

Jeff D Eldredge

List of Publications by Year in descending order

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84
papers

2,528
citations

201575

27
h-index

214721

47
g-index

89
all docs

89
docs citations

89
times ranked

1467
citing authors

#	ARTICLE	IF	CITATIONS
1	The absorption of axial acoustic waves by a perforated liner with bias flow. <i>Journal of Fluid Mechanics</i> , 2003, 485, 307-335.	1.4	216
2	Leading-Edge Vortices: Mechanics and Modeling. <i>Annual Review of Fluid Mechanics</i> , 2019, 51, 75-104.	10.8	209
3	Numerical simulation of the fluid dynamics of 2D rigid body motion with the vortex particle method. <i>Journal of Computational Physics</i> , 2007, 221, 626-648.	1.9	134
4	Low-order phenomenological modeling of leading-edge vortex formation. <i>Theoretical and Computational Fluid Dynamics</i> , 2013, 27, 577-598.	0.9	131
5	On the roles of chord-wise flexibility in a flapping wing with hovering kinematics. <i>Journal of Fluid Mechanics</i> , 2010, 659, 94-115.	1.4	127
6	Acoustic modeling of perforated plates with bias flow for Large-Eddy Simulations. <i>Journal of Computational Physics</i> , 2009, 228, 4757-4772.	1.9	103
7	A General Deterministic Treatment of Derivatives in Particle Methods. <i>Journal of Computational Physics</i> , 2002, 180, 686-709.	1.9	102
8	A Computational Study of a Canonical Pitch-Up, Pitch-Down Wing Maneuver. , 2009, , .		101
9	A numerical study of compressible turbulent boundary layers. <i>Physics of Fluids</i> , 2011, 23, .	1.6	94
10	Axisymmetric simulations of libration-driven fluid dynamics in a spherical shell geometry. <i>Physics of Fluids</i> , 2010, 22, .	1.6	77
11	Passive locomotion of a simple articulated fish-like system in the wake of an obstacle. <i>Journal of Fluid Mechanics</i> , 2008, 607, 279-288.	1.4	73
12	A Vortex Particle Method for Two-Dimensional Compressible Flow. <i>Journal of Computational Physics</i> , 2002, 179, 371-399.	1.9	72
13	An inviscid model for vortex shedding from a deforming body. <i>Theoretical and Computational Fluid Dynamics</i> , 2007, 21, 343-368.	0.9	69
14	Numerical and experimental study of the fluid dynamics of a flapping wing with low order flexibility. <i>Physics of Fluids</i> , 2008, 20, .	1.6	59
15	Inertial particle trapping in viscous streaming. <i>Physics of Fluids</i> , 2013, 25, .	1.6	49
16	Lagrangian coherent structures in low Reynolds number swimming. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 204105.	0.7	41
17	A versatile taxonomy of low-dimensional vortex models for unsteady aerodynamics. <i>Journal of Fluid Mechanics</i> , 2019, 858, 917-948.	1.4	41
18	Dynamically coupled fluid-body interactions in vorticity-based numerical simulations. <i>Journal of Computational Physics</i> , 2008, 227, 9170-9194.	1.9	40

