

# Michael Baudoin

## List of Publications by Year in descending order

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Version: 2024-02-01

40  
papers

1,140  
citations

430442

18  
h-index

377514

34  
g-index

45  
all docs

45  
docs citations

45  
times ranked

981  
citing authors

#	ARTICLE	IF	CITATIONS
1	Folding a focalized acoustical vortex on a flat holographic transducer: Miniaturized selective acoustical tweezers. <i>Science Advances</i> , 2019, 5, eaav1967.	4.7	135
2	Spatially selective manipulation of cells with single-beam acoustical tweezers. <i>Nature Communications</i> , 2020, 11, 4244.	5.8	123
3	Acoustic Tweezers for Particle and Fluid Micromanipulation. <i>Annual Review of Fluid Mechanics</i> , 2020, 52, 205-234.	10.8	102
4	Droplet displacements and oscillations induced by ultrasonic surface acoustic waves: A quantitative study. <i>Physical Review E</i> , 2010, 81, 036315.	0.8	96
5	Selective Manipulation of Microscopic Particles with Precursor Swirling Rayleigh Waves. <i>Physical Review Applied</i> , 2017, 7, .	1.5	76
6	Anisotropic Swirling Surface Acoustic Waves from Inverse Filtering for On-Chip Generation of Acoustic Vortices. <i>Physical Review Applied</i> , 2015, 4, .	1.5	61
7	Low power sessile droplets actuation via modulated surface acoustic waves. <i>Applied Physics Letters</i> , 2012, 100, 154102.	1.5	54
8	On the influence of viscosity and caustics on acoustic streaming in sessile droplets: an experimental and a numerical study with a cost-effective method. <i>Journal of Fluid Mechanics</i> , 2017, 821, 384-420.	1.4	51
9	Cell detachment and label-free cell sorting using modulated surface acoustic waves (SAWs) in droplet-based microfluidics. <i>Lab on A Chip</i> , 2014, 14, 3556.	3.1	35
10	The air-liquid flow in a microfluidic airway tree. <i>Medical Engineering and Physics</i> , 2011, 33, 849-856.	0.8	32
11	Airway reopening through catastrophic events in a hierarchical network. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 859-864.	3.3	28
12	Cyclones and attractive streaming generated by acoustical vortices. <i>Physical Review E</i> , 2014, 90, 013008.	0.8	25
13	SAW Synthesis With IDTs Array and the Inverse Filter: Toward a Versatile SAW Toolbox for Microfluidics and Biological Applications. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2016, 63, 1601-1607.	1.7	24
14	Particle Assembly with Synchronized Acoustic Tweezers. <i>Physical Review Applied</i> , 2019, 12, .	1.5	24
15	Taming the degeneration of Bessel beams at an anisotropic-isotropic interface: Toward three-dimensional control of confined vortical waves. <i>Physical Review E</i> , 2015, 92, 063201.	0.8	21
16	Acoustic Radiation Force on Small Spheres Due to Transient Acoustic Fields. <i>Physical Review Applied</i> , 2021, 15, .	1.5	21
17	Equivalence between angular spectrum-based and multipole expansion-based formulas of the acoustic radiation force and torque. <i>Journal of the Acoustical Society of America</i> , 2021, 149, 3469-3482.	0.5	20
18	Dynamics of sessile and pendant drops excited by surface acoustic waves: Gravity effects and correlation between oscillatory and translational motions. <i>Physical Review E</i> , 2016, 93, 053106.	0.8	18

#	ARTICLE	IF	CITATIONS
19	Inverse Saffman-Taylor Experiments with Particles Lead to Capillarity Driven Fingering Instabilities. <i>Physical Review Letters</i> , 2016, 117, 034501.	2.9	17
20	Dynamics of a liquid plug in a capillary tube under cyclic forcing: memory effects and airway reopening. <i>Journal of Fluid Mechanics</i> , 2018, 838, 165-191.	1.4	17
21	Acoustic radiation torque on a particle in a fluid: An angular spectrum based compact expression. <i>Journal of the Acoustical Society of America</i> , 2020, 148, 3131-3140.	0.5	17
22	Everlasting bubbles and liquid films resisting drainage, evaporation, and nuclei-induced bursting. <i>Physical Review Fluids</i> , 2022, 7, .	1.0	17
23	Capillary tube wetting induced by particles: towards armoured bubbles tailoring. <i>Soft Matter</i> , 2014, 10, 9403-9412.	1.2	16
24	Sound, infrasound, and sonic boom absorption by atmospheric clouds. <i>Journal of the Acoustical Society of America</i> , 2011, 130, 1142-1153.	0.5	14
25	Dynamics of liquid plugs in prewetted capillary tubes: from acceleration and rupture to deceleration and airway obstruction. <i>Soft Matter</i> , 2016, 12, 8710-8717.	1.2	14
26	An extended coupled phase theory for the sound propagation in polydisperse concentrated suspensions of rigid particles. <i>Journal of the Acoustical Society of America</i> , 2007, 121, 3386.	0.5	13
27	Three-Dimensional Trapping and Assembly of Small Particles with Synchronized Spherical Acoustical Vortices. <i>Physical Review Applied</i> , 2020, 14, .	1.5	12
28	Three-Dimensional Trapping and Dynamic Axial Manipulation with Frequency-Tuned Spiraling Acoustical Tweezers: A Theoretical Study. <i>Physical Review Applied</i> , 2021, 16, .	1.5	11
29	Scattering of ultrasonic shock waves in suspensions of silica nanoparticles. <i>Journal of the Acoustical Society of America</i> , 2011, 129, 1209-1220.	0.5	8
30	Increased resistance to detachment of adherent microspheres and <i>Bacillus</i> spores subjected to a drying step. <i>Colloids and Surfaces B: Biointerfaces</i> , 2016, 143, 293-300.	2.5	8
31	Acoustic Sensing of Forces Driving Fast Capillary Flows. <i>Physical Review Letters</i> , 2020, 124, 084502.	2.9	7
32	Nonspherical armoured bubble vibration. <i>Soft Matter</i> , 2017, 13, 3879-3884.	1.2	5
33	Unstationary dynamics of drops subjected to MHz-surface acoustic waves modulated at low frequency. <i>Experiments in Fluids</i> , 2022, 63, 1.	1.1	5
34	On the influence of spatial correlations on sound propagation in concentrated solutions of rigid particles. <i>Journal of the Acoustical Society of America</i> , 2008, 123, 4127-4139.	0.5	4
35	Pressure-driven dynamics of liquid plugs in rectangular microchannels: Influence of the transition between quasi-static and dynamic film deposition regimes. <i>International Journal of Multiphase Flow</i> , 2019, 113, 343-357.	1.6	4
36	Removal of living cells from biosensing surfaces in droplet-based microfluidics using surface acoustic waves. <i>Proceedings of Meetings on Acoustics</i> , 2013, , .	0.3	2

#	ARTICLE	IF	CITATIONS
37	Motion of Long Levitating Drops in Tubes in an Anti-Bretherton Configuration. Physical Review Letters, 2020, 125, 194501.	2.9	2
38	Absorption of sonic boom by clouds. AIP Conference Proceedings, 2006, , .	0.3	1
39	Acoustic shock wave propagation through solutions of nano-particles. AIP Conference Proceedings, 2008, , .	0.3	0
40	Microscopic Airway Reopening Through Cascades of Plugs Ruptures. , 2009, , .		0