Hrvoje Jasak

List of Publications by Year in descending order

108 papers	6,644 citations	236925 25 h-index	66911 78 g-index
109 all docs	109 docs citations	109 times ranked	5161 citing authors

#	Article	IF	Citations
1	A tensorial approach to computational continuum mechanics using object-oriented techniques. Computers in Physics, 1998, 12, 620.	0.5	3,639
2	High resolution NVD differencing scheme for arbitrarily unstructured meshes. International Journal for Numerical Methods in Fluids, 1999, 31, 431-449.	1.6	466
3	A computational method for sharp interface advection. Royal Society Open Science, 2016, 3, 160405.	2.4	225
4	Application of the finite volume method and unstructured meshes to linear elasticity. International Journal for Numerical Methods in Engineering, 2000, 48, 267-287.	2.8	172
5	A moving mesh finite volume interface tracking method for surface tension dominated interfacial fluid flow. Computers and Fluids, 2012, 55, 70-84.	2.5	132
6	OpenFOAM : Open source CFD in research and industry. International Journal of Naval Architecture and Ocean Engineering, 2009, 1, 89-94.	2.3	122
7	Multi-dimensional simulation of thermal non-equilibrium channel flow. International Journal of Multiphase Flow, 2010, 36, 284-292.	3.4	108
8	Viscoelastic flow analysis using the software OpenFOAM and differential constitutive equations. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 1625-1636.	2.4	107
9	A pressure-based, compressible, two-phase flow finite volume method for underwater explosions. Computers and Fluids, 2013, 87, 132-143.	2.5	94
10	OpenFOAM: Open source CFD in research and industry. International Journal of Naval Architecture and Ocean Engineering, 2009, 1, 89-94.	2.3	87
11	Dynamic Mesh Handling in OpenFOAM. , 2009, , .		76
12	CFD validation and grid sensitivity studies of full scale ship self propulsion. International Journal of Naval Architecture and Ocean Engineering, 2019, 11, 33-43.	2.3	75
13	Implementation of the Ghost Fluid Method for free surface flows in polyhedral Finite Volume framework. Computers and Fluids, 2017, 153, 1-19.	2.5	72
14	OpenFOAM Finite Volume Solver for Fluid-Solid Interaction. Transactions of Famena, 2018, 42, 1-31.	0.6	58
15	A block-coupled Finite Volume methodology for linear elasticity and unstructured meshes. Computers and Structures, 2016, 175, 100-122.	4.4	54
16	Open-source computational model of a solid oxide fuel cell. Computer Physics Communications, 2016, 200, 15-26.	7.5	53
17	Numerical simulation of viscoelastic two-phase flows using openFOAMÂ®. Chemical Engineering Science, 2011, 66, 5487-5496.	3.8	50
18	Automatic Mesh Motion with Topological Changes for Engine Simulation. , 0, , .		44

