Fotis Sotiropoulos

List of Publications by Year
in descending order

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185	10,415	23500	39575
papers	citations	58 h-index	94 g-index

188	188	188	5283
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A hybrid Cartesian/immersed boundary method for simulating flows with 3D, geometrically complex, moving bodies. Journal of Computational Physics, 2005, 207, 457-492.	1.9	474
2	Curvilinear immersed boundary method for simulating fluid structure interaction with complex 3D rigid bodies. Journal of Computational Physics, 2008, 227, 7587-7620.	1.9	368
3	Numerical investigation of the hydrodynamics of carangiform swimming in the transitional and inertial flow regimes. Journal of Experimental Biology, 2008, 211, 1541-1558.	0.8	351
4	A numerical method for solving the 3D unsteady incompressible Navierâ€“Stokes equations in curvilinear domains with complex immersed boundaries. Journal of Computational Physics, 2007, 225, 1782-1809.	1.9	333
5	Immersed boundary methods for simulating fluidâ€“structure interaction. Progress in Aerospace Sciences, 2014, 65, 1-21.	6.3	308
6	Vortex-induced vibrations of two cylinders in tandem arrangement in the proximityâ€“wake interference region. Journal of Fluid Mechanics, 2009, 621, 321-364.	1.4	243
7	On the role of form and kinematics on the hydrodynamics of self-propelled body/caudal fin swimming. Journal of Experimental Biology, 2010, 213, 89-107.	0.8	209
8	Numerical investigation of the hydrodynamics of anguilliform swimming in the transitional and inertial flow regimes. Journal of Experimental Biology, 2009, 212, 576-592.	0.8	201
9	On the interaction between a turbulent open channel flow and an axial-flow turbine. Journal of Fluid Mechanics, 2013, 716, 658-670.	1.4	183
10	Experimental and computational investigation of local scour around bridge piers. Advances in Water Resources, 2012, 37, 73-85.	1.7	182
11	On the onset of wake meandering for an axial flow turbine in a turbulent open channel flow. Journal of Fluid Mechanics, 2014, 744, 376-403.	1.4	172
12	Characterization of Hemodynamic Forces Induced by Mechanical Heart Valves: Reynolds vs. Viscous Stresses. Annals of Biomedical Engineering, 2008, 36, 276-297.	1.3	163
13	A general reconstruction algorithm for simulating flows with complex 3D immersed boundaries on Cartesian grids. Journal of Computational Physics, 2003, 191, 660-669.	1.9	161
14	Flow in Prosthetic Heart Valves: State-of-the-Art and Future Directions. Annals of Biomedical Engineering, 2005, 33, 1689-1694.	1.3	155
15	High-resolution numerical simulation of turbulence in natural waterways. Advances in Water Resources, 2011, 34, 98-113.	1.7	135
16	Reynolds number dependence of turbulence statistics in the wake of wind turbines. Wind Energy, 2012, 15, 733-742.	1.9	135
17	Numerical simulation of 3D flow past a real-life marine hydrokinetic turbine. Advances in Water Resources, 2012, 39, 33-43.	1.7	120
18	An overset-grid method for 3D unsteady incompressible flows. Journal of Computational Physics, 2003, 191, 567-600.	1.9	119

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19	Toward patient-specific simulations of cardiac valves: State-of-the-art and future directions. Journal of Biomechanics, 2013, 46, 217-228.	0.9	119
20	Computational study and modeling of turbine spacing effects in infinite aligned wind farms. Physics of Fluids, 2012, 24, .	1.6	109
21	Physics-Driven CFD Modeling of Complex Anatomical Cardiovascular Flows?A TCPC Case Study. Annals of Biomedical Engineering, 2005, 33, 284-300.	1.3	106
