SÃ©bastien Michelin

List of Publications by Year
in descending order

75 papers	3,013 citations	159585 30 h-index	161849 54 g-index
76 all docs	76 docs citations	76 times ranked	2099 citing authors

#	Article	IF	Citations
1	Confined self-propulsion of an isotropic active colloid. Journal of Fluid Mechanics, 2022, 933, .	3.4	9
2	Collective dynamics and rheology of confined phoretic suspensions. Journal of Fluid Mechanics, 2022, 943, .	3.4	2
3	Alignment and scattering of colliding active droplets. Soft Matter, 2021, 17, 365-375.	2.7	15
4	Hydrochemical interactions of phoretic particles: a regularized multipole framework. Journal of Fluid Mechanics, 2021, 919, .	3.4	11
5	Self-propulsion in 2D confinement: phoretic and hydrodynamic interactions. European Physical Journal E, 2021, 44, 97.	1.6	5
6	Instability and self-propulsion of active droplets along a wall. Physical Review Fluids, 2021, 6, .	2.5	15
7	Spontaneous onset of convection in a uniform phoretic channel. Soft Matter, 2020, 16, 1259-1269.	2.7	8
8	Highâ€Throughput Measurements of Intraâ€Cellular and Secreted Cytokine from Single Spheroids Using Anchored Microfluidic Droplets. Small, 2020, 16, e2002303.	10.0	18
9	Acoustic propulsion of a small, bottom-heavyÂsphere. Journal of Fluid Mechanics, 2020, 898, .	3.4	9
10	Flutter and resonances of a flag near a free surface. Journal of Fluids and Structures, 2020, 96, 103046.	3.4	7
11	Slender phoretic theory of chemically active filaments. Journal of Fluid Mechanics, 2020, 898, .	3.4	10
12	Collisions and rebounds of chemically active droplets. Journal of Fluid Mechanics, 2020, 886, .	3.4	29
13	Bouncing, chasing, or pausing: Asymmetric collisions of active droplets. Physical Review Fluids, 2020, 5, .	2.5	15
14	Hydrochemical interactions in dilute phoretic suspensions: From individual particle properties to collective organization. Physical Review Fluids, 2020, 5, .	2.5	8
15	Universal optimal geometry of minimal phoretic pumps. Scientific Reports, 2019, 9, 10788.	3.3	9
16	Orientational instability and spontaneous rotation of active nematic droplets. Soft Matter, 2019, 15, 7814-7822.	2.7	13
17	No net motion for oscillating near-spheres at low Reynolds numbers. Journal of Fluid Mechanics, 2019, 866, .	3.4	6
18	Nonlinear dynamics of a chemically-active drop: From steady to chaotic self-propulsion. Journal of Chemical Physics, 2019, 150, 044110.	3.0	42

#	Article	IF	Citations
19	Phoretic and hydrodynamic interactions of weakly confined autophoretic particles. Journal of Chemical Physics, 2019, 150, 044902.	3.0	33
20	Self-propulsion near the onset of Marangoni instability of deformable active droplets. Journal of Fluid Mechanics, 2019, 860, 711-738.	3.4	40
21	Viscous growth and rebound of a bubble near a rigid surface. Journal of Fluid Mechanics, 2019, 860, 172-199.	3.4	6
22	Flow field around a confined active droplet. Physical Review Fluids, 2019, 4, .	2.5	20
23	Modeling chemo-hydrodynamic interactions of phoretic particles: A unified framework. Physical Review Fluids, 2019, 4, .	2.5	19
24	Physics of Bubbleâ€Propelled Microrockets. Advanced Functional Materials, 2018, 28, 1800686.	14.9	28
25	Clustering-induced self-propulsion of isotropic autophoretic particles. Soft Matter, 2018, 14, 7155-7173.	2.7	41
26	Collective dissolution of microbubbles. Physical Review Fluids, 2018, 3, .	2.5	31
27	Geometric tuning of self-propulsion for Janus catalytic particles. Scientific Reports, 2017, 7, 42264.	3.3	49
28	Monitoring the orientation of rare-earth-doped nanorods for flow shear tomography. Nature Nanotechnology, 2017, 12, 914-919.	31.5	65
29	Fluid-solid-electric energy transport along piezoelectric flags. European Journal of Computational Mechanics, 2017, 26, 154-171.	0.6	3
30	Optimal energy harvesting from vortex-induced vibrations of cables. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160583.	2.1	15
31	Phoretic flow induced by asymmetric confinement. Journal of Fluid Mechanics, 2016, 799, .	3.4	5
32	Optimal Energy Harvesting From Vortex-Induced Vibrations of Cables. , 2016, , .		1
33	Synchronized flutter of two slender flags. Journal of Fluid Mechanics, 2016, 801, 652-669.	3.4	11
34	Electro-hydrodynamic synchronization of piezoelectric flags. Journal of Fluids and Structures, 2016, 65, 398-410.	3.4	2
35	Stresslets Induced by Active Swimmers. Physical Review Letters, 2016, 117, 148001.	7.8	33
36	Universal microfluidic platform for bioassays in anchored droplets. Lab on A Chip, 2016, 16, 4200-4211.	6.0	49

