

# Mark A Stremler

## List of Publications by Year in descending order

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Version: 2024-02-01

67  
papers

2,779  
citations

331538

21  
h-index

189801

50  
g-index

70  
all docs

70  
docs citations

70  
times ranked

2661  
citing authors

#	ARTICLE	IF	CITATIONS
1	Passive mixing in a three-dimensional serpentine microchannel. <i>Journal of Microelectromechanical Systems</i> , 2000, 9, 190-197.	1.7	1,052
2	Effects of flow and diffusion on chemotaxis studies in a microfabricated gradient generator. <i>Lab on A Chip</i> , 2005, 5, 611.	3.1	242
3	Vortex Crystals. <i>Advances in Applied Mechanics</i> , 2003, 39, 1-79.	1.4	152
4	Topological fluid mechanics of stirring. <i>Journal of Fluid Mechanics</i> , 2000, 403, 277-304.	1.4	140
5	Isolation of prostate tumor initiating cells (TICs) through their dielectrophoretic signature. <i>Lab on A Chip</i> , 2012, 12, 182-189.	3.1	108
6	Designing for chaos: applications of chaotic advection at the microscale. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2004, 362, 1019-1036.	1.6	104
7	Experimental defect analysis and force prediction simulation of high weld pitch friction stir welding. <i>Science and Technology of Welding and Joining</i> , 2006, 11, 657-665.	1.5	77
8	Chaotic mixer improves microarray hybridization. <i>Analytical Biochemistry</i> , 2004, 325, 215-226.	1.1	76
9	Topological fluid mechanics of point vortex motions. <i>Physica D: Nonlinear Phenomena</i> , 2003, 175, 69-95.	1.3	70
10	Mélange passif dans les microcanaux : fabrication et expérience. <i>Mécanique Et Industries</i> , 2001, 2, 343-348.	0.2	62
11	Fluid shear stress impacts ovarian cancer cell viability, subcellular organization, and promotes genomic instability. <i>PLoS ONE</i> , 2018, 13, e0194170.	1.1	57
12	Effects of Vessel Tortuosity on Coronary Hemodynamics: An Idealized and Patient-Specific Computational Study. <i>Annals of Biomedical Engineering</i> , 2016, 44, 2228-2239.	1.3	51
13	Motion of three point vortices in a periodic parallelogram. <i>Journal of Fluid Mechanics</i> , 1999, 392, 101-128.	1.4	50
14	Four-vortex motion with zero total circulation and impulse. <i>Physics of Fluids</i> , 1999, 11, 3704-3715.	1.6	48
15	On the motion of three point vortices in a periodic strip. <i>Journal of Fluid Mechanics</i> , 1996, 314, 1-25.	1.4	43
16	Microfluidic mixing using contactless dielectrophoresis. <i>Electrophoresis</i> , 2011, 32, 2569-2578.	1.3	31
17	Critical spacing of stationary tandem circular cylinders at $\text{Re} > 100$ . <i>Journal of Fluids and Structures</i> , 2019, 89, 49-60.	1.5	31
18	A maximum entropy approach to optimal mixing in a pulsed source-sink flow. <i>Physics of Fluids</i> , 2006, 18, 011701.	1.6	27

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19	Generating topological chaos in lid-driven cavity flow. <i>Physics of Fluids</i> , 2007, 19, 103602.	1.6	27
20	Topological Chaos and Periodic Braiding of Almost-Cyclic Sets. <i>Physical Review Letters</i> , 2011, 106, 114101.	2.9	27
21	A Pulsed Source-Sink Fluid Mixing Device. <i>Journal of Microelectromechanical Systems</i> , 2006, 15, 259-266.	1.7	23
22	Exotic vortex wakes—point vortex solutions. <i>Journal of Fluids and Structures</i> , 2006, 22, 929-940.	1.5	20
23	Flow structure in a wide microchannel with surface grooves. <i>Mechanics Research Communications</i> , 2009, 36, 125-129.	1.0	18
24	Disabled $\alpha 2$ modulates homotypic and heterotypic platelet interactions by binding to sulfatides. <i>British Journal of Haematology</i> , 2011, 154, 122-133.	1.2	18
25	Topological chaos, braiding and bifurcation of almost-cyclic sets. <i>Chaos</i> , 2012, 22, 043135.	1.0	18
26	Burst mode pumping: A new mechanism of drinking in mosquitoes. <i>Scientific Reports</i> , 2018, 8, 4885.	1.6	17
27	Relative equilibria of singly periodic point vortex arrays. <i>Physics of Fluids</i> , 2003, 15, 3767-3775.	1.6	16
28	A mathematical model of 2P and 2C vortex wakes. <i>Journal of Fluids and Structures</i> , 2011, 27, 774-783.	1.5	16
29	On relative equilibria and integrable dynamics of point vortices in periodic domains. <i>Theoretical and Computational Fluid Dynamics</i> , 2010, 24, 25-37.	0.9	14
30	On point vortex models of exotic bluff body wakes. <i>Fluid Dynamics Research</i> , 2014, 46, 061410.	0.6	14
31	Isolation of rare cancer cells from blood cells using dielectrophoresis. , 2012, 2012, 590-3.		13
32	Label-free Isolation and Enrichment of Cells Through Contactless Dielectrophoresis. <i>Journal of Visualized Experiments</i> , 2013, , .	0.2	13
33	Finite-time Collapse of Three Point Vortices in the Plane. <i>Regular and Chaotic Dynamics</i> , 2018, 23, 530-550.	0.3	13
34	On the motion of two point vortex pairs with glide-reflective symmetry in a periodic strip. <i>Physics of Fluids</i> , 2015, 27, 103603.	1.6	12
35	Microfluidic reactors for advancing the MS analysis of fast biological responses. <i>Microsystems and Nanoengineering</i> , 2019, 5, 7.	3.4	10
36	Evaluation of phase-modulated lattice sums. <i>Journal of Mathematical Physics</i> , 2004, 45, 3584-3589.	0.5	9

