

# Hrvoje Jasak

## List of Publications by Year in descending order

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Version: 2024-02-01

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  | Numerical analysis of self-propulsion flow characteristics in model scale. Ocean Engineering, 2022, 259, 111885.                                                                  | 4.3 | 6         |
| 2  | Parallelisation of selective algebraic multigrid for block-“pressure-velocity system in OpenFOAM. Computer Physics Communications, 2021, 258, 107529.                             | 7.5 | 7         |
| 3  | Implicitly coupled phase fraction equations for polydisperse flows. International Journal for Numerical Methods in Fluids, 2021, 93, 1627-1644.                                   | 1.6 | 1         |
| 4  | Approach on simulation of solidification and shrinkage of gravity cast salt cores. Simulation Modelling Practice and Theory, 2021, 107, 102231.                                   | 3.8 | 4         |
| 5  | A Eulerian Multi-Fluid Model for High-Speed Evaporating Sprays. Processes, 2021, 9, 941.                                                                                          | 2.8 | 2         |
| 6  | 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        |
| 7  | Optimizing wave-generation and wave-damping in 3D-flow simulations with implicit relaxation-zones. Coastal Engineering, 2021, 171, 104035.                                        | 4.0 | 5         |
| 8  | Finite Volume method for general compressible naval hydrodynamics. Ocean Engineering, 2020, 196, 106773.                                                                          | 4.3 | 10        |
| 9  | Development of a Eulerian Multi-Fluid Solver for Dense Spray Applications in OpenFOAM. Energies, 2020, 13, 4740.                                                                  | 3.1 | 7         |
| 10 | Numerical Modeling of Transcritical and Supercritical Fuel Injections Using a Multi-Component Two-Phase Flow Model. Energies, 2020, 13, 5676.                                     | 3.1 | 21        |
| 11 | CFD simulations for surf-riding occurrence assessment. Ocean Engineering, 2020, 218, 107975.                                                                                      | 4.3 | 8         |
| 12 | CFD simulation of loadings on circular duct in calm water and waves. Ships and Offshore Structures, 2020, 15, S110-S122.                                                          | 1.9 | 7         |
| 13 | Launching of ships from horizontal berth by tipping tables - CFD simulation of wave generation. Engineering Structures, 2020, 210, 110343.                                        | 5.3 | 5         |
| 14 | Practical Computational Fluid Dynamics with the Finite Volume Method. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2020, , 103-161.                   | 0.6 | 13        |
| 15 | 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        |
| 16 | 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         |
| 17 | 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        |
| 18 | Implicitly coupled phase fraction equations for the Eulerian multi-fluid model. Computers and Fluids, 2019, 192, 104277.                                                          | 2.5 | 7         |