22	Curvilinear immersed boundary method for simulating coupled flow and bed morphodynamic interactions due to sediment transport phenomena. Advances in Water Resources, 2011, 34, 829-843.	1.7	106
23	Fluid Mechanics of Heart Valves and Their Replacements. Annual Review of Fluid Mechanics, 2016, 48, 259-283.	10.8	103
24	Natural snowfall reveals large-scale flow structures in the wake of a 2.5-MW wind turbine. Nature Communications, 2014, 5, 4216.	5.8	99
25	A numerical approach for simulating fluid structure interaction of flexible thin shells undergoing arbitrarily large deformations in complex domains. Journal of Computational Physics, 2015, 300, 814-843.	1.9	99
26	A review of state-of-the-art numerical methods for simulating flow through mechanical heart valves. Medical and Biological Engineering and Computing, 2009, 47, 245-256.	1.6	98
27	Hydrodynamics of the bluegill sunfish C-start escape response: three-dimensional simulations and comparison with experimental data. Journal of Experimental Biology, 2012, 215, 671-684.	0.8	97
28	Large-eddy simulation of turbulent flow past wind turbines/farms: the Virtual Wind Simulator (VWiS). Wind Energy, 2015, 18, 2025-2045.	1.9	97
29	Turbulent Flow Properties Around a Staggered Wind Farm. Boundary-Layer Meteorology, 2011, 141, 349-367.	1.2	96
30	Longitudinal curvature effects in turbulent boundary layers. Progress in Aerospace Sciences, 1997, 33, 1-70.	6.3	94
31	Numerical simulation of sand waves in a turbulent open channel flow. Journal of Fluid Mechanics, 2014, 753, 150-216.	1.4	93
32	Level set immersed boundary method for coupled simulation of air/water interaction with complex floating structures. Journal of Computational Physics, 2014, 277, 201-227.	1.9	93
33	High-Resolution Fluidâ€“Structure Interaction Simulations of Flow Through a Bi-Leaflet Mechanical Heart Valve in an Anatomic Aorta. Annals of Biomedical Engineering, 2010, 38, 326-344.	1.3	92
34	Disentangling the Functional Roles of Morphology and Motion in the Swimming of Fish. Integrative and Comparative Biology, 2010, 50, 1140-1154.	0.9	92
35	Estimation of Power Spectra of Acoustic-Doppler Velocimetry Data Contaminated with Intermittent Spikes. Journal of Hydraulic Engineering, 2010, 136, 368-378.	0.7	91
36	The three-dimensional structure of confined swirling flows with vortex breakdown. Journal of Fluid Mechanics, 2001, 426, 155-175.	1.4	87

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37	The discrete continuity equation in primitive variable solutions of incompressible flow. Journal of Computational Physics, 1991, 95, 212-227.	1.9	86
38	Drag reduction of large wind turbine blades through riblets: Evaluation of riblet geometry and application strategies. Renewable Energy, 2013, 50, 1095-1105.	4.3	85
39	Fluidâ€“structure interaction of an aortic heart valve prosthesis driven by an animated anatomic left ventricle. Journal of Computational Physics, 2013, 244, 41-62.	1.9	82
40	River Training and Ecological Enhancement Potential Using In-Stream Structures. Journal of Hydraulic Engineering, 2010, 136, 967-980.	0.7	78
41	Large-eddy simulation of a utility-scale wind farm in complex terrain. Applied Energy, 2018, 229, 767-777.	5.1	78
42	Chaotic advection in three-dimensional stationary vortex-breakdown bubbles: Å¡il'nikov's chaos and the devil's staircase. Journal of Fluid Mechanics, 2001, 444, 257-297.	1.4	77
43	Lagrangian model of bed-load transport in turbulent junction flows. Journal of Fluid Mechanics, 2011, 666, 36-76.	1.4	77
44	Correction of Pulmonary Arteriovenous Malformation Using Image-Based Surgical Planning. JACC: Cardiovascular Imaging, 2009, 2, 1024-1030.	2.3	75