#	Article	IF	Citations
19	Decomposition model for naval hydrodynamic applications, Part I: Computational method. Ocean Engineering, 2016, 121, 37-46.	4.3	41
20	AUTOMATIC RESOLUTION CONTROL FOR THE FINITE-VOLUME METHOD, PART 1: A-POSTERIORI ERROR ESTIMATES. Numerical Heat Transfer, Part B: Fundamentals, 2000, 38, 237-256.	0.9	40
21	AUTOMATIC RESOLUTION CONTROL FOR THE FINITE-VOLUME METHOD, PART 2: ADAPTIVE MESH REFINEMENT AND COARSENING. Numerical Heat Transfer, Part B: Fundamentals, 2000, 38, 257-271.	0.9	38
22	Viscoelastic fluid analysis in internal and in free surface flows using the software OpenFOAM. Computers and Chemical Engineering, 2010, 34, 1984-1993.	3.8	35
23	In-Cylinder CFD Simulation Using a C++ Object-Oriented Toolkit. , 0, , .		32
24	On ultrasound-induced microbubble oscillation in a capillary blood vessel and its implications for the bloodâ€“brain barrier. Physics in Medicine and Biology, 2012, 57, 1019-1045.	3.0	32
25	Decomposition model for naval hydrodynamic applications, Part II: Verification and validation. Ocean Engineering, 2016, 121, 76-88.	4.3	29
26	A Blind Comparative Study of Focused Wave Interactions with a Fixed FPSO-like Structure (CCP-WSI) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.8	29
27	Attitudes of the Lifestyle of Health and Sustainability Segment in Hungary. Sustainability, 2017, 9, 1763.	3.2	27
28	CFD simulations of violent breaking wave impacts on a vertical wall using a two-phase compressible solver. Coastal Engineering, 2019, 154, 103564.	4.0	27
29	Modeling of droplet detachment using dynamic contact angles in polymer electrolyte fuel cell gas channels. International Journal of Hydrogen Energy, 2019, 44, 11088-11096.	7.1	27
30	Accurate assessment of ship-propulsion characteristics using CFD. Ocean Engineering, 2019, 175, 149-162.	4.3	26
31	Element residual error estimate for the finite volume method. Computers and Fluids, 2003, 32, 223-248.	2.5	23
32	Enhanced coupling of solid body motion and fluid flow in finite volume framework. Ocean Engineering, 2017, 143, 295-304.	4.3	22
33	RESIDUAL ERROR ESTIMATE FOR THE FINITE-VOLUME METHOD. Numerical Heat Transfer, Part B: Fundamentals, 2001, 39, 1-19.	0.9	21
34	Numerical Modeling of Transcritical and Supercritical Fuel Injections Using a Multi-Component Two-Phase Flow Model. Energies, 2020, 13, 5676.	3.1	21
35	A strength implicit correction scheme for the viscous-plastic sea ice model. Ocean Modelling, 2004, 7, 111-133.	2.4	20
36	OpenFOAM Turbo Tools: From General Purpose CFD to Turbomachinery Simulations. , 2011, , .		20

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37	Consistent second-order time-accurate non-iterative PISO-algorithm. Computers and Fluids, 2018, 166, 78-85.	2.5	20
38	Multi-dimensional modeling of the air/fuel mixture formation process in a PFI engine for motorcycle applications. , 2009, , .		19
39	Viscoelastic Flow Simulation: Development of a Methodology of Analysis Using the Software OpenFOAM and Differential Constitutive Equations. Computer Aided Chemical Engineering, 2009, , 915-920.	0.5	18
40	A framework for efficient irregular wave simulations using Higher Order Spectral method coupled with viscous two phase model. Journal of Ocean Engineering and Science, 2017, 2, 253-267.	4.3	18
41	Block-selective algebraic multigrid for implicitly coupled pressure-velocity system. Computers and Fluids, 2018, 167, 100-110.	2.5	18
42	AUTOMATIC RESOLUTION CONTROL FOR THE FINITE-VOLUME METHOD, PART 3: TURBULENT FLOW APPLICATIONS. Numerical Heat Transfer, Part B: Fundamentals, 2000, 38, 273-290.	0.9	17
43	A parallel dual-grid multiscale approach to CFDâ€“DEM couplings. Journal of Computational Physics, 2019, 378, 708-722.	3.8	17
44	CFD verification and validation of green sea loads. Ocean Engineering, 2018, 148, 500-515.	4.3	17
45	CFD analysis of cooling effects in H2-fed solid oxide fuel cells. Journal of Power Sources, 2011, 196, 7290-7301.	7.8	15
46	Green sea loads in irregular waves with Finite Volume method. Ocean Engineering, 2019, 171, 554-564.	4.3	15
47	Rapid CFD Simulation of Internal Combustion Engines. , 0, , .		14
48	A coupled finite volume flow solver for the solution of incompressible viscoelastic flows. Journal of Non-Newtonian Fluid Mechanics, 2019, 265, 99-115.	2.4	14
49	On the dynamic behavior of rising droplets. International Journal of Multiphase Flow, 2019, 110, 165-178.	3.4	13
50	Practical Computational Fluid Dynamics with the Finite Volume Method. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2020, , 103-161.	0.6	13
51	Stability Issues of Fuel Cell Models in the Activation and Concentration Regimes. Journal of Electrochemical Energy Conversion and Storage, 2018, 15, .	2.1	12
52	A moving mesh interface tracking method for simulation of liquidâ€“liquid systems. Journal of Computational Physics, 2017, 334, 419-441.	3.8	11
53	Numerical simulations of hydrodynamic loads and structural responses of a Pre-Swirl Stator. International Journal of Naval Architecture and Ocean Engineering, 2021, 13, 804-816.	2.3	11
54	Simulation of Free Surface Viscoelastic Fluid Flow Using the viscoelasticInterFoam Solver. Computer Aided Chemical Engineering, 2010, , 31-36.	0.5	10

