Michael F Barad

List of Publications by Year
in descending order

30	788	759233 12	1058476 14
papers	citations	h-index	g-index

31	31	31	422
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fluid-Structure Interaction Simulations of the ASPIRE SR01 Supersonic Parachute. , 2022, , .		2
2	Scale-Resolving Simulations of Supersonic Retro-Propulsion Concept For Mars Entry, Descent, and Landing. , 2022, , .		0
3	Fluid-structure interaction simulations of the ASPIRE SR01 supersonic parachute flight test. Aerospace Science and Technology, 2022, 126, 107596.	4.8	13
4	An immersed boundary fluidâ€“structure interaction method for thin, highly compliant shell structures. Journal of Computational Physics, 2021, 438, 110369.	3.8	43
5	A positivity-preserving high-order weighted compact nonlinear scheme for compressible gas-liquid flows. Journal of Computational Physics, 2021, 444, 110569.	3.8	25
6	A Numerical Investigation of Parachute Deployment in Supersonic Flow. , 2020, , .		5
7	Fully-Coupled Fluid-Structure Interaction Simulations of a Supersonic Parachute. , 2019, , .		2
8	Fluid-Structure Interactions with Geometrically Nonlinear Deformations. , 2019, , .		5
9	Development of immersed boundary computational aeroacoustic prediction capabilities for open-rotor noise. Journal of Computational Physics, 2019, 388, 690-716.	3.8	42
10	Propeller Noise Predictions Using the Lattice Boltzmann Method. , 2019, , .		3
11	Application of Lattice Boltzmann and Navier-Stokes Methods to NASAâ€™s Wall Mounted Hump. , 2018, , .		3
12	Four-jet impingement: Noise characteristics and simplified acoustic model. International Journal of Heat and Fluid Flow, 2017, 67, 43-58.	2.4	2
13	Lattice Boltzmann and Navier-Stokes Cartesian CFD Approaches for Airframe Noise Predictions. , 2017, , .		15
14	Parallel adaptive high-order CFD simulations characterising SOFIA cavity acoustics. International Journal of Computational Fluid Dynamics, 2016, 30, 437-443.	1.2	1
15	Computational framework for Launch, Ascent, and Vehicle Aerodynamics (LAVA). Aerospace Science and Technology, 2016, 55, 189-219.	4.8	98
16	An Immersed Boundary Method for Solving the Compressible Navier-Stokes Equations with Fluid-Structure Interaction. , 2016, , .		18
17	Open Rotor Computational Aeroacoustic Analysis with an Immersed Boundary Method. , 2016, , .		14
18	A comparison of higher-order finite-difference shock capturing schemes. Computers and Fluids, 2015, 122, 184-208.	2.5	88

#	Article	IF	Citations
19	A Comparison of Higher-Order Shock Capturing Schemes Within the LAVA CFD Solver. , 2014, , .		3
20	The LAVA Computational Fluid Dynamics Solver. , 2014, , .		46
21	Verification and Validation Studies for the LAVA CFD Solver. , 2013, , .		7
22	Computational Prediction of Pressure and Thermal Environments in the Flame Trench with Launch Vehicles. , 2013, , .		8
23	Space-Time Accuracy Assessment of CFD Simulations for the Launch Environment. , 2011, , .		10
24	Aerodynamic Database Generation for SRB Separation from a Heavy Lift Launch Vehicle. , 2011, , .		6
25	Simulations of shear instabilities in interfacial gravity waves. Journal of Fluid Mechanics, 2010, 644, 61-95.	3.4	64
26	Propulsion generated by diffusion-driven flow. Nature Physics, 2010, 6, 516-519.	16.7	30
27	An adaptive cutâ€cell method for environmental fluid mechanics. International Journal for Numerical Methods in Fluids, 2009, 60, 473-514.	1.6	33
28	A Cartesian grid embedded boundary method for the heat equation and Poissonâ€™s equation in three dimensions. Journal of Computational Physics, 2006, 211, 531-550.	3.8	101
29	A fourth-order accurate local refinement method for Poissonâ€™s equation. Journal of Computational Physics, 2005, 209, 1-18.	3.8	60
30	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