

# SÃ©bastien Michelin

## List of Publications by Year in descending order

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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	Self-Propulsion of Pure Water Droplets by Spontaneous Marangoni-Stress-Driven Motion. <i>Physical Review Letters</i> , 2014, 113, 248302.	7.8	234
2	Energy harvesting efficiency of piezoelectric flags in axial flows. <i>Journal of Fluid Mechanics</i> , 2013, 714, 489-504.	3.4	197
3	Resonance and propulsion performance of a heaving flexible wing. <i>Physics of Fluids</i> , 2009, 21, .	4.0	191
4	Spontaneous autophoretic motion of isotropic particles. <i>Physics of Fluids</i> , 2013, 25, .	4.0	179
5	Piezoelectric coupling in energy-harvesting fluttering flexible plates: linear stability analysis and conversion efficiency. <i>Journal of Fluids and Structures</i> , 2011, 27, 1357-1375.	3.4	172
6	Phoretic self-propulsion at finite Péclet numbers. <i>Journal of Fluid Mechanics</i> , 2014, 747, 572-604.	3.4	161
7	Vortex shedding model of a flapping flag. <i>Journal of Fluid Mechanics</i> , 2008, 617, 1-10.	3.4	139
8	Efficiency optimization and symmetry-breaking in a model of ciliary locomotion. <i>Physics of Fluids</i> , 2010, 22, .	4.0	115
9	An unsteady point vortex method for coupled fluid–solid problems. <i>Theoretical and Computational Fluid Dynamics</i> , 2009, 23, 127-153.	2.2	105
10	Low speed flutter and limit cycle oscillations of a two-degree-of-freedom flat plate in a wind tunnel. <i>Journal of Fluids and Structures</i> , 2013, 43, 244-255.	3.4	91
11	Optimal feeding is optimal swimming for all Péclet numbers. <i>Physics of Fluids</i> , 2011, 23, .	4.0	75
12	On the efficiency of energy harvesting using vortex-induced vibrations of cables. <i>Journal of Fluids and Structures</i> , 2014, 49, 427-440.	3.4	70
13	Energy harvesting from axial fluid-elastic instabilities of a cylinder. <i>Journal of Fluids and Structures</i> , 2012, 30, 159-172.	3.4	66
14	Monitoring the orientation of rare-earth-doped nanorods for flow shear tomography. <i>Nature Nanotechnology</i> , 2017, 12, 914-919.	31.5	65
15	Autophoretic locomotion from geometric asymmetry. <i>European Physical Journal E</i> , 2015, 38, 91.	1.6	61
16	Universal microfluidic platform for bioassays in anchored droplets. <i>Lab on A Chip</i> , 2016, 16, 4200-4211.	6.0	49
17	Geometric tuning of self-propulsion for Janus catalytic particles. <i>Scientific Reports</i> , 2017, 7, 42264.	3.3	49
18	Linear stability analysis of coupled parallel flexible plates in an axial flow. <i>Journal of Fluids and Structures</i> , 2009, 25, 1136-1157.	3.4	45

#	ARTICLE	IF	CITATIONS
19	Nonlinear dynamics of a chemically-active drop: From steady to chaotic self-propulsion. <i>Journal of Chemical Physics</i> , 2019, 150, 044110.	3.0	42
20	Clustering-induced self-propulsion of isotropic autophoretic particles. <i>Soft Matter</i> , 2018, 14, 7155-7173.	2.7	41
21	Self-propulsion near the onset of Marangoni instability of deformable active droplets. <i>Journal of Fluid Mechanics</i> , 2019, 860, 711-738.	3.4	40
22	The Long-Time Dynamics of Two Hydrodynamically-Coupled Swimming Cells. <i>Bulletin of Mathematical Biology</i> , 2010, 72, 973-1005.	1.9	37
23	Flow-induced pruning of branched systems and brittle reconfiguration. <i>Journal of Theoretical Biology</i> , 2011, 284, 117-124.	1.7	36
24	Unsteady feeding and optimal strokes of model ciliates. <i>Journal of Fluid Mechanics</i> , 2013, 715, 1-31.	3.4	34
25	Fluid-Solid-Electric Lock-In of Energy-Harvesting Piezoelectric Flags. <i>Physical Review Applied</i> , 2015, 3, .	3.8	34
26	Influence and optimization of the electrodes position in a piezoelectric energy harvesting flag. <i>Journal of Sound and Vibration</i> , 2015, 346, 200-215.	3.9	33
27	Stresslets Induced by Active Swimmers. <i>Physical Review Letters</i> , 2016, 117, 148001.	7.8	33
28	Phoretic and hydrodynamic interactions of weakly confined autophoretic particles. <i>Journal of Chemical Physics</i> , 2019, 150, 044902.	3.0	33
29	The effect of non-uniform damping on flutter in axial flow and energy-harvesting strategies. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012, 468, 3620-3635.	2.1	32
30	Stability of a vortex with a heavy core. <i>Journal of Fluid Mechanics</i> , 2005, 526, 67-76.	3.4	31
31	Collective dissolution of microbubbles. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	31
32	Collisions and rebounds of chemically active droplets. <i>Journal of Fluid Mechanics</i> , 2020, 886, .	3.4	29
33	Physics of Bubble-Propelled Microrockets. <i>Advanced Functional Materials</i> , 2018, 28, 1800686.	14.9	28
34	Falling cards and flapping flags: understanding fluid-solid interactions using an unsteady point vortex model. <i>Theoretical and Computational Fluid Dynamics</i> , 2010, 24, 195-200.	2.2	26
35	Geometric pumping in autophoretic channels. <i>Soft Matter</i> , 2015, 11, 5804-5811.	2.7	26
36	A regularised singularity approach to phoretic problems. <i>European Physical Journal E</i> , 2015, 38, 139.	1.6	24

