

# Jeff D Eldredge

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

79  
papers

1,899  
citations

25  
h-index

42  
g-index

89  
ext. papers

2,265  
ext. citations

3.1  
avg, IF

5.55  
L-index

#	Paper	IF	Citations
79	The absorption of axial acoustic waves by a perforated liner with bias flow. <i>Journal of Fluid Mechanics</i> , <b>2003</b> , 485, 307-335	3.7	171
78	Numerical simulation of the fluid dynamics of 2D rigid body motion with the vortex particle method. <i>Journal of Computational Physics</i> , <b>2007</b> , 221, 626-648	4.1	114
77	Leading-Edge Vortices: Mechanics and Modeling. <i>Annual Review of Fluid Mechanics</i> , <b>2019</b> , 51, 75-104	2.2	106
76	On the roles of chord-wise flexibility in a flapping wing with hovering kinematics. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 659, 94-115	3.7	98
75	Low-order phenomenological modeling of leading-edge vortex formation. <i>Theoretical and Computational Fluid Dynamics</i> , <b>2013</b> , 27, 577-598	2.3	96
74	A General Deterministic Treatment of Derivatives in Particle Methods. <i>Journal of Computational Physics</i> , <b>2002</b> , 180, 686-709	4.1	90
73	Acoustic modeling of perforated plates with bias flow for Large-Eddy Simulations. <i>Journal of Computational Physics</i> , <b>2009</b> , 228, 4757-4772	4.1	83
72	A Computational Study of a Canonical Pitch-Up, Pitch-Down Wing Maneuver <b>2009</b> ,		80
71	Axisymmetric simulations of libration-driven fluid dynamics in a spherical shell geometry. <i>Physics of Fluids</i> , <b>2010</b> , 22, 086602	4.4	66
70	A numerical study of compressible turbulent boundary layers. <i>Physics of Fluids</i> , <b>2011</b> , 23, 015106	4.4	65
69	An inviscid model for vortex shedding from a deforming body. <i>Theoretical and Computational Fluid Dynamics</i> , <b>2007</b> , 21, 343-368	2.3	61
68	Passive locomotion of a simple articulated fish-like system in the wake of an obstacle. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 607, 279-288	3.7	59
67	A Vortex Particle Method for Two-Dimensional Compressible Flow. <i>Journal of Computational Physics</i> , <b>2002</b> , 179, 371-399	4.1	56
66	Numerical and experimental study of the fluid dynamics of a flapping wing with low order flexibility. <i>Physics of Fluids</i> , <b>2008</b> , 20, 073603	4.4	47
65	Dynamically coupled fluidBody interactions in vorticity-based numerical simulations. <i>Journal of Computational Physics</i> , <b>2008</b> , 227, 9170-9194	4.1	35
64	Inertial particle trapping in viscous streaming. <i>Physics of Fluids</i> , <b>2013</b> , 25, 033602	4.4	34
63	Summary of the AIAA FDTC Low Reynolds Number Discussion Group's Canonical Cases <b>2010</b> ,		32