| #  | ARTICLE                                                                                                                                                                     | IF  | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Implicitly Coupled Pressure–Velocity Solver. , 2019, , 249-267.                                                                                                             |     | 3         |
| 20 | Two-Way Coupled Eulerian–Eulerian Simulations of a Viscous Snow Phase with Turbulent Drag. , 2019, , 491-508.                                                               |     | 0         |
| 21 | Enhanced Turbomachinery Capabilities for Foam-Extend: Development and Validation. , 2019, , 145-155.                                                                        |     | 0         |
| 22 | Harmonic Balance Method for Turbomachinery Applications. , 2019, , 223-233.                                                                                                 |     | 0         |
| 23 | The Harmonic Balance Method for Temporally Periodic Free Surface Flows. , 2019, , 481-489.                                                                                  |     | 0         |
| 24 | Analysis of Transients in Francis Turbine Using Fourier Methods. , 2019, , .                                                                                                |     | 2         |
| 25 | OpenFOAM®. , 2019, , .                                                                                                                                                      |     | 7         |
| 26 | IsoAdvector: Geometric VOF on General Meshes. , 2019, , 281-296.                                                                                                            |     | 7         |
| 27 | 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        |
| 28 | 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        |
| 29 | Accurate assessment of ship-propulsion characteristics using CFD. Ocean Engineering, 2019, 175, 149-162.                                                                    | 4.3 | 26        |
| 30 | Parallel block–selective algebraic multigrid in foam–extend. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900424.                                        | 0.2 | 0         |
| 31 | Green sea loads in irregular waves with Finite Volume method. Ocean Engineering, 2019, 171, 554-564.                                                                        | 4.3 | 15        |
| 32 | Implementation of an implicit pressure–velocity coupling for the Eulerian multi-fluid model. Computers and Fluids, 2019, 181, 188-207.                                      | 2.5 | 8         |
| 33 | A parallel dual-grid multiscale approach to CFD–DEM couplings. Journal of Computational Physics, 2019, 378, 708-722.                                                        | 3.8 | 17        |
| 34 | On the dynamic behavior of rising droplets. International Journal of Multiphase Flow, 2019, 110, 165-178.                                                                   | 3.4 | 13        |
| 35 | Added Mass Partitioned Fluid–Structure Interaction Solver Based on a Robin Boundary Condition for Pressure. , 2019, , 1-22.                                                 |     | 2         |
| 36 | A Blind Comparative Study of Focused Wave Interactions with a Fixed FPSO-like Structure (CCP-WSI) Tj ETQq0 0 0 rgBT /Overlock 10 Tf                                         |     | 29        |

| #  | ARTICLE                                                                                                                                                                                   | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | Wave Impact Loads Prediction With Compressible Air Effects Using CFD. , 2019, , .                                                                                                         |     | 0         |
| 38 | Added Resistance CFD Analysis of the KVLCC2 With the Naval Hydro Pack. , 2019, , .                                                                                                        |     | 0         |
| 39 | Harmonic Balance developments in OpenFOAM. Computers and Fluids, 2018, 172, 632-643.                                                                                                      | 2.5 | 6         |
| 40 | Block-selective algebraic multigrid for implicitly coupled pressure-velocity system. Computers and Fluids, 2018, 167, 100-110.                                                            | 2.5 | 18        |
| 41 | Harmonic Balance method for nonlinear and viscous free surface flows. Ocean Engineering, 2018, 157, 164-179.                                                                              | 4.3 | 4         |
| 42 | Consistent second-order time-accurate non-iterative PISO-algorithm. Computers and Fluids, 2018, 166, 78-85.                                                                               | 2.5 | 20        |
| 43 | The Compressible Harmonic Balance Method for Turbomachinery. , 2018, , .                                                                                                                  |     | 1         |
| 44 | 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        |
| 45 | OpenFOAM Finite Volume Solver for Fluid-Solid Interaction. Transactions of Fomenko, 2018, 42, 1-31.                                                                                       | 0.6 | 58        |
| 46 | Stability Issues of Fuel Cell Models in the Activation and Concentration Regimes. Journal of Electrochemical Energy Conversion and Storage, 2018, 15, .                                   | 2.1 | 12        |
| 47 | A stable numerical implementation of integral viscoelastic models in the OpenFOAM®computational library. Computers and Fluids, 2018, 172, 728-740.                                        | 2.5 | 8         |
| 48 | Lubricated elastoplastic contact model for metal forming processes in OpenFOAM. Computers and Fluids, 2018, 172, 226-240.                                                                 | 2.5 | 9         |
| 49 | CFD verification and validation of green sea loads. Ocean Engineering, 2018, 148, 500-515.                                                                                                | 4.3 | 17        |
| 50 | A moving mesh interface tracking method for simulation of liquid-liquid systems. Journal of Computational Physics, 2017, 334, 419-441.                                                    | 3.8 | 11        |
| 51 | A Non-Linear Harmonic Balance Method for Turbomachinery Applications. , 2017, , .                                                                                                         |     | 0         |
| 52 | 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        |
| 53 | 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        |
| 54 | Enhanced coupling of solid body motion and fluid flow in finite volume framework. Ocean Engineering, 2017, 143, 295-304.                                                                  | 4.3 | 22        |