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37	Synchronized switch harvesting applied to piezoelectric flags. Smart Materials and Structures, 2016, 25, 085004.	3.5	5
38	Flow distribution in parallel microfluidic networks and its effect on concentration gradient. Biomicrofluidics, 2015, 9, 054119.	2.4	15
39	A reciprocal theorem for boundary-driven channel flows. Physics of Fluids, 2015, 27, 111701.	4.0	13
40	Resonance-induced enhancement of the energy harvesting performance of piezoelectric flags. Applied Physics Letters, 2015, 107, .	3.3	17
41	Numerical and Experimental Study on Energy-Harvesting Piezoelectric Flags. , 2015, , .		1
42	A regularised singularity approach to phoretic problems. European Physical Journal E, 2015, 38, 139.	1.6	24
43	Autophoretic locomotion from geometric asymmetry. European Physical Journal E, 2015, 38, 91.	1.6	61
44	Fluid-Solid-Electric Lock-In of Energy-Harvesting Piezoelectric Flags. Physical Review Applied, 2015, 3, .	3.8	34
45	Phoretic self-propulsion at large PÃ©cletÂnumbers. Journal of Fluid Mechanics, 2015, 768, .	3.4	22
46	Influence and optimization of the electrodes position in a piezoelectric energy harvesting flag. Journal of Sound and Vibration, 2015, 346, 200-215.	3.9	33
47	Geometric pumping in autophoretic channels. Soft Matter, 2015, 11, 5804-5811.	2.7	26
48	A space-averaged model of branched structures. Computers and Structures, 2015, 146, 12-19.	4.4	3
49	Drag reduction, from bending to pruning. Europhysics Letters, 2014, 108, 48002.	2.0	7
50	Self-Propulsion of Pure Water Droplets by Spontaneous Marangoni-Stress-Driven Motion. Physical Review Letters, 2014, 113, 248302.	7.8	234
51	Energy Harvesting Using Vortex-Induced Vibrations of a Hanging Cable. , 2014, , .		0
52	Flow Energy Harvesting With Piezoelectric Flags. , 2014, , .		2
53	On the efficiency of energy harvesting using vortex-induced vibrations of cables. Journal of Fluids and Structures, 2014, 49, 427-440.	3.4	70
54	Phoretic self-propulsion at finite PÃ©clet numbers. Journal of Fluid Mechanics, 2014, 747, 572-604.	3.4	161

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55	Low speed flutter and limit cycle oscillations of a two-degree-of-freedom flat plate in a wind tunnel. Journal of Fluids and Structures, 2013, 43, 244-255.	3.4	91
56	Energy harvesting efficiency of piezoelectric flags in axial flows. Journal of Fluid Mechanics, 2013, 714, 489-504.	3.4	197
57	Spontaneous autophoretic motion of isotropic particles. Physics of Fluids, 2013, 25, .	4.0	179
58	Self-similar vortex-induced vibrations of a hanging string. Journal of Fluid Mechanics, 2013, 724, .	3.4	11
59	Energy Harvesting by Vortex-Induced Vibrations in Slender Structures. , 2013, , .		14
60	Unsteady feeding and optimal strokes of model ciliates. Journal of Fluid Mechanics, 2013, 715, 1-31.	3.4	34
61	The effect of non-uniform damping on flutter in axial flow and energy-harvesting strategies. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 3620-3635.	2.1	32
62	Energy harvesting from axial fluid-elastic instabilities of a cylinder. Journal of Fluids and Structures, 2012, 30, 159-172.	3.4	66
63	Piezoelectric coupling in energy-harvesting fluttering flexible plates: linear stability analysis and conversion efficiency. Journal of Fluids and Structures, 2011, 27, 1357-1375.	3.4	172
64	Flow-induced pruning of branched systems and brittle reconfiguration. Journal of Theoretical Biology, 2011, 284, 117-124.	1.7	36
65	Optimal feeding is optimal swimming for all PÃ©clet numbers. Physics of Fluids, 2011, 23, .	4.0	75
66	Falling cards and flapping flags: understanding fluidâ€“solid interactions using an unsteady point vortex model. Theoretical and Computational Fluid Dynamics, 2010, 24, 195-200.	2.2	26
67	The Long-Time Dynamics of Two Hydrodynamically-Coupled Swimming Cells. Bulletin of Mathematical Biology, 2010, 72, 973-1005.	1.9	37
68	Efficiency optimization and symmetry-breaking in a model of ciliary locomotion. Physics of Fluids, 2010, 22, .	4.0	115
69	An unsteady point vortex method for coupled fluidâ€“solid problems. Theoretical and Computational Fluid Dynamics, 2009, 23, 127-153.	2.2	105
70	Linear stability analysis of coupled parallel flexible plates in an axial flow. Journal of Fluids and Structures, 2009, 25, 1136-1157.	3.4	45
71	Resonance and propulsion performance of a heaving flexible wing. Physics of Fluids, 2009, 21, .	4.0	191
72	Falling cards and flapping flags: understanding fluidâ€“solid interactions using an unsteady point vortex model. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2009, , 211-216.	0.2	2

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73	The dipolar field of rotating bodies in two dimensions. Journal of Fluid Mechanics, 2008, 607, 109-118.	3.4	3
74	Vortex shedding model of a flapping flag. Journal of Fluid Mechanics, 2008, 617, 1-10.	3.4	139
75	Stability of a vortex with a heavy core. Journal of Fluid Mechanics, 2005, 526, 67-76.	3.4	31