45	Turbulence effects on a fullâ€scale 2.5â€‰MW horizontalâ€axis wind turbine under neutrally stratified conditions. Wind Energy, 2015, 18, 339-349.	1.9	75
46	Numerical Simulation of Flow in Mechanical Heart Valves: Grid Resolution and the Assumption of Flow Symmetry. Journal of Biomechanical Engineering, 2003, 125, 709-718.	0.6	73
47	Flow phenomena and mechanisms in a field-scale experimental meandering channel with a pool-riffle sequence: Insights gained via numerical simulation. Journal of Geophysical Research, 2011, 116, .	3.3	71
48	On the statistics of wind turbine wake meandering: An experimental investigation. Physics of Fluids, 2015, 27, .	1.6	70
49	A new class of actuator surface models for wind turbines. Wind Energy, 2018, 21, 285-302.	1.9	70
50	Computational and experimental investigation of scour past laboratory models of stream restoration rock structures. Advances in Water Resources, 2013, 54, 191-207.	1.7	67
51	Initial stages of erosion and bed form development in a turbulent flow around a cylindrical pier. Journal of Geophysical Research, 2011, 116, .	3.3	66
52	Reynolds Number Effects on the Coherent Dynamics of the Turbulent Horseshoe Vortex System. Flow, Turbulence and Combustion, 2011, 86, 231-262.	1.4	66
53	Effects of a three-dimensional hill on the wake characteristics of a model wind turbine. Physics of Fluids, 2015, 27, .	1.6	66
54	Coherent Structures in Flat-Bed Abutment Flow: Computational Fluid Dynamics Simulations and Experiments. Journal of Hydraulic Engineering, 2003, 129, 177-186.	0.7	64

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55	Numerical Simulation of Swirling Flow in Complex Hydroturbine Draft Tube Using Unsteady Statistical Turbulence Models. Journal of Hydraulic Engineering, 2005, 131, 441-456.	0.7	64
56	Numerical modeling of 3D turbulent free surface flow in natural waterways. Advances in Water Resources, 2012, 40, 23-36.	1.7	63
57	Coherent structure dynamics upstream of a long rectangular block at the side of a large aspect ratio channel. Physics of Fluids, 2005, 17, 115104.	1.6	61
58	Detached eddy simulation of flow around two wall-mounted cubes in tandem. International Journal of Heat and Fluid Flow, 2009, 30, 286-305.	1.1	61
59	On the three-dimensional vortical structure of early diastolic flow in a patient-specific left ventricle. European Journal of Mechanics, B/Fluids, 2012, 35, 20-24.	1.2	61
60	Wake meandering statistics of a model wind turbine: Insights gained by large eddy simulations. Physical Review Fluids, 2016, 1, .	1.0	61
61	On the evolution of turbulent scales in the wake of a wind turbine model. Journal of Turbulence, 2012, 13, N27.	0.5	58
62	A parallel overset-curvilinear-immersed boundary framework for simulating complex 3D incompressible flows. Computers and Fluids, 2013, 77, 76-96.	1.3	54
63	Similarity of wake meandering for different wind turbine designs for different scales. Journal of Fluid Mechanics, 2018, 842, 5-25.	1.4	53
64	Direct numerical simulation of sharkskin denticles in turbulent channel flow. Physics of Fluids, 2016, 28, .	1.6	50
65	Wake characteristics of a TriFrame of axial-flow hydrokinetic turbines. Renewable Energy, 2017, 109, 332-345.	4.3	50
66	Flow simulations in arbitrarily complex cardiovascular anatomies â€“ An unstructured Cartesian grid approach. Computers and Fluids, 2009, 38, 1749-1762.	1.3	48
67	Individualized computer-based surgical planning to address pulmonary arteriovenous malformations in patients with a single ventricle with an interrupted inferior vena cava and azygous continuation. Journal of Thoracic and Cardiovascular Surgery, 2011, 141, 1170-1177.	0.4	48
