

# David R Fuhrman

## List of Publications by Year in descending order

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80  
papers

3,420  
citations

172386

29  
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138417

58  
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83  
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83  
docs citations

83  
times ranked

1834  
citing authors

#	ARTICLE	IF	CITATIONS
1	Computational Fluid Dynamics Simulation of Deep-Water Wave Instabilities Involving Wave Breaking. Journal of Offshore Mechanics and Arctic Engineering, 2022, 144, .	0.6	6
2	Numerical Solutions of Two-Dimensional Navier–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
3	Reynolds stress turbulence modelling of surf zone breaking waves. Journal of Fluid Mechanics, 2022, 937, .	1.4	10
4	A new $\tilde{I}_f$ -transform based Fourier–Legendre–Galerkin model for nonlinear water waves. International Journal for Numerical Methods in Fluids, 2021, 93, 220-248.	0.9	3
5	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
6	Simulation of three-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
7	Span shoulder migration in three-dimensional current-induced scour beneath submerged pipelines. Coastal Engineering, 2021, 164, 103776.	1.7	18
8	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
9	Temporal scouring and backfilling processes around a pile group subject to unsteady hydrographs. Ain Shams Engineering Journal, 2021, , .	3.5	0
10	Three-dimensional numerical simulation of wave-induced scour around a pile on a sloping beach. Ocean Engineering, 2021, 233, 109174.	1.9	17
11	Enhanced solution of 2D incompressible Navier–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
12	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
13	A 2D Navier-Stokes Equations Solver Based on Generalized Harmonic Polynomial Cell Method With Non-Uniform Grid. , 2021, , .		0
14	CFD Simulation of Nonlinear Deep-Water Wave Instabilities Involving Wave Breaking. , 2021, , .		0
15	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
16	The 8th International Conference on Coastal Dynamics, Helsingør, Denmark, 12-16 June, 2017. Ocean Dynamics, 2020, 70, 289-290.	0.9	0
17	CFD investigations of scour beneath a submarine pipeline with the effect of upward seepage. Coastal Engineering, 2020, 156, 103624.	1.7	26
18	Numerical investigation of wave-plus-current induced scour beneath two submarine pipelines in tandem. Coastal Engineering, 2020, 156, 103619.	1.7	38

#	ARTICLE	IF	CITATIONS
19	Stabilized RANS simulation of surf zone kinematics and boundary layer processes beneath large-scale plunging waves over a breaker bar. <i>Ocean Modelling</i> , 2020, 155, 101705.	1.0	15
20	A discussion on “Numerical computations of resonant sloshing using the modified isoAdvector method and the buoyancy-modified turbulence closure model” [Appl. Ocean Res. (2019), 93, article no. 101829, doi:10.1016/j.apor.2019.05.014]. <i>Applied Ocean Research</i> , 2020, 99, 102159.	1.8	2
21	Corrigendum to “Full-scale CFD simulation of tsunamis. Part 1: Model validation and run-up” [Coast. Eng. 151 (2019) 22–41]. <i>Coastal Engineering</i> , 2020, 157, 103653.	1.7	0
22	Trough instabilities in Boussinesq formulations for water waves. <i>Journal of Fluid Mechanics</i> , 2020, 889, .	1.4	7
23	Instability of the realizable $k-\mu$ turbulence model beneath surface waves. <i>Physics of Fluids</i> , 2020, 32, .	1.6	16
24	On the accuracy and applicability of a new implicit Taylor method and the high-order spectral method on steady nonlinear waves. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020, 476, 20200436.	1.0	3
25	Turbulence in Coastal and Civil Engineering. <i>Advanced Series on Ocean Engineering</i> , 2020, , .	0.1	14
26	SIMULATING BREAKING WAVES WITH THE REYNOLDS STRESS TURBULENCE MODEL. <i>Coastal Engineering Proceedings</i> , 2020, , 17.	0.1	2
27	Performance of interFoam on the simulation of progressive waves. <i>Coastal Engineering Journal</i> , 2019, 61, 380-400.	0.7	81
28	Full-scale CFD simulation of tsunamis. Part 2: Boundary layers and bed shear stresses. <i>Coastal Engineering</i> , 2019, 151, 42-57.	1.7	19
29	Full-scale CFD simulation of tsunamis. Part 1: Model validation and run-up. <i>Coastal Engineering</i> , 2019, 151, 22-41.	1.7	21
30	Numerical modeling of flow and morphology induced by a solitary wave on a sloping beach. <i>Applied Ocean Research</i> , 2019, 82, 259-273.	1.8	21
31	Generalized time scale for wave-induced backfilling beneath submarine pipelines. <i>Coastal Engineering</i> , 2019, 143, 113-122.	1.7	4
32	TOWARDS AN ENGINEERING MODEL FOR PROFILE EVOLUTION: DETAILED 3D SEDIMENT TRANSPORT MODELLING. , 2019, , .		0
33	Experimental study of tsunami-induced scour around a monopile foundation. <i>Coastal Engineering</i> , 2018, 138, 9-21.	1.7	40
34	Density based topology optimization of turbulent flow heat transfer systems. <i>Structural and Multidisciplinary Optimization</i> , 2018, 57, 1905-1918.	1.7	116
35	Topology optimization of turbulent flows. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018, 331, 363-393.	3.4	138
36	Influence of turbulent horseshoe vortex and associated bed shear stress on sediment transport in front of a cylinder. <i>Experimental Thermal and Fluid Science</i> , 2018, 97, 444-457.	1.5	25