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19	RÃ©sumÃ© of the AIAA FDTC Low Reynolds Number Discussion Group's Canonical Cases. , 2010, , .		38
20	Numerical simulations of undulatory swimming at moderate Reynolds number. Bioinspiration and Biomimetics, 2006, 1, S19-S24.	1.5	36
21	High-Amplitude Pitch of a Flat Plate: An Abstraction of Perching and Flapping. International Journal of Micro Air Vehicles, 2009, 1, 203-216.	1.0	36
22	Improving vortex models via optimal control theory. Journal of Fluids and Structures, 2014, 49, 91-111.	1.5	35
23	A Reconciliation of Viscous and Inviscid Approaches to Computing Locomotion of Deforming Bodies. Experimental Mechanics, 2010, 50, 1349-1353.	1.1	34
24	Strongly coupled dynamics of fluids and rigid-body systems with the immersed boundary projection method. Journal of Computational Physics, 2015, 295, 87-113.	1.9	33
25	The effects of boundary topography on convection in Earthâ€™s core. Geophysical Journal International, 2012, 189, 799-814.	1.0	32
26	Machine-Learning-Based Detection of Aerodynamic Disturbances Using Surface Pressure Measurements. AIAA Journal, 2019, 57, 5079-5093.	1.5	32
27	The influence of fluid properties on the morphology of core turbulence and the geomagnetic field. Earth and Planetary Science Letters, 2012, 359-360, 55-60.	1.8	30
28	Data-assimilated low-order vortex modeling of separated flows. Physical Review Fluids, 2018, 3, .	1.0	29
29	Fluid transport and coherent structures of translating and flapping wings. Chaos, 2010, 20, 017509.	1.0	27
30	High-Fidelity Simulations and Low-Order Modeling of a Rapidly Pitching Plate. , 2010, , .		24
31	On the interaction of higher duct modes with a perforated liner system with bias flow. Journal of Fluid Mechanics, 2004, 510, 303-331.	1.4	21
32	Numerical Investigation of the Acoustic Behavior of a Multi-Perforated Liner. , 2007, , .		19
33	Near-wall dynamics of compressible boundary layers. Physics of Fluids, 2011, 23, .	1.6	18
34	Wake Sensing for Aircraft Formation Flight. Journal of Guidance, Control, and Dynamics, 2014, 37, 513-524.	1.6	16
35	Ensemble Kalman filter for vortex models of disturbed aerodynamic flows. Physical Review Fluids, 2021, 6, .	1.0	16
36	Numerical and Experimental Investigation of the Role of Flexibility in Flapping Wing Flight. , 2006, , .		15

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37	The dynamics and acoustics of viscous two-dimensional leapfrogging vortices. <i>Journal of Sound and Vibration</i> , 2007, 301, 74-92.	2.1	14
38	Performance improvement through passive mechanics in jellyfish-inspired swimming. <i>International Journal of Non-Linear Mechanics</i> , 2011, 46, 557-567.	1.4	14
39	A regulated multiscale closed-loop cardiovascular model, with applications to hemorrhage and hypertension. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2018, 34, e2975.	1.0	13
40	Wake vortex regimes of a pitching cantilever plate in quiescent air and their correlation with mean flow generation. <i>Journal of Fluids and Structures</i> , 2019, 84, 408-420.	1.5	13
41	Transport of inertial particles by viscous streaming in arrays of oscillating probes. <i>Physical Review E</i> , 2016, 93, 013109.	0.8	12
42	Three-dimensional characteristics of the jet flows induced by a pitching plate in a quiescent fluid. <i>Journal of Fluid Mechanics</i> , 2020, 887, .	1.4	12
43	A Computational Study of the Flow Through a Vitreous Cutter. <i>Journal of Biomechanical Engineering</i> , 2010, 132, 121005.	0.6	11
44	Illustration of Wing Deformation Effects in Three-Dimensional Flapping Flight. <i>AIAA Journal</i> , 2015, 53, 2607-2620.	1.5	11
45	Efficient Tools for the Simulation of Flapping Wing Flows. , 2005, , .		9
46	A Vortex Sheet/Point Vortex Dynamical Model For Unsteady Separated Flows. , 2016, , .		9
47	Intra-aneurysmal flow reductions in a thin film nitinol flow diverter. <i>Smart Materials and Structures</i> , 2011, 20, 055021.	1.8	8
48	Characterization of perfused and sectioned liver tissue in a full indentation cycle using a visco-hyperelastic model. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 90, 591-603.	1.5	8
49	Lift coefficient estimation for a rapidly pitching airfoil. <i>Experiments in Fluids</i> , 2021, 62, 1.	1.1	8
50	A method of immersed layers on Cartesian grids, with application to incompressible flows. <i>Journal of Computational Physics</i> , 2022, 448, 110716.	1.9	8
51	An ensemble Kalman filter approach to parameter estimation for patient-specific cardiovascular flow modeling. <i>Theoretical and Computational Fluid Dynamics</i> , 2020, 34, 521-544.	0.9	8
52	Modeling Dynamic Lift Response to Actuation. , 2016, , .		7
53	EnKF-based Dynamic Estimation of Separated Flows with a Low-Order Vortex Model. , 2018, , .		7
54	A viscous vortex particle method for deforming bodies with application to biolocomotion. <i>International Journal for Numerical Methods in Fluids</i> , 2009, 59, 1299-1320.	0.9	6