62	Lagrangian coherent structures in low Reynolds number swimming. <i>Journal of Physics Condensed Matter</i> , <b>2009</b> , 21, 204105	1.8	31
61	High-Amplitude Pitch of a Flat Plate: An Abstraction of Perching and Flapping. <i>International Journal of Micro Air Vehicles</i> , <b>2009</b> , 1, 203-216	0.8	31
60	Numerical simulations of undulatory swimming at moderate Reynolds number. <i>Bioinspiration and Biomimetics</i> , <b>2006</b> , 1, S19-24	2.6	31
59	Strongly coupled dynamics of fluids and rigid-body systems with the immersed boundary projection method. <i>Journal of Computational Physics</i> , <b>2015</b> , 295, 87-113	4.1	29
58	A versatile taxonomy of low-dimensional vortex models for unsteady aerodynamics. <i>Journal of Fluid Mechanics</i> , <b>2019</b> , 858, 917-948	3.7	29
57	Improving vortex models via optimal control theory. <i>Journal of Fluids and Structures</i> , <b>2014</b> , 49, 91-111	3.1	28
56	A Reconciliation of Viscous and Inviscid Approaches to Computing Locomotion of Deforming Bodies. <i>Experimental Mechanics</i> , <b>2010</b> , 50, 1349-1353	2.6	28
55	The effects of boundary topography on convection in Earth's core. <i>Geophysical Journal International</i> , <b>2012</b> , 189, 799-814	2.6	25
54	The influence of fluid properties on the morphology of core turbulence and the geomagnetic field. <i>Earth and Planetary Science Letters</i> , <b>2012</b> , 359-360, 55-60	5.3	25
53	Fluid transport and coherent structures of translating and flapping wings. <i>Chaos</i> , <b>2010</b> , 20, 017509	3.3	25
52	Data-assimilated low-order vortex modeling of separated flows. <i>Physical Review Fluids</i> , <b>2018</b> , 3,	2.8	21
51	Machine-Learning-Based Detection of Aerodynamic Disturbances Using Surface Pressure Measurements. <i>AIAA Journal</i> , <b>2019</b> , 57, 5079-5093	2.1	20
50	Mathematical Modeling of Unsteady Inviscid Flows. <i>Interdisciplinary Applied Mathematics</i> , <b>2019</b> ,	0.7	18
49	High-Fidelity Simulations and Low-Order Modeling of a Rapidly Pitching Plate <b>2010</b> ,		18
48	On the interaction of higher duct modes with a perforated liner system with bias flow. <i>Journal of Fluid Mechanics</i> , <b>2004</b> , 510, 303-331	3.7	18
47	Near-wall dynamics of compressible boundary layers. <i>Physics of Fluids</i> , <b>2011</b> , 23, 065109	4.4	14
46	Numerical Investigation of the Acoustic Behavior of a Multi-Perforated Liner <b>2007</b> ,		14
45	Wake Sensing for Aircraft Formation Flight. <i>Journal of Guidance, Control, and Dynamics</i> , <b>2014</b> , 37, 513-524.1	4.1	11

44	Performance improvement through passive mechanics in jellyfish-inspired swimming. <i>International Journal of Non-Linear Mechanics</i> , <b>2011</b> , 46, 557-567	2.8	11
43	Numerical and Experimental Investigation of the Role of Flexibility in Flapping Wing Flight <b>2006</b> ,		11
42	A computational study of the flow through a vitreous cutter. <i>Journal of Biomechanical Engineering</i> , <b>2010</b> , 132, 121005	2.1	10
41	The dynamics and acoustics of viscous two-dimensional leapfrogging vortices. <i>Journal of Sound and Vibration</i> , <b>2007</b> , 301, 74-92	3.9	10
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> , <b>2019</b> , 84, 408-420	3.1	9
39	Three-dimensional characteristics of the jet flows induced by a pitching plate in a quiescent fluid. <i>Journal of Fluid Mechanics</i> , <b>2020</b> , 887,	3.7	8
38	A regulated multiscale closed-loop cardiovascular model, with applications to hemorrhage and hypertension. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2018</b> , 34, e2975	2.6	8
37	Illustration of Wing Deformation Effects in Three-Dimensional Flapping Flight. <i>AIAA Journal</i> , <b>2015</b> , 53, 2607-2620	2.1	8
36	Efficient Tools for the Simulation of Flapping Wing Flows <b>2005</b> ,		8
35	EnKF-based Dynamic Estimation of Separated Flows with a Low-Order Vortex Model <b>2018</b> ,		7
34	Transport of inertial particles by viscous streaming in arrays of oscillating probes. <i>Physical Review E</i> , <b>2016</b> , 93, 013109	2.4	7
33	Intra-aneurysmal flow reductions in a thin film nitinol flow diverter. <i>Smart Materials and Structures</i> , <b>2011</b> , 20, 055021	3.4	7
32	Modeling Dynamic Lift Response to Actuation <b>2016</b> ,		6
31	A Vortex Sheet/Point Vortex Dynamical Model For Unsteady Separated Flows <b>2016</b> ,		6
30	A viscous vortex particle method for deforming bodies with application to biolocomotion. <i>International Journal for Numerical Methods in Fluids</i> , <b>2009</b> , 59, 1299-1320	1.9	6
29	Evaluation of the Upper Airway Morphology: The Role of Cone Beam Computed Tomography. <i>Journal of the California Dental Association</i> , <b>2015</b> , 43, 531-9	4.3	6
28	Improved low-order modeling of a pitching and perching plate <b>2011</b> ,		5
27	Ensemble Kalman filter for vortex models of disturbed aerodynamic flows. <i>Physical Review Fluids</i> , <b>2021</b> , 6,	2.8	5

