Freddie Witherden

List of Publications by Year
in descending order

23 papers	1,006 citations	759233 12 h-index	713466 21 g-index
23 all docs	23 docs citations	23 times ranked	840 citing authors

#	Article	IF	Citations
1	An extended range of stable-symmetric-conservative Flux Reconstruction correction functions. Computer Methods in Applied Mechanics and Engineering, 2015, 296, 248-272.	6.6	296
2	PyFR: An open source framework for solving advectionâ€“diffusion type problems on streaming architectures using the flux reconstruction approach. Computer Physics Communications, 2014, 185, 3028-3040.	7.5	207
3	On the utility of GPU accelerated high-order methods for unsteady flow simulations: A comparison with industry-standard tools. Journal of Computational Physics, 2017, 334, 497-521.	3.8	105
4	On the identification of symmetric quadrature rules for finite element methods. Computers and Mathematics With Applications, 2015, 69, 1232-1241.	2.7	75
5	Heterogeneous computing on mixed unstructured grids with PyFR. Computers and Fluids, 2015, 120, 173-186.	2.5	57
6	Recovering missing CFD data for high-order discretizations using deep neural networks and dynamics learning. Journal of Computational Physics, 2019, 395, 105-124.	3.8	42
7	A high-order cross-platform incompressible Navierâ€“Stokes solver via artificial compressibility with application to a turbulent jet. Computer Physics Communications, 2018, 233, 193-205.	7.5	38
8	Towards Green Aviation with Python at Petascale. , 2016, , .		30
9	A parallel direct cut algorithm for high-order overset methods with application to a spinning golf ball. Journal of Computational Physics, 2018, 374, 692-723.	3.8	27
10	ZEFR: A GPU-accelerated high-order solver for compressible viscous flows using the flux reconstruction method. Computer Physics Communications, 2020, 250, 107169.	7.5	23
11	Locally adaptive pseudo-time stepping for high-order Flux Reconstruction. Journal of Computational Physics, 2019, 399, 108913.	3.8	19
12	Accuracy, stability, and performance comparison between the spectral difference and flux reconstruction schemes. Computers and Fluids, 2021, 221, 104922.	2.5	18
13	High-order accurate direct numerical simulation of flow over a MTU-T161 low pressure turbine blade. Computers and Fluids, 2021, 226, 104989.	2.5	17
14	High-Order Flux Reconstruction Schemes. Handbook of Numerical Analysis, 2016, 17, 227-263.	1.8	12
15	A new family of weighted one-parameter flux reconstruction schemes. Computers and Fluids, 2021, 222, 104918.	2.5	11
16	On nodal point sets for flux reconstruction. Journal of Computational and Applied Mathematics, 2021, 381, 113014.	2.0	8
17	High-order computational fluid dynamics simulations of a spinning golf ball. Sports Engineering, 2019, 22, 1.	1.1	6
18	On the spectrum of the Stegerâ€Warming fluxâ€vector splitting scheme. International Journal for Numerical Methods in Fluids, 2018, 87, 601-606.	1.6	4

#	Article	IF	Citations
19	Cache blocking strategies applied to flux reconstruction. Computer Physics Communications, 2022, 271, 108193.	7.5	4
20	Partially-averaged Navierâ€“Stokes simulations of turbulence within a high-order flux reconstruction framework. Journal of Computational Physics, 2022, 456, 110992.	3.8	4
21	Hyperbolic diffusion in flux reconstruction: Optimisation through kernel fusion within tensor-product elements. Computer Physics Communications, 2022, 273, 108235.	7.5	2
22	Inline vector compression for computational physics. Computer Physics Communications, 2021, 258, 107562.	7.5	1
23	Python at Petascale With PyFR or: How I Learned to Stop Worrying and Love the Snake. Computing in Science and Engineering, 2021, 23, 29-37.	1.2	0