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55	Toward numerical simulations of fluid-structure interactions for investigation of obstructive sleep apnea. <i>Theoretical and Computational Fluid Dynamics</i> , 2016, 30, 87-104.	0.9	6
56	Wake Vortex Detection and Tracking for Aircraft Formation Flight. , 2019, , .		6
57	Model of Left Ventricular Contraction: Validation Criteria and Boundary Conditions. <i>Lecture Notes in Computer Science</i> , 2019, 11504, 294-303.	1.0	6
58	Evaluation of the Upper Airway Morphology: The Role of Cone Beam Computed Tomography. <i>Journal of the California Dental Association</i> , 2015, 43, 531-9.	0.0	6
59	The Acoustics of Two-Dimensional Leapfrogging Vortices. , 2005, , .		5
60	Numerical Study of Hypersonic Flow Over an Isolated Roughness with a High-Order Cut-Cell Method. , 2011, , .		5
61	Improved low-order modeling of a pitching and perching plate. , 2011, , .		5
62	A high-order multi-zone cut-stencil method for numerical simulations of high-speed flows over complex geometries. <i>Journal of Computational Physics</i> , 2016, 316, 652-681.	1.9	5
63	Deep learning and data assimilation approaches to sensor reduction in estimation of disturbed separated flows. , 2020, , .		5
64	Smoothed particle hydrodynamics simulation of biphasic soft tissue and its medical applications. <i>Medical and Biological Engineering and Computing</i> , 2021, 59, 227-242.	1.6	5
65	A best practices guide to CFD education in the undergraduate curriculum. <i>International Journal of Aerodynamics</i> , 2014, 4, 200.	0.1	4
66	Planar potential flow on Cartesian grids. <i>Journal of Fluid Mechanics</i> , 2022, 941, .	1.4	4
67	Experimental quantification of unsteady leading-edge flow separation. <i>Journal of Fluid Mechanics</i> , 2022, 941, .	1.4	4
68	A dilating vortex particle method for compressible flow. <i>Journal of Turbulence</i> , 2002, 3, N36.	0.5	2
69	An Exploration of Passive and Active Flexibility in Biocomotion through Analysis of Canonical Problems. <i>Advances in Science and Technology</i> , 0, , .	0.2	2
70	Improving Vortex Models via Optimal Control Theory. , 2013, , .		2
71	Reduced-Order Two- and Three-Dimensional Vortex Modeling of Unsteady Separated Flows. , 2015, , .		2
72	Recent developments in multiphysics computational models of physiological flows. <i>Theoretical and Computational Fluid Dynamics</i> , 2016, 30, 1-2.	0.9	2

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73	Visualization of vascular injuries in extremity trauma. Medical and Biological Engineering and Computing, 2017, 55, 1709-1718.	1.6	2
74	Applications of ensemble Kalman filtered vortex modeling to gust-wing interactions. , 2021, , .		2
75	Mean transport of inertial particles in viscous streaming flows. Physical Review Fluids, 2020, 5, .	1.0	2
76	Quasisteady Particle Transport in Slowly Varying Periodic Streaming Flows. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 5859-5865.	0.4	1
77	Numerical Simulation of High-Speed Flows Over Complex Geometries with a High-Order Multi-Zone Cut-Cell Method. , 2014, , .		1
78	A low-rank nonlinear ensemble filter for vortex models of aerodynamic flows. , 2021, , .		1
79	Current Methods and Advances in Simulation of Hemorrhage after Trauma. American Surgeon, 2017, 83, 1137-1141.	0.4	1
80	Introduction: 28th Annual Gallery of Fluid Motion (Long Beach, California, USA, 2010). Physics of Fluids, 2011, 23, 091101.	1.6	0
81	Theoretical and experimental study of the dynamic response of absorber-based, micro-scale, oscillatory probes for contact sensing applications. Review of Scientific Instruments, 2016, 87, 065005.	0.6	0
82	A simplified computational model of possible hydrodynamic interactions between respiratory and swimming-related water flows in labriform-swimming fishes. Bioinspiration and Biomimetics, 2021, 16, 036002.	1.5	0
83	Transport of Vortex Elements. Interdisciplinary Applied Mathematics, 2019, , 245-267.	0.2	0
84	Cardiovascular blood flow analysis under normal and open injury conditions. Studies in Health Technology and Informatics, 2014, 196, 372-7.	0.2	0