

# Andrew J Szeri

## List of Publications by Year in descending order

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91  
papers

3,094  
citations

147801

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161849

54  
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91  
all docs

91  
docs citations

91  
times ranked

2293  
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrochemomechanical Energy Conversion in Nanofluidic Channels. Nano Letters, 2004, 4, 2315-2321.	9.1	304
2	Water vapour, sonoluminescence and sonochemistry. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2000, 456, 1685-1709.	2.1	297
3	Dissolution or growth of soluble spherical oscillating bubbles. Journal of Fluid Mechanics, 1994, 277, 381-407.	3.4	190
4	Inertially driven inhomogeneities in violently collapsing bubbles: the validity of the Rayleigh-Plesset equation. Journal of Fluid Mechanics, 2002, 452, 145-162.	3.4	109
5	A reduced model of cavitation physics for use in sonochemistry. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2001, 457, 1685-1700.	2.1	101
6	Interaction of lithotripter shockwaves with single inertial cavitation bubbles. Journal of Fluid Mechanics, 2007, 593, 33-56.	3.4	93
7	Impact of a compound droplet on a flat surface: A model for single cell epitaxy. Physics of Fluids, 2010, 22, .	4.0	91
8	Sonoluminescence and diffusive transport. Physics of Fluids, 1996, 8, 2354-2364.	4.0	88
9	Shape stability and violent collapse of microbubbles in acoustic traveling waves. Physics of Fluids, 2007, 19, 047101.	4.0	87
10	Pathological pattern formation and cortical propagation of epileptic seizures. Journal of the Royal Society Interface, 2005, 2, 113-127.	3.4	74
11	Heat and mass transfer during the violent collapse of nonspherical bubbles. Physics of Fluids, 2003, 15, 2576-2586.	4.0	69
12	Mixture segregation within sonoluminescence bubbles. Journal of Fluid Mechanics, 1999, 396, 203-221.	3.4	68
13	Shock formation within sonoluminescence bubbles. Physics of Fluids, 1999, 11, 10-17.	4.0	67
14	Coupled dynamics of translation and collapse of acoustically driven microbubbles. Journal of the Acoustical Society of America, 2002, 112, 1346-1352.	1.1	60
15	SYNCHRONIZATION MEASURES OF THE SCALP ELECTROENCEPHALOGRAM CAN DISCRIMINATE HEALTHY FROM ALZHEIMER'S SUBJECTS. International Journal of Neural Systems, 2007, 17, 61-69.	5.2	59
16	Dynamics of bubbles near a rigid surface subjected to a lithotripter shock wave. Part 2. Reflected shock intensifies non-spherical cavitation collapse. Journal of Fluid Mechanics, 2008, 616, 63-97.	3.4	58
17	Dissolution or growth of soluble spherical oscillating bubbles: the effect of surfactants. Journal of Fluid Mechanics, 1995, 289, 295-314.	3.4	54
18	Rayleigh-Taylor instability of violently collapsing bubbles. Physics of Fluids, 2002, 14, 2925-2928.	4.0	51

