Michael F Barad

List of Publications by Year
in descending order

30 papers	788 citations	759233 12 h-index	1058476 14 g-index
31 all docs	31 docs citations	31 times ranked	422 citing authors

#	Article	IF	Citations
1	A Cartesian grid embedded boundary method for the heat equation and Poisson's equation in three dimensions. Journal of Computational Physics, 2006, 211, 531-550.	3.8	101
2	Computational framework for Launch, Ascent, and Vehicle Aerodynamics (LAVA). Aerospace Science and Technology, 2016, 55, 189-219.	4.8	98
3	A comparison of higher-order finite-difference shock capturing schemes. Computers and Fluids, 2015, 122, 184-208.	2.5	88
4	Simulations of shear instabilities in interfacial gravity waves. Journal of Fluid Mechanics, 2010, 644, 61-95.	3.4	64
5	A fourth-order accurate local refinement method for Poisson's equation. Journal of Computational Physics, 2005, 209, 1-18.	3.8	60
6	The LAVA Computational Fluid Dynamics Solver. , 2014, , .		46
7	An immersed boundary fluid–structure interaction method for thin, highly compliant shell structures. Journal of Computational Physics, 2021, 438, 110369.	3.8	43
8	Development of immersed boundary computational aeroacoustic prediction capabilities for open-rotor noise. Journal of Computational Physics, 2019, 388, 690-716.	3.8	42
9	Tidal oscillation of sediment between a river and a bay: a conceptual model. Estuarine, Coastal and Shelf Science, 2004, 60, 81-90.	2.1	40
10	An adaptive cut–cell method for environmental fluid mechanics. International Journal for Numerical Methods in Fluids, 2009, 60, 473-514.	1.6	33
11	Propulsion generated by diffusion-driven flow. Nature Physics, 2010, 6, 516-519.	16.7	30
12	A positivity-preserving high-order weighted compact nonlinear scheme for compressible gas-liquid flows. Journal of Computational Physics, 2021, 444, 110569.	3.8	25
13	An Immersed Boundary Method for Solving the Compressible Navier-Stokes Equations with Fluid-Structure Interaction. , 2016, , .		18
14	Lattice Boltzmann and Navier-Stokes Cartesian CFD Approaches for Airframe Noise Predictions. , 2017, , .		15
15	Open Rotor Computational Aeroacoustic Analysis with an Immersed Boundary Method. , 2016, , .		14
16	Fluid-structure interaction simulations of the ASPIRE SR01 supersonic parachute flight test. Aerospace Science and Technology, 2022, 126, 107596.	4.8	13
17	Space-Time Accuracy Assessment of CFD Simulations for the Launch Environment. , 2011, , .		10
18	Computational Prediction of Pressure and Thermal Environments in the Flame Trench with Launch Vehicles. , 2013, , .		8

#	ARTICLE	IF	CITATIONS
19	Verification and Validation Studies for the LAVA CFD Solver. , 2013, , .		7
20	Aerodynamic Database Generation for SRB Separation from a Heavy Lift Launch Vehicle. , 2011, , .		6
21	Fluid-Structure Interactions with Geometrically Nonlinear Deformations. , 2019, , .		5
22	A Numerical Investigation of Parachute Deployment in Supersonic Flow. , 2020, , .		5
23	A Comparison of Higher-Order Shock Capturing Schemes Within the LAVA CFD Solver. , 2014, , .		3
24	Application of Lattice Boltzmann and Navier-Stokes Methods to NASAâ€™s Wall Mounted Hump. , 2018, , .		3
25	Propeller Noise Predictions Using the Lattice Boltzmann Method. , 2019, , .		3
26	Four-jet impingement: Noise characteristics and simplified acoustic model. International Journal of Heat and Fluid Flow, 2017, 67, 43-58.	2.4	2
27	Fully-Coupled Fluid-Structure Interaction Simulations of a Supersonic Parachute. , 2019, , .		2
28	Fluid-Structure Interaction Simulations of the ASPIRE SR01 Supersonic Parachute. , 2022, , .		2
29	Parallel adaptive high-order CFD simulations characterising SOFIA cavity acoustics. International Journal of Computational Fluid Dynamics, 2016, 30, 437-443.	1.2	1
30	Scale-Resolving Simulations of Supersonic Retro-Propulsion Concept For Mars Entry, Descent, and Landing. , 2022, , .		0