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55	Evaluation of an improved mixing plane interface for OpenFOAM. IOP Conference Series: Earth and Environmental Science, 2014, 22, 022004.	0.3	10
56	Coupling boundary condition for high-intensity electric arc attached on a non-homogeneous refractory cathode. Computer Physics Communications, 2018, 222, 31-45.	7.5	10
57	Finite Volume method for general compressible naval hydrodynamics. Ocean Engineering, 2020, 196, 106773.	4.3	10
58	Modeling the interaction of microbubbles: Effects of proximity, confinement, and excitation amplitude. Physics of Fluids, 2014, 26, .	4.0	9
59	Finite Volume Implementation of the Harmonic Balance Method for Periodic Non-Linear Flows. , 2016, , .		9
60	Three dimensional modeling of free surface flow and sediment transport with bed deformation using automatic mesh motion. Environmental Modelling and Software, 2017, 97, 303-317.	4.5	9
61	The breakup of intravascular microbubbles and its impact on the endothelium. Biomechanics and Modeling in Mechanobiology, 2017, 16, 611-624.	2.8	9
62	Lubricated elastoplastic contact model for metal forming processes in OpenFOAM. Computers and Fluids, 2018, 172, 226-240.	2.5	9
63	Two-way coupled Eulerian-Eulerian simulations of drifting snow with viscous treatment of the snow phase. Journal of Wind Engineering and Industrial Aerodynamics, 2017, 169, 67-76.	3.9	8
64	A stable numerical implementation of integral viscoelastic models in the OpenFOAMÂ®computational library. Computers and Fluids, 2018, 172, 728-740.	2.5	8
65	Implementation of an implicit pressureâ€“velocity coupling for the Eulerian multi-fluid model. Computers and Fluids, 2019, 181, 188-207.	2.5	8
66	CFD simulations for surf-riding occurrence assessment. Ocean Engineering, 2020, 218, 107975.	4.3	8
67	Numerical Simulation of Wave Loading on Static Offshore Structures. Springer Tracts in Mechanical Engineering, 2015, , 95-105.	0.3	8
68	Implicitly coupled phase fraction equations for the Eulerian multi-fluid model. Computers and Fluids, 2019, 192, 104277.	2.5	7
69	OpenFOAMÂ®. , 2019, , .		7
70	IsoAdvector: Geometric VOF on General Meshes. , 2019, , 281-296.		7
71	Development of a Eulerian Multi-Fluid Solver for Dense Spray Applications in OpenFOAM. Energies, 2020, 13, 4740.	3.1	7
72	CFD simulation of loadings on circular duct in calm water and waves. Ships and Offshore Structures, 2020, 15, S110-S122.	1.9	7