| #  | ARTICLE                                                                                                                                                                             | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | 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         |
| 56 | 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         |
| 57 | Accurate green water loads calculation using naval hydro pack. IOP Conference Series: Materials Science and Engineering, 2017, 276, 012011.                                         | 0.6 | 0         |
| 58 | The breakup of intravascular microbubbles and its impact on the endothelium. Biomechanics and Modeling in Mechanobiology, 2017, 16, 611-624.                                        | 2.8 | 9         |
| 59 | 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         |
| 60 | Attitudes of the Lifestyle of Health and Sustainability Segment in Hungary. Sustainability, 2017, 9, 1763.                                                                          | 3.2 | 27        |
| 61 | CFD Analysis in Subsea and Marine Technology. IOP Conference Series: Materials Science and Engineering, 2017, 276, 012009.                                                          | 0.6 | 6         |
| 62 | 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         |
| 63 | Implementation and Validation of the Harmonic Balance Method for Temporally Periodic Non-Linear Flows. , 2016, , .                                                                  |     | 0         |
| 64 | A computational method for sharp interface advection. Royal Society Open Science, 2016, 3, 160405.                                                                                  | 2.4 | 225       |
| 65 | Decomposition model for naval hydrodynamic applications, Part I: Computational method. Ocean Engineering, 2016, 121, 37-46.                                                         | 4.3 | 41        |
| 66 | A block-coupled Finite Volume methodology for linear elasticity and unstructured meshes. Computers and Structures, 2016, 175, 100-122.                                              | 4.4 | 54        |
| 67 | Decomposition model for naval hydrodynamic applications, Part II: Verification and validation. Ocean Engineering, 2016, 121, 76-88.                                                 | 4.3 | 29        |
| 68 | Technical and Economic Readiness Review of CFD-Based Numerical Wave Basin for Offshore Floater Design. , 2016, , .                                                                  |     | 6         |
| 69 | Finite Volume Implementation of the Harmonic Balance Method for Periodic Non-Linear Flows. , 2016, , .                                                                              |     | 9         |
| 70 | Open-source computational model of a solid oxide fuel cell. Computer Physics Communications, 2016, 200, 15-26.                                                                      | 7.5 | 53        |
| 71 | Implementation of integral viscoelastic constitutive models in OpenFOAM® computational library. AIP Conference Proceedings, 2015, , .                                               | 0.4 | 1         |
| 72 | Application of a Riemann Solver Unstructured Finite Volume Method to Combustion Instabilities. Journal of Propulsion and Power, 2015, 31, 937-950.                                  | 2.2 | 2         |