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37	On the over-production of turbulence beneath surface waves in Reynolds-averaged Navier–Stokes models. <i>Journal of Fluid Mechanics</i> , 2018, 853, 419-460.	1.4	156
38	Numerical simulation of scour and backfilling processes around a circular pile in waves. <i>Coastal Engineering</i> , 2017, 122, 87-107.	1.7	69
39	RANS-based simulation of wave-induced sheet-flow transport of graded sediments. <i>Coastal Engineering</i> , 2017, 121, 90-102.	1.7	13
40	Tsunami-induced scour around monopile foundations. <i>Coastal Engineering</i> , 2017, 129, 36-49.	1.7	59
41	Uniform asymptotic approximations for transient waves due to an initial disturbance. <i>Journal of Geophysical Research: Oceans</i> , 2016, 121, 60-84.	1.0	1
42	Numerical simulation of tsunami-scale wave boundary layers. <i>Coastal Engineering</i> , 2016, 110, 17-31.	1.7	48
43	Experimental and numerical study of wave-induced backfilling beneath submarine pipelines. <i>Coastal Engineering</i> , 2016, 118, 63-75.	1.7	19
44	Simulation of Wave-Plus-Current Scour beneath Submarine Pipelines. <i>Journal of Waterway, Port, Coastal and Ocean Engineering</i> , 2016, 142, .	0.5	21
45	Longitudinal dispersion of heavy particles in an oscillating tunnel and application to wave boundary layers. <i>Journal of Ocean Engineering and Marine Energy</i> , 2016, 2, 59-83.	0.9	1
46	Numerical investigation of flow and scour around a vertical circular cylinder. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2015, 373, 20140104.	1.6	98
47	Numerical simulation of wave-induced scour and backfilling processes beneath submarine pipelines. <i>Coastal Engineering</i> , 2014, 94, 10-22.	1.7	100
48	RANS-based simulation of turbulent wave boundary layer and sheet-flow sediment transport processes. <i>Coastal Engineering</i> , 2013, 73, 151-166.	1.7	62
49	Laboratory observations of flow and sediment transport induced by plunging regular waves. <i>Journal of Geophysical Research: Oceans</i> , 2013, 118, 6161-6182.	1.0	50
50	Third-order theory for multi-directional irregular waves. <i>Journal of Fluid Mechanics</i> , 2012, 698, 304-334.	1.4	48
51	A wave generation toolbox for the open-source CFD library: OpenFoam®. <i>International Journal for Numerical Methods in Fluids</i> , 2012, 70, 1073-1088.	0.9	720
52	Flow and sediment transport induced by a plunging solitary wave. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	86
53	Roughness-induced streaming in turbulent wave boundary layers. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	9
54	HIGH-ORDER BOUSSINESQ-TYPE MODELLING OF NONLINEAR WAVE PHENOMENA IN DEEP AND SHALLOW WATER. <i>Series on Quality, Reliability and Engineering Statistics</i> , 2010, , 245-285.	0.2	8