26	Model of Left Ventricular Contraction: Validation Criteria and Boundary Conditions. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 11504, 294-303	0.9	4
25	Wake Vortex Detection and Tracking for Aircraft Formation Flight <b>2019</b> ,		4
24	Numerical Study of Hypersonic Flow Over an Isolated Roughness with a High-Order Cut-Cell Method <b>2011</b> ,		4
23	The Acoustics of Two-Dimensional Leapfrogging Vortices <b>2005</b> ,		4
22	An ensemble Kalman filter approach to parameter estimation for patient-specific cardiovascular flow modeling. <i>Theoretical and Computational Fluid Dynamics</i> , <b>2020</b> , 34, 521-544	2.3	4
21	Deep learning and data assimilation approaches to sensor reduction in estimation of disturbed separated flows <b>2020</b> ,		3
20	Toward numerical simulations of fluid-structure interactions for investigation of obstructive sleep apnea. <i>Theoretical and Computational Fluid Dynamics</i> , <b>2016</b> , 30, 87-104	2.3	3
19	A high-order multi-zone cut-stencil method for numerical simulations of high-speed flows over complex geometries. <i>Journal of Computational Physics</i> , <b>2016</b> , 316, 652-681	4.1	3
18	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> , <b>2019</b> , 90, 591-603	4.1	3
17	Lift coefficient estimation for a rapidly pitching airfoil. <i>Experiments in Fluids</i> , <b>2021</b> , 62, 1	2.5	3
16	Visualization of vascular injuries in extremity trauma. <i>Medical and Biological Engineering and Computing</i> , <b>2017</b> , 55, 1709-1718	3.1	2
15	Reduced-Order Two- and Three-Dimensional Vortex Modeling of Unsteady Separated Flows <b>2015</b> ,		2
14	A dilating vortex particle method for compressible flow. <i>Journal of Turbulence</i> , <b>2002</b> , 3, N36	2.1	2
13	Numerical Simulation of High-Speed Flows Over Complex Geometries with a High-Order Multi-Zone Cut-Cell Method <b>2014</b> ,		1
12	Improving Vortex Models via Optimal Control Theory <b>2013</b> ,		1
11	An Exploration of Passive and Active Flexibility in Biocomotion through Analysis of Canonical Problems. <i>Advances in Science and Technology</i> , <b>2008</b> , 58, 212-219	0.1	1
10	Examples of Two-Dimensional Flow Modeling. <i>Interdisciplinary Applied Mathematics</i> , <b>2019</b> , 341-367	0.7	1
9	Smoothed particle hydrodynamics simulation of biphasic soft tissue and its medical applications. <i>Medical and Biological Engineering and Computing</i> , <b>2021</b> , 59, 227-242	3.1	1

8	A method of immersed layers on Cartesian grids, with application to incompressible flows. <i>Journal of Computational Physics</i> , <b>2022</b> , 448, 110716	4.1	1
7	Current Methods and Advances in Simulation of Hemorrhage after Trauma. <i>American Surgeon</i> , <b>2017</b> , 83, 1137-1141	0.8	0
6	Quasisteady Particle Transport in Slowly Varying Periodic Streaming Flows. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2014</b> , 47, 5859-5865		
5	Introduction: 28th Annual Gallery of Fluid Motion (Long Beach, California, USA, 2010). <i>Physics of Fluids</i> , <b>2011</b> , 23, 091101	4.4	
4	Transport of Vortex Elements. <i>Interdisciplinary Applied Mathematics</i> , <b>2019</b> , 245-267	0.7	
3	Flow About a Two-Dimensional Flat Plate. <i>Interdisciplinary Applied Mathematics</i> , <b>2019</b> , 269-339	0.7	
2	Theoretical and experimental study of the dynamic response of absorber-based, micro-scale, oscillatory probes for contact sensing applications. <i>Review of Scientific Instruments</i> , <b>2016</b> , 87, 065005	1.7	
1	Cardiovascular blood flow analysis under normal and open injury conditions. <i>Studies in Health Technology and Informatics</i> , <b>2014</b> , 196, 372-7	0.5	