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37	Topological chaos and mixing in a three-dimensional channel flow. <i>Physics of Fluids</i> , 2009, 21, .	1.6	9
38	Exploring the dynamics of $\hat{\sim}2P\hat{\sim}$ wakes with reflective symmetry using point vortices. <i>Journal of Fluid Mechanics</i> , 2017, 831, 72-100.	1.4	9
39	Mixing Analysis in a Lid-Driven Cavity Flow at Finite Reynolds Numbers. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2012, 134, .	0.8	8
40	The wake of a transversely oscillating circular cylinder in a flowing soap film at low Reynolds number. <i>Journal of Fluids and Structures</i> , 2021, 105, 103343.	1.5	5
41	Point Vortex Models and the Dynamics of Strong Vortices in the Atmosphere and Oceans. <i>Lecture Notes in Physics</i> , 2001, , 1-17.	0.3	5
42	Nonlinear excursions of particles in ideal 2D flows. <i>Physica D: Nonlinear Phenomena</i> , 2011, 240, 199-207.	1.3	4
43	Improving DNA microarray hybridization with a pulsed source-sink mixing device. , 0, , .		3
44	Hassan Aref (1950–2011). <i>Regular and Chaotic Dynamics</i> , 2011, 16, 671-684.	0.3	3
45	Recent Progress in the Relative Equilibria of Point Vortices – In Memoriam Hassan Aref. <i>Procedia IUTAM</i> , 2013, 7, 3-12.	1.2	2
46	Mixing Measures. , 2008, , 1376-1382.		2
47	Evolving geometry of a vortex triangle. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	2
48	Analysis of natural convection in a rotating open loop. <i>Journal of Thermophysics and Heat Transfer</i> , 1994, 8, 100-106.	0.9	1
49	Point vortex models of bluff body wakes. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007, 7, 1101305-1101306.	0.2	1
50	Streamline patterns in 2P vortex street equilibria – CORRIGENDUM. <i>Journal of Fluid Mechanics</i> , 2020, 901, .	1.4	1
51	On flowing soap films as experimental models of 2D Navier–Stokes flows. <i>Experiments in Fluids</i> , 2021, 62, 1.	1.1	1
52	Fluid Mixing Chaotic Advection and Microarray Analysis. <i>CISM International Centre for Mechanical Sciences, Courses and Lectures</i> , 2009, , 323-337.	0.3	1
53	TiO <sub>2</sub> Surface Modifications for Light Modulated Control of Flow Velocity. , 2000, , 331-334.		1
54	Celebrating the 200th Anniversary of the Birth of Hermann Ludwig Ferdinand von Helmholtz (31.08.1821–08.09.1894). <i>Regular and Chaotic Dynamics</i> , 2021, 26, 463-466.	0.3	1

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55	Something Old, Something New: Three Point Vortices on the Plane. Regular and Chaotic Dynamics, 2021, 26, 482-504.	0.3	1
56	Mixing Enhancement in Microfluidic Devices Using Contactless Dielectrophoresis (cDEP). , 2011, , .		0
57	Enrichment of Cancer Cells Using a High Throughput Contactless Dielectrophoretic (CDEP) Microfluidic Device. , 2011, , .		0
58	Parametric study of fluid flow manipulation with piezoelectric macrofiber composite flaps. Proceedings of SPIE, 2017, , .	0.8	0
59	Characterization of Chaotic Motion of DNA in Linear Shear Flows. , 2003, , .		0
60	Enhancing DNA Microarray Analysis With Pulsed Source-Sink Flows. , 2003, , .		0
61	Computational Modeling of a Cell-Based Microphysiometer. , 2006, , .		0
62	Investigating Dielectrophoretic Signature of Mouse Ovarian Surface Epithelial Cells, Macrophages and Fibroblasts. , 2012, , .		0
63	Mixing Measures. , 2014, , 1-12.		0
64	Mixing Measures. , 2015, , 2260-2269.		0
65	Energy transfer between multiple vibrating bimorphs through flow interactions in an otherwise quiescent fluid domain. , 2018, , .		0
66	Flow visualization data from experiments with an oscillating circular cylinder in a gravity-driven soap film. Data in Brief, 2022, 41, 107819.	0.5	0
67	On the Topology of the Atmosphere Advected by a Periodic Array of Axisymmetric Thin-cored Vortex Rings. Regular and Chaotic Dynamics, 2022, 27, 183-197.	0.3	0