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37	Phoretic self-propulsion at large Péclet numbers. <i>Journal of Fluid Mechanics</i> , 2015, 768, .	3.4	22
38	Flow field around a confined active droplet. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	20
39	Modeling chemo-hydrodynamic interactions of phoretic particles: A unified framework. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	19
40	High-throughput Measurements of Intra-cellular and Secreted Cytokine from Single Spheroids Using Anchored Microfluidic Droplets. <i>Small</i> , 2020, 16, e2002303.	10.0	18
41	Resonance-induced enhancement of the energy harvesting performance of piezoelectric flags. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	17
42	Flow distribution in parallel microfluidic networks and its effect on concentration gradient. <i>Biomicrofluidics</i> , 2015, 9, 054119.	2.4	15
43	Optimal energy harvesting from vortex-induced vibrations of cables. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016, 472, 20160583.	2.1	15
44	Alignment and scattering of colliding active droplets. <i>Soft Matter</i> , 2021, 17, 365-375.	2.7	15
45	Bouncing, chasing, or pausing: Asymmetric collisions of active droplets. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	15
46	Instability and self-propulsion of active droplets along a wall. <i>Physical Review Fluids</i> , 2021, 6, .	2.5	15
47	Energy Harvesting by Vortex-Induced Vibrations in Slender Structures. , 2013, , .		14
48	A reciprocal theorem for boundary-driven channel flows. <i>Physics of Fluids</i> , 2015, 27, 111701.	4.0	13
49	Oriental instability and spontaneous rotation of active nematic droplets. <i>Soft Matter</i> , 2019, 15, 7814-7822.	2.7	13
50	Self-similar vortex-induced vibrations of a hanging string. <i>Journal of Fluid Mechanics</i> , 2013, 724, .	3.4	11
51	Synchronized flutter of two slender flags. <i>Journal of Fluid Mechanics</i> , 2016, 801, 652-669.	3.4	11
52	Hydrochemical interactions of phoretic particles: a regularized multipole framework. <i>Journal of Fluid Mechanics</i> , 2021, 919, .	3.4	11
53	Slender phoretic theory of chemically active filaments. <i>Journal of Fluid Mechanics</i> , 2020, 898, .	3.4	10
54	Universal optimal geometry of minimal phoretic pumps. <i>Scientific Reports</i> , 2019, 9, 10788.	3.3	9

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55	Acoustic propulsion of a small, bottom-heavy sphere. <i>Journal of Fluid Mechanics</i> , 2020, 898, .	3.4	9
56	Confined self-propulsion of an isotropic active colloid. <i>Journal of Fluid Mechanics</i> , 2022, 933, .	3.4	9
57	Spontaneous onset of convection in a uniform phoretic channel. <i>Soft Matter</i> , 2020, 16, 1259-1269.	2.7	8
58	Hydrochemical interactions in dilute phoretic suspensions: From individual particle properties to collective organization. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	8
59	Drag reduction, from bending to pruning. <i>Europhysics Letters</i> , 2014, 108, 48002.	2.0	7
60	Flutter and resonances of a flag near a free surface. <i>Journal of Fluids and Structures</i> , 2020, 96, 103046.	3.4	7
61	No net motion for oscillating near-spheres at low Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2019, 866, .	3.4	6
62	Viscous growth and rebound of a bubble near a rigid surface. <i>Journal of Fluid Mechanics</i> , 2019, 860, 172-199.	3.4	6
63	Phoretic flow induced by asymmetric confinement. <i>Journal of Fluid Mechanics</i> , 2016, 799, .	3.4	5
64	Synchronized switch harvesting applied to piezoelectric flags. <i>Smart Materials and Structures</i> , 2016, 25, 085004.	3.5	5
65	Self-propulsion in 2D confinement: phoretic and hydrodynamic interactions. <i>European Physical Journal E</i> , 2021, 44, 97.	1.6	5
66	The dipolar field of rotating bodies in two dimensions. <i>Journal of Fluid Mechanics</i> , 2008, 607, 109-118.	3.4	3
67	A space-averaged model of branched structures. <i>Computers and Structures</i> , 2015, 146, 12-19.	4.4	3
68	Fluid-solid-electric energy transport along piezoelectric flags. <i>European Journal of Computational Mechanics</i> , 2017, 26, 154-171.	0.6	3
69	Flow Energy Harvesting With Piezoelectric Flags. , 2014, , .		2
70	Electro-hydrodynamic synchronization of piezoelectric flags. <i>Journal of Fluids and Structures</i> , 2016, 65, 398-410.	3.4	2
71	Falling cards and flapping flags: understanding fluid-solids interactions using an unsteady point vortex model. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2009, , 211-216.	0.2	2
72	Collective dynamics and rheology of confined phoretic suspensions. <i>Journal of Fluid Mechanics</i> , 2022, 943, .	3.4	2

#	ARTICLE	IF	CITATIONS
73	Numerical and Experimental Study on Energy-Harvesting Piezoelectric Flags. , 2015, , .		1
74	Optimal Energy Harvesting From Vortex-Induced Vibrations of Cables. , 2016, , .		1
75	Energy Harvesting Using Vortex-Induced Vibrations of a Hanging Cable. , 2014, , .		0