. , 2007, , 209-236.		3
61	On the accuracy and applicability of a new implicit Taylor method and the high-order spectral method on steady nonlinear waves. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200436.	1.0	3
62	A discussion on â€œNumerical computations of resonant sloshing using the modified isoAdvector method and the buoyancy-modified turbulence closure modelâ€•[Appl.ÂOcean Res.Â(2019), 93, article no.Â101829, doi:10.1016.j.apor.2019.05.014]. Applied Ocean Research, 2020, 99, 102159.	1.8	2
63	Numerical Simulation of the Boundary Layer Flow Generated in Monterey Bay, California, by the 2010 Chilean Tsunami: Case Study. Journal of Waterway, Port, Coastal and Ocean Engineering, 2021, 147, 05021012.	0.5	2
64	A CRITICAL DISCUSSION OF THE SOLITARY WAVE PARADIGM FOR TSUNAMIS. , 2009, , .		2
65	SIMULATING BREAKING WAVES WITH THE REYNOLDS STRESS TURBULENCE MODEL. Coastal Engineering Proceedings, 2020, , 17.	0.1	2
66	Potential dominance of oscillating crescent waves in finite width tanks. Physics of Fluids, 2005, 17, 038102.	1.6	1
67	Uniform asymptotic approximations for transient waves due to an initial disturbance. Journal of Geophysical Research: Oceans, 2016, 121, 60-84.	1.0	1
68	Longitudinal dispersion of heavy particles in an oscillating tunnel and application to wave boundary layers. Journal of Ocean Engineering and Marine Energy, 2016, 2, 59-83.	0.9	1
69	Numerical Solutions of Two-Dimensional Navierâ€“Stokes Equations Based on a Generalized Harmonic Polynomial Cell Method With Non-Uniform Grid. Journal of Offshore Mechanics and Arctic Engineering, 2022, 144, .	0.6	1
70	<title>Bichromatic water waves in finite depth</title>. , 2006, 5975, 352.		0
71	NUMERICAL SIMULATION OF EXTREME EVENTS FROM FOCUSED DIRECTIONALLY SPREAD WAVEFIELDS. , 2007, , .		0
72	The 8th International Conference on Coastal Dynamics, HelsingÃ¸r, Denmark, 12-16 June, 2017. Ocean Dynamics, 2020, 70, 289-290.	0.9	0

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73	Corrigendum to â€œFull-scale CFD simulation of tsunamis. Part 1: Model validation and run-upâ€•[Coast. Eng. 151 (2019) 22â€“41]. Coastal Engineering, 2020, 157, 103653.	1.7	0
74	Temporal scouring and backfilling processes around a pile group subject to unsteady hydrographs. Ain Shams Engineering Journal, 2021, , .	3.5	0
75	A 2D Navier-Stokes Equations Solver Based on Generalized Harmonic Polynomial Cell Method With Non-Uniform Grid. , 2021, , .		0
76	CFD Simulation of Nonlinear Deep-Water Wave Instabilities Involving Wave Breaking. , 2021, , .		0
77	COMPUTATION OF NONLINEAR WATER WAVES WITH A HIGH-ORDER BOUSSINESQ MODEL. , 2005, , .		0
78	IMPROVED VELOCITY POTENTIAL FORMULATIONS OF HIGHLY ACCURATE BOUSSINESQ-TYPE MODELS. , 2009, , .		0
79	TOWARDS AN ENGINEERING MODEL FOR PROFILE EVOLUTION: DETAILED 3D SEDIMENT TRANSPORT MODELLING. , 2019, , .		0
80	Mean and variance of the Eulerian and Lagrangian horizontal velocities induced by nonlinear multi-directional irregular water waves. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, .	1.0	0