| #  | ARTICLE                                                                                                                                                                           | IF  | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 73 | Numerical Simulation of Wave Loading on Static Offshore Structures. Springer Tracts in Mechanical Engineering, 2015, , 95-105.                                                    | 0.3 | 8         |
| 74 | Modeling the interaction of microbubbles: Effects of proximity, confinement, and excitation amplitude. Physics of Fluids, 2014, 26, .                                             | 4.0 | 9         |
| 75 | Evaluation of an improved mixing plane interface for OpenFOAM. IOP Conference Series: Earth and Environmental Science, 2014, 22, 022004.                                          | 0.3 | 10        |
| 76 | A pressure-based, compressible, two-phase flow finite volume method for underwater explosions. Computers and Fluids, 2013, 87, 132-143.                                           | 2.5 | 94        |
| 77 | Entropy Stable Multi-dimensional Dissipation Function for the Roe Scheme on Unstructured Meshes. , 2012, , .                                                                      |     | 0         |
| 78 | On ultrasound-induced microbubble oscillation in a capillary blood vessel and its implications for the blood-brain barrier. Physics in Medicine and Biology, 2012, 57, 1019-1045. | 3.0 | 32        |
| 79 | 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       |
| 80 | Advances on Viscoelastic Fluid Flow Simulation. , 2012, , 233-265.                                                                                                                |     | 0         |
| 81 | Numerical simulation of viscoelastic two-phase flows using openFOAM®. Chemical Engineering Science, 2011, 66, 5487-5496.                                                          | 3.8 | 50        |
| 82 | CFD analysis of cooling effects in H2-fed solid oxide fuel cells. Journal of Power Sources, 2011, 196, 7290-7301.                                                                 | 7.8 | 15        |
| 83 | OpenFOAM Turbo Tools: From General Purpose CFD to Turbomachinery Simulations. , 2011, , .                                                                                         |     | 20        |
| 84 | Multi-dimensional simulation of thermal non-equilibrium channel flow. International Journal of Multiphase Flow, 2010, 36, 284-292.                                                | 3.4 | 108       |
| 85 | Viscoelastic flow analysis using the software OpenFOAM and differential constitutive equations. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 1625-1636.                   | 2.4 | 107       |
| 86 | 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        |
| 87 | Simulation of Free Surface Viscoelastic Fluid Flow Using the viscoelasticInterFoam Solver. Computer Aided Chemical Engineering, 2010, , 31-36.                                    | 0.5 | 10        |
| 88 | Vorticity Confinement method applied to flow around an Ahmed body and comparison with experiments. WIT Transactions on Engineering Sciences, 2010, , .                            | 0.0 | 0         |
| 89 | Multi-dimensional modeling of the air/fuel mixture formation process in a PFI engine for motorcycle applications. , 2009, , .                                                     |     | 19        |
| 90 | OpenFOAM: Open source CFD in research and industry. International Journal of Naval Architecture and Ocean Engineering, 2009, 1, 89-94.                                            | 2.3 | 87        |

| #   | ARTICLE                                                                                                                                                                                           | IF  | CITATIONS |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 91  | 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        |
| 92  | Dynamic Mesh Handling in OpenFOAM. , 2009, , .                                                                                                                                                    |     | 76        |
| 93  | OpenFOAM : Open source CFD in research and industry. International Journal of Naval Architecture and Ocean Engineering, 2009, 1, 89-94.                                                           | 2.3 | 122       |
| 94  | Acceleration and Stabilization of Algebraic Multigrid Solver Applied to Incompressible Flow Problems. , 2007, , .                                                                                 |     | 3         |
| 95  | A strength implicit correction scheme for the viscous-plastic sea ice model. Ocean Modelling, 2004, 7, 111-133.                                                                                   | 2.4 | 20        |
| 96  | Element residual error estimate for the finite volume method. Computers and Fluids, 2003, 32, 223-248.                                                                                            | 2.5 | 23        |
| 97  | RESIDUAL ERROR ESTIMATE FOR THE FINITE-VOLUME METHOD. Numerical Heat Transfer, Part B: Fundamentals, 2001, 39, 1-19.                                                                              | 0.9 | 21        |
| 98  | 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       |
| 99  | 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        |
| 100 | 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        |
| 101 | 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        |
| 102 | High resolution NVD differencing scheme for arbitrarily unstructured meshes. International Journal for Numerical Methods in Fluids, 1999, 31, 431-449.                                            | 1.6 | 466       |
| 103 | High resolution NVD differencing scheme for arbitrarily unstructured meshes. International Journal for Numerical Methods in Fluids, 1999, 31, 431-449.                                            | 1.6 | 7         |
| 104 | A tensorial approach to computational continuum mechanics using object-oriented techniques. Computers in Physics, 1998, 12, 620.                                                                  | 0.5 | 3,639     |
| 105 | Rapid CFD Simulation of Internal Combustion Engines. , 0, , .                                                                                                                                     |     | 14        |
| 106 | In-Cylinder CFD Simulation Using a C++ Object-Oriented Toolkit. , 0, , .                                                                                                                          |     | 32        |
| 107 | Automatic Mesh Motion with Topological Changes for Engine Simulation. , 0, , .                                                                                                                    |     | 44        |
| 108 | Development of a CFD Solver for Primary Diesel Jet Atomization in FOAM-Extend. , 0, , .                                                                                                           |     | 2         |