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73	Parallelisation of selective algebraic multigrid for blockâ€“pressureâ€“velocity system in OpenFOAM. Computer Physics Communications, 2021, 258, 107529.	7.5	7
74	High resolution NVD differencing scheme for arbitrarily unstructured meshes. International Journal for Numerical Methods in Fluids, 1999, 31, 431-449.	1.6	7
75	Technical and Economic Readiness Review of CFD-Based Numerical Wave Basin for Offshore Floater Design. , 2016, , .		6
76	CFD Analysis in Subsea and Marine Technology. IOP Conference Series: Materials Science and Engineering, 2017, 276, 012009.	0.6	6
77	Harmonic Balance developments in OpenFOAM. Computers and Fluids, 2018, 172, 632-643.	2.5	6
78	Numerical analysis of self-propulsion flow characteristics in model scale. Ocean Engineering, 2022, 259, 111885.	4.3	6
79	Launching of ships from horizontal berth by tipping tables â€“ CFD simulation of wave generation. Engineering Structures, 2020, 210, 110343.	5.3	5
80	Optimizing wave-generation and wave-damping in 3D-flow simulations with implicit relaxation-zones. Coastal Engineering, 2021, 171, 104035.	4.0	5
81	Harmonic Balance method for nonlinear and viscous free surface flows. Ocean Engineering, 2018, 157, 164-179.	4.3	4
82	Approach on simulation of solidification and shrinkage of gravity cast salt cores. Simulation Modelling Practice and Theory, 2021, 107, 102231.	3.8	4
83	Acceleration and Stabilization of Algebraic Multigrid Solver Applied to Incompressible Flow Problems. , 2007, , .		3
84	Implicitly Coupled Pressureâ€“Velocity Solver. , 2019, , 249-267.		3
85	Application of a Riemann Solver Unstructured Finite Volume Method to Combustion Instabilities. Journal of Propulsion and Power, 2015, 31, 937-950.	2.2	2
86	Analysis of Transients in Francis Turbine Using Fourier Methods. , 2019, , .		2
87	A Eulerian Multi-Fluid Model for High-Speed Evaporating Sprays. Processes, 2021, 9, 941.	2.8	2
88	Added Mass Partitioned Fluidâ€“Structure Interaction Solver Based on a Robin Boundary Condition for Pressure. , 2019, , 1-22.		2
89	Development of a CFD Solver for Primary Diesel Jet Atomization in FOAM-Extend. , 0, , .		2
90	Benchmark simulations of flow past rigid bodies using an open-source, sharp interface immersed boundary method. Progress in Computational Fluid Dynamics, 2017, 1, 1.	0.2	2

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91	Implementation of integral viscoelastic constitutive models in OpenFOAMÂ® computational library. AIP Conference Proceedings, 2015, , .	0.4	1
92	Monolithic coupling of the pressure and rigid body motion equations in computational marine hydrodynamics. Journal of Marine Science and Application, 2017, 16, 375-381.	1.7	1
93	The Compressible Harmonic Balance Method for Turbomachinery. , 2018, , .		1
94	Implicitly coupled phase fraction equations for polydisperse flows. International Journal for Numerical Methods in Fluids, 2021, 93, 1627-1644.	1.6	1
95	Entropy Stable Multi-dimensional Dissipation Function for the Roe Scheme on Unstructured Meshes. , 2012, , .		0
96	Implementation and Validation of the Harmonic Balance Method for Temporally Periodic Nonâ€“Linear Flows. , 2016, , .		0
97	A Non-Linear Harmonic Balance Method for Turbomachinery Applications. , 2017, , .		0
98	Accurate green water loads calculation using naval hydro pack. IOP Conference Series: Materials Science and Engineering, 2017, 276, 012011.	0.6	0
99	Application of the Harmonic Balance method for regime change prediction using Francis-99 test case. Journal of Physics: Conference Series, 2019, 1296, 012010.	0.4	0
100	Two-Way Coupled Eulerianâ€“Eulerian Simulations of a Viscous Snow Phase with Turbulent Drag. , 2019, , 491-508.		0
101	Enhanced Turbomachinery Capabilities for Foam-Extend: Development and Validation. , 2019, , 145-155.		0
102	Harmonic Balance Method for Turbomachinery Applications. , 2019, , 223-233.		0
103	The Harmonic Balance Method for Temporally Periodic Free Surface Flows. , 2019, , 481-489.		0
104	Parallel blockâ€“selective algebraic multigrid in foamâ€extend. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900424.	0.2	0
105	Vorticity Confinement method applied to flow around an Ahmed body and comparison with experiments. WIT Transactions on Engineering Sciences, 2010, , .	0.0	0
106	Advances on Viscoelastic Fluid Flow Simulation. , 2012, , 233-265.		0
107	Wave Impact Loads Prediction With Compressible Air Effects Using CFD. , 2019, , .		0
108	Added Resistance CFD Analysis of the KVLCC2 With the Naval Hydro Pack. , 2019, , .		0