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55	Physically-consistent wall boundary conditions for the <i>k-<math>\epsilon</math></i> turbulence model. Journal of Hydraulic Research/De Recherches Hydrauliques, 2010, 48, 793-800.	0.7	31
56	Tsunami generation, propagation, and run-up with a high-order Boussinesq model. Coastal Engineering, 2009, 56, 747-758.	1.7	92
57	Velocity potential formulations of highly accurate Boussinesq-type models. Coastal Engineering, 2009, 56, 467-478.	1.7	43
58	Bed slope effects on turbulent wave boundary layers: 1. Model validation and quantification of rough-turbulent results. Journal of Geophysical Research, 2009, 114, .	3.3	25
59	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
60	A CRITICAL DISCUSSION OF THE SOLITARY WAVE PARADIGM FOR TSUNAMIS. , 2009, , .		2
61	IMPROVED VELOCITY POTENTIAL FORMULATIONS OF HIGHLY ACCURATE BOUSSINESQ-TYPE MODELS. , 2009, , .		0
62	Simulation of nonlinear wave run-up with a high-order Boussinesq model. Coastal Engineering, 2008, 55, 139-154.	1.7	71
63	Run-up of tsunamis and long waves in terms of surf-similarity. Coastal Engineering, 2008, 55, 209-223.	1.7	90
64	Surf Similarity and Solitary Wave Runup. Journal of Waterway, Port, Coastal and Ocean Engineering, 2008, 134, 195-198.	0.5	30
65	On the solitary wave paradigm for tsunamis. Journal of Geophysical Research, 2008, 113, .	3.3	278
66	NUMERICAL SIMULATION OF EXTREME EVENTS FROM FOCUSED DIRECTIONALLY SPREAD WAVEFIELDS. , 2007, , .		0
67	Analytical and numerical models for tsunami run-up. , 2007, , 209-236.		3
68	Numerical simulation of lowest-order short-crested wave instabilities. Journal of Fluid Mechanics, 2006, 563, 415.	1.4	53
69	Short-crested waves in deep water: a numerical investigation of recent laboratory experiments. Journal of Fluid Mechanics, 2006, 559, 391.	1.4	24
70	Third-order theory for bichromatic bi-directional water waves. Journal of Fluid Mechanics, 2006, 557, 369.	1.4	52
71	<title>Bichromatic water waves in finite depth</title>. , 2006, 5975, 352.		0
72	A Boussinesq-type method for fully nonlinear waves interacting with a rapidly varying bathymetry. Coastal Engineering, 2006, 53, 487-504.	1.7	129

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73	A numerical study of nonlinear wave run-up on a vertical plate. Coastal Engineering, 2006, 53, 929-945.	1.7	28
74	Nonlinear wave-structure interactions with a high-order Boussinesq model. Coastal Engineering, 2005, 52, 655-672.	1.7	28
75	Potential dominance of oscillating crescent waves in finite width tanks. Physics of Fluids, 2005, 17, 038102.	1.6	1
76	COMPUTATION OF NONLINEAR WATER WAVES WITH A HIGH-ORDER BOUSSINESQ MODEL. , 2005, , .		0
77	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
78	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
79	A numerical study of crescent waves. Journal of Fluid Mechanics, 2004, 513, 309-341.	1.4	39
80	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