68	Fluid dynamics simulations show that facial masks can suppress the spread of COVID-19 in indoor environments. AIP Advances, 2020, 10, .	0.6	48
69	A Numerical Investigation of Blood Damage in the Hinge Area of Aortic Bileaflet Mechanical Heart Valves During the Leakage Phase. Annals of Biomedical Engineering, 2012, 40, 1468-1485.	1.3	47
70	3D Unsteady RANS Modeling of Complex Hydraulic Engineering Flows. I: Numerical Model. Journal of Hydraulic Engineering, 2005, 131, 800-808.	0.7	46
71	Coherent dynamics in the rotor tip shear layer of utility-scale wind turbines. Journal of Fluid Mechanics, 2016, 804, 90-115.	1.4	46
72	On the genesis and evolution of barchan dunes: morphodynamics. Journal of Fluid Mechanics, 2017, 815, 117-148.	1.4	46

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73	Pulsatile Flow Effects on the Hemodynamics of Intracranial Aneurysms. Journal of Biomechanical Engineering, 2010, 132, 111009.	0.6	45
74	Vortex-induced vibrations of an elastically mounted sphere with three degrees of freedom at Re = 300: hysteresis and vortex shedding modes. Journal of Fluid Mechanics, 2011, 686, 426-450.	1.4	45
75	Effect of wind turbine nacelle on turbine wake dynamics in large wind farms. Journal of Fluid Mechanics, 2019, 869, 1-26.	1.4	45
76	Numerical investigation of laminar flows through 90-degree diversions of rectangular cross-section. Computers and Fluids, 1996, 25, 95-118.	1.3	44
77	Numerical simulation of large dunes in meandering streams and rivers with in-stream rock structures. Advances in Water Resources, 2015, 81, 45-61.	1.7	43
78	Simulation of the Three-Dimensional Hinge Flow Fields of a Bileaflet Mechanical Heart Valve Under Aortic Conditions. Annals of Biomedical Engineering, 2010, 38, 841-853.	1.3	42
79	Unstructured Cartesian refinement with sharp interface immersed boundary method for 3D unsteady incompressible flows. Journal of Computational Physics, 2016, 325, 272-300.	1.9	42
80	3D Unsteady RANS Modeling of Complex Hydraulic Engineering Flows. II: Model Validation and Flow Physics. Journal of Hydraulic Engineering, 2005, 131, 809-820.	0.7	41
81	On the structure of vortex rings from inclined nozzles. Journal of Fluid Mechanics, 2011, 686, 451-483.	1.4	41
82	Transition from bubble-type vortex breakdown to columnar vortex in a confined swirling flow. International Journal of Heat and Fluid Flow, 1998, 19, 446-458.	1.1	40
83	Turbulence anisotropy and near-wall modeling in predicting three-dimensional shear-flows. AIAA Journal, 1995, 33, 504-514.	1.5	39
84	Coherent Structure Dynamics in Turbulent Flows Past In-Stream Structures: Some Insights Gained via Numerical Simulation. Journal of Hydraulic Engineering, 2010, 136, 981-993.	0.7	39
85	Assessing the predictive capabilities of isotropic, eddy viscosity Reynoldsâ€averaged turbulence models in a naturalâ€like meandering channel. Water Resources Research, 2012, 48, .	1.7	39
86	Three-dimensional flow visualization in the wake of a miniature axial-flow hydrokinetic turbine. Experiments in Fluids, 2013, 54, 1.	1.1	39
87	Performance and resilience of hydrokinetic turbine arrays under large migrating fluvial bedforms. Nature Energy, 2018, 3, 839-846.	19.8	39
88	Vortex Phenomena in Sidewall Aneurysm Hemodynamics: Experiment and Numerical Simulation. Annals of Biomedical Engineering, 2013, 41, 2157-2170.	1.3	38
89	Simulation-Based Approach for Stream Restoration Structure Design: Model Development and Validation. Journal of Hydraulic Engineering, 2014, 140, .	0.7	37
90	Effects of energetic coherent motions on the power and wake of an axial-flow turbine. Physics of Fluids, 2015, 27, .	1.6	37

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91	Wake meandering of a model wind turbine operating in two different regimes. Physical Review Fluids, 2018, 3, .	1.0	37
92	A primitive variable method for the solution of three-dimensional incompressible viscous flows. Journal of Computational Physics, 1992, 103, 336-349.	1.9	36
93	A Second-Order Godunov Method for Wave Problems in Coupled Solidâ€“Waterâ€“Gas Systems. Journal of Computational Physics, 1999, 151, 790-815.	1.9	36
94	Three-dimensional numerical model for open-ehannels with free-surfaee variations. Journal of Hydraulic Research/De Recherches Hydrauliques, 2000, 38, 115-121.	0.7	36
95	Riblet drag reduction in mild adverse pressure gradients: A numerical investigation. International Journal of Heat and Fluid Flow, 2015, 56, 251-260.	1.1	35
96	High-fidelity numerical modeling of the Upper Mississippi River under extreme flood condition. Advances in Water Resources, 2016, 98, 97-113.	1.7	34
97	Numerical simulation of strongly swirling turbulent flows through an abrupt expansion. International Journal of Heat and Fluid Flow, 2010, 31, 390-400.	1.1	33
98	Comparative hemodynamics in an aorta with bicuspid and trileaflet valves. Theoretical and Computational Fluid Dynamics, 2016, 30, 67-85.	0.9	33
99	Large-eddy simulation of a hydrokinetic turbine mounted on an erodible bed. Renewable Energy, 2017, 113, 1419-1433.	4.3	33
100	Fluidâ€“structure interaction simulation of floating structures interacting with complex, large-scale ocean waves and atmospheric turbulence with application to floating offshore wind turbines. Journal of Computational Physics, 2018, 355, 144-175.	1.9	33
101	Strongly-Coupled Multigrid Method for 3-D Incompressible Flows Using Near-Wall Turbulence Closures. Journal of Fluids Engineering, Transactions of the ASME, 1997, 119, 314-324.	0.8	32
102	Experiments on Lagrangian transport in steady vortex-breakdown bubbles in a confined swirling flow. Journal of Fluid Mechanics, 2002, 466, 215-248.	1.4	32
103	Large eddy simulation of turbulence and solute transport in a forested headwater stream. Journal of Geophysical Research F: Earth Surface, 2016, 121, 146-167.	1.0	32
104	A Review on the Meandering of Wind Turbine Wakes. Energies, 2019, 12, 4725.	1.6	32
105	On the role of copepod antennae in the production of hydrodynamic force during hopping. Journal of Experimental Biology, 2010, 213, 3019-3035.	0.8	29
106	A Novel Bioreactor for Mechanobiological Studies of Engineered Heart Valve Tissue Formation Under Pulmonary Arterial Physiological Flow Conditions. Journal of Biomechanical Engineering, 2014, 136, 121009.	0.6	29
107	Water exit dynamics of jumping archer fish: Integrating two-phase flow large-eddy simulation with experimental measurements. Physics of Fluids, 2020, 32, .	1.6	29
108	A computational study of expiratory particle transport and vortex dynamics during breathing with and without face masks. Physics of Fluids, 2021, 33, 066605.	1.6	28

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109	Toward the simulation of complex 3D shear flows using unsteady statistical turbulence models. International Journal of Heat and Fluid Flow, 2004, 25, 513-527.	1.1	27
110	Variableâ€sized wind turbines are a possibility for wind farm optimization. Wind Energy, 2014, 17, 1483-1494.	1.9	27
111	Prediction of turbulent flow through a transition duct using second-moment closure. AIAA Journal, 1994, 32, 2194-2204.	1.5	26
112	Large-eddy simulation of the Mississippi River under base-flow condition: hydrodynamics of a natural diffluence-confluence region. Journal of Hydraulic Research/De Recherches Hydrauliques, 2019, 57, 836-851.	0.7	26
113	Wake characteristics of a utility-scale wind turbine under coherent inflow structures and different operating conditions. Physical Review Fluids, 2019, 4, .	1.0	25
114	Three-Dimensional Unsteady RANS Modeling of Discontinuous Gravity Currents in Rectangular Domains. Journal of Hydraulic Engineering, 2009, 135, 505-521.	0.7	24
115	Application of Reynolds-Stress Transport Models to Stern and Wake Flows. Journal of Ship Research, 1995, 39, 263-283.	0.5	24
116	Numerical Investigation of the Performance of Three Hinge Designs of Bileaflet Mechanical Heart Valves. Annals of Biomedical Engineering, 2010, 38, 3295-3310.	1.3	23
117	Fractional step artificial compressibility schemes for the unsteady incompressible Navierâ€“Stokes equations. Computers and Fluids, 2007, 36, 974-986.	1.3	22
118	Vortex-induced vibrations of an elastically mounted sphere: The effects of Reynolds number and reduced velocity. Journal of Fluids and Structures, 2016, 66, 54-68.	1.5	22
119	Experimental visualization of Lagrangian coherent structures in aperiodic flows. Physics of Fluids, 2003, 15, L25-L28.	1.6	21
120	On the turbulent flow structure around an instream structure with realistic geometry. Water Resources Research, 2016, 52, 7869-7891.	1.7	21
121	Vortex formation and instability in the left ventricle. Physics of Fluids, 2012, 24, 91110.	1.6	20
122	Effect of flow pulsatility on modeling the hemodynamics in the total cavopulmonary connection. Journal of Biomechanics, 2012, 45, 2376-2381.	0.9	20
123	Large-Eddy Simulation of Three-Dimensional Turbulent Free Surface Flow Past a Complex Stream Restoration Structure. Journal of Hydraulic Engineering, 2015, 141, .	0.7	20
124	Simulation-based optimization of in-stream structures design: rock vanes. Environmental Fluid Mechanics, 2018, 18, 695-738.	0.7	20
125	Experimentally Validated Hemodynamics Simulations of Mechanical Heart Valves in Three Dimensions. Cardiovascular Engineering and Technology, 2012, 3, 88-100.	0.7	19
126	CFD study of aquatic thrust generation by an octopus-like arm under intense prescribed deformations. Computers and Fluids, 2015, 115, 54-65.	1.3	19

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127	Analytical model for predicting the performance of arbitrary size and layout wind farms. Wind Energy, 2016, 19, 1239-1248.	1.9	19
128	Flowâ€“Structure Interaction Simulations of the Aortic Heart Valve at Physiologic Conditions: The Role of Tissue Constitutive Model. Journal of Biomechanical Engineering, 2018, 140, .	0.6	19
129	Simulation-based optimization of inâ€“stream structures design: bendway weirs. Environmental Fluid Mechanics, 2017, 17, 79-109.	0.7	18
130	Non-linear rotation-free shell finite-element models for aortic heart valves. Journal of Biomechanics, 2017, 50, 56-62.	0.9	18
131	On the genesis and evolution of barchan dunes: Hydrodynamics. Physics of Fluids, 2020, 32, 086602.	1.6	18
132	High-fidelity simulations and field measurements for characterizing wind fields in a utility-scale wind farm. Applied Energy, 2021, 281, 116115.	5.1	18
133	Coupled fully implicit solution procedure for the steady incompressible Navier-Stokes equations. Journal of Computational Physics, 1990, 87, 328-348.	1.9	17
134	Nonlinear rotationâ€free threeâ€node shell finite element formulation. International Journal for Numerical Methods in Engineering, 2013, 95, 740-770.	1.5	17
135	Time-Averaged Wind Turbine Wake Flow Field Prediction Using Autoencoder Convolutional Neural Networks. Energies, 2022, 15, 41.	1.6	17
136	Image-Guided Fluid-Structure Interaction Simulation of Transvalvular Hemodynamics: Quantifying the Effects of Varying Aortic Valve Leaflet Thickness. Fluids, 2019, 4, 119.	0.8	16
137	A computational comparison of two incompressible Navier-Stokes solvers in three-dimensional laminar flows. Computers and Fluids, 1994, 23, 627-646.	1.3	15
138	Pressure-Based Residual Smoothing Operators for Multistage Pseudocompressibility Algorithms. Journal of Computational Physics, 1997, 133, 129-145.	1.9	15
139	Computational Fluid Dynamics for Medical Device Design and Evaluation: Are We There Yet?. Cardiovascular Engineering and Technology, 2012, 3, 137-138.	0.7	15
140	Numerical and experimental investigation of pulsatile hemodynamics in the total cavopulmonary connection. Journal of Biomechanics, 2013, 46, 373-382.	0.9	15
141	Hydraulics in the era of exponentially growing computing power. Journal of Hydraulic Research/De Recherches Hydrauliques, 2015, 53, 547-560.	0.7	14
142	Hydrodynamics and sediment transport in a meandering channel with a model axialâ€flow hydrokinetic turbine. Water Resources Research, 2016, 52, 860-879.	1.7	14
143	Large eddy simulation of density current on sloping beds. International Journal of Heat and Mass Transfer, 2018, 120, 1374-1385.	2.5	13
144	Numerical study of flow dynamics around a stream restoration structure in a meandering channel. Journal of Hydraulic Research/De Recherches Hydrauliques, 2015, 53, 178-185.	0.7	12

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145	Prediction of Glossosoma biomass spatial distribution in Valley Creek by field measurements and a threeâ€dimensional turbulent openâ€channel flow model. Water Resources Research, 2015, 51, 1457-1471.	1.7	12
146	Simulation-based optimization of in-stream structures design: J-hook vanes. Journal of Hydraulic Research/De Recherches Hydrauliques, 2015, 53, 588-608.	0.7	12
147	Trapping and sedimentation of inertial particles in three-dimensional flows in a cylindrical container with exactly counter-rotating lids. Journal of Fluid Mechanics, 2009, 641, 169-193.	1.4	11
148	IDeC(k): A new velocity reconstruction algorithm on arbitrarily polygonal staggered meshes. Journal of Computational Physics, 2011, 230, 6583-6604.	1.9	11
149	Multiresolution Largeâ€Eddy Simulation of an Array of Hydrokinetic Turbines in a Fieldâ€Scale River: The Roosevelt Island Tidal Energy Project in New York City. Water Resources Research, 2018, 54, 10,188.	1.7	11
150	On the dispersion of contaminants released far upwind of a cubical building for different turbulent inflows. Building and Environment, 2019, 154, 324-335.	3.0	11
151	High Resolution Simulation of Diastolic Left Ventricular Hemodynamics Guided by Four-Dimensional Flow Magnetic Resonance Imaging Data. Flow, Turbulence and Combustion, 2019, 102, 3-26.	1.4	11
152	Scour depth prediction at the base of longitudinal walls: a combined experimental, numerical, and field study. Environmental Fluid Mechanics, 2020, 20, 459-478.	0.7	11
153	Assessment of Parshall flumes for discharge measurement of open-channel flows: A comparative numerical and field case study. Measurement: Journal of the International Measurement Confederation, 2021, 167, 108292.	2.5	11
154	Introduction to Statistical Turbulence Modelling for Hydraulic Engineering Flows. , 2005, , 91-120.		9
155	Role of Artificial Dissipation Scaling and Multigrid Acceleration in Numerical Solutions of the Depth-Averaged Free-Surface Flow Equations. Journal of Hydraulic Engineering, 2005, 131, 476-487.	0.7	9
156	On the use of spires for generating inflow conditions with energetic coherent structures in large eddy simulation. Journal of Turbulence, 2017, 18, 611-633.	0.5	9
157	Uncertainty quantification of infinite aligned wind farm performance using nonâ€intrusive polynomial chaos and a distributed roughness model. Wind Energy, 2017, 20, 945-958.	1.9	9
158	Numerical Study on the Effect of Airâ€“Seaâ€“Land Interaction on the Atmospheric Boundary Layer in Coastal Area. Atmosphere, 2018, 9, 51.	1.0	9
159	Measurement-Based Numerical Study of the Effects of Realistic Land Topography and Stratification on the Coastal Marine Atmospheric Surface Layer. Boundary-Layer Meteorology, 2019, 171, 289-314.	1.2	9
160	Mean Flow and Turbulence Characteristics around Multiple-Arm Instream Structures and Comparison with Single-Arm Structures. Journal of Hydraulic Engineering, 2020, 146, .	0.7	9
161	A quasi-coupled wind wave experimental framework for testing offshore wind turbine floating systems. Theoretical and Applied Mechanics Letters, 2021, 11, 100294.	1.3	9
162	Moving least squares reconstruction for sharp interface immersed boundary methods. International Journal for Numerical Methods in Fluids, 2019, 90, 57-80.	0.9	8

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163	Performance and Wake Characterization of a Model Hydrokinetic Turbine: The Reference Model 1 (RM1) Dual Rotor Tidal Energy Converter. Energies, 2020, 13, 5145.	1.6	8
164	A short note on the simulation of turbulent stratified flow and mobile bed interaction using the continuum coupled flow and morphodynamics model. Environmental Fluid Mechanics, 2020, 20, 1511-1525.	0.7	8
165	Mean flow and turbulence characteristics around single-arm instream structures. Journal of Hydraulic Research/De Recherches Hydrauliques, 2021, 59, 404-419.	0.7	8
166	Eulerian-Eulerian large eddy simulation of two-phase dilute bubbly flows. Chemical Engineering Science, 2019, 208, 115156.	1.9	7
167	A thin-walled composite beam model for light-weighted structures interacting with fluids. Journal of Fluids and Structures, 2020, 95, 102968.	1.5	7
168	Design Methods for In-Stream Flow Control Structures. , 2014, , .		7
169	Computational Methods for Fluid-Structure Interaction Simulation of Heart Valves in Patient-Specific Left Heart Anatomies. Fluids, 2022, 7, 94.	0.8	7
170	On the Lagrangian dynamics of saliva particles during normal mouth breathing. Physics of Fluids, 2022, 34, .	1.6	7
171	Numerical simulation of interaction between multiphase flows and thin flexible structures. Journal of Computational Physics, 2022, 448, 110691.	1.9	6
172	Marine-hydrokinetic energy and the environment: Observations, modeling, and basic processes. Eos, 2012, 93, 111-111.	0.1	5
173	Reply to Comment by Sookhak Lari, K. and Davis, G. B. on â€œÂâ€˜Large Eddy Simulation of Turbulence and Solute Transport in a Forested Headwater Streamâ€™: Invalid Representation of Scalar Transport by the Act of Diffusionâ€• Journal of Geophysical Research F: Earth Surface, 2018, 123, 1610-1612.	1.0	5
174	Hydraulic Engineering in the Era of Big Data and Extreme Computing: Can Computers Simulate River Turbulence?. Journal of Hydraulic Engineering, 2019, 145, .	0.7	5
175	DES of turbulent flow over wall-mounted obstacles using wall functions. KSCE Journal of Civil Engineering, 2012, 16, 189-196.	0.9	4
176	High Resolution Simulation of Tri-Leaflet Aortic Heart Valve in an Idealized Aorta. Journal of Medical Devices, Transactions of the ASME, 2013, 7, .	0.4	4
177	Experimental and computational study of a high-Reynolds jet flow. Canadian Journal of Civil Engineering, 2017, 44, 569-578.	0.7	4
178	Wake Statistics of Different-Scale Wind Turbines under Turbulent Boundary Layer Inflow. Energies, 2020, 13, 3004.	1.6	2
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