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19	Radial response of individual bubbles subjected to shock wave lithotripsy pulses in vitro. <i>Physics of Fluids</i> , 2002, 14, 913-921.	4.0	51
20	Mechanisms of seizure propagation in a cortical model. <i>Journal of Computational Neuroscience</i> , 2007, 22, 63-80.	1.0	44
21	Dilution of Microbicide Gels With Vaginal Fluid and Semen Simulants: Effect on Rheological Properties and Coating Flow. <i>Journal of Pharmaceutical Sciences</i> , 2008, 97, 1030-1038.	3.3	43
22	Emergence from general anesthesia and the sleep-manifold. <i>Frontiers in Systems Neuroscience</i> , 2014, 8, 146.	2.5	42
23	Shock formation in the presence of entropy gradients. <i>Journal of Fluid Mechanics</i> , 2001, 431, 161-188.	3.4	41
24	Bifurcation control of a seizing human cortex. <i>Physical Review E</i> , 2006, 73, 041928.	2.1	41
25	A new computational method for the solution of flow problems of microstructured fluids. Part 1. Theory. <i>Journal of Fluid Mechanics</i> , 1992, 242, 549-576.	3.4	37
26	Surfactant dynamics and rectified diffusion of microbubbles. <i>Journal of Fluid Mechanics</i> , 1996, 311, 361.	3.4	37
27	Surfactant Scavenging and Surface Deposition by Rising Bubbles. <i>Journal of Colloid and Interface Science</i> , 1999, 212, 1-13.	9.4	37
28	Rigid particles suspended in time-dependent flows: irregular versus regular motion, disorder versus order. <i>Journal of Fluid Mechanics</i> , 1992, 237, 33-56.	3.4	35
29	A new damping mechanism in strongly collapsing bubbles. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2000, 456, 2983-2994.	2.1	35
30	Mechanical clot damage from cavitation during sonothrombolysis. <i>Journal of the Acoustical Society of America</i> , 2013, 133, 3159-3175.	1.1	35
31	A new computational method for the solution of flow problems of microstructured fluids. Part 2. Inhomogeneous shear flow of a suspension. <i>Journal of Fluid Mechanics</i> , 1994, 262, 171-204.	3.4	32
32	Assessment of shock wave lithotripters via cavitation potential. <i>Physics of Fluids</i> , 2007, 19, 86103.	4.0	31
33	Capillary waves and air-sea gas transfer. <i>Journal of Fluid Mechanics</i> , 1997, 332, 341-358.	3.4	30
34	Dynamics of bubbles near a rigid surface subjected to a lithotripter shock wave. Part 1. Consequences of interference between incident and reflected waves. <i>Journal of Fluid Mechanics</i> , 2008, 616, 43-61.	3.4	29
35	A model of transluminal flow of an anti-HIV microbicide vehicle: Combined elastic squeezing and gravitational sliding. <i>Physics of Fluids</i> , 2008, 20, 83101.	4.0	29
36	Argon Rectification and the Cause of Light Emission in Single-Bubble Sonoluminescence. <i>Physical Review Letters</i> , 2002, 88, 074301.	7.8	28

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37	Microstructure suspended in three-dimensional flows. <i>Journal of Fluid Mechanics</i> , 1993, 250, 143-167.	3.4	24
38	Shape stability of unsteadily translating bubbles. <i>Physics of Fluids</i> , 2002, 14, 2216.	4.0	23
39	Optimization of acoustic scattering from dual-frequency driven microbubbles at the difference frequency. <i>Journal of the Acoustical Society of America</i> , 2003, 113, 3073.	1.1	22
40	A quantitative framework for the design of acellular hemoglobins as blood substitutes: Implications of dynamic flow conditions. <i>Biophysical Chemistry</i> , 2007, 128, 63-74.	2.8	20
41	A continuous mapping of sleep states through association of EEG with a mesoscale cortical model. <i>Journal of Computational Neuroscience</i> , 2011, 30, 471-487.	1.0	19
42	Synchronization measures of bursting data: Application to the electrocorticogram of an auditory event-related experiment. <i>Physical Review E</i> , 2004, 70, 011914.	2.1	18
43	Transient spreading and swelling behavior of a gel deploying an anti-HIV topical microbicide. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2012, 187-188, 36-42.	2.4	18
44	Open loop optogenetic control of simulated cortical epileptiform activity. <i>Journal of Computational Neuroscience</i> , 2014, 36, 515-525.	1.0	18
45	A model of feedback control for the charge-balanced suppression of epileptic seizures. <i>Journal of Computational Neuroscience</i> , 2010, 28, 375-387.	1.0	17
46	Cross-Coupling Errors of Micromachined Gyroscopes. <i>Journal of Microelectromechanical Systems</i> , 2004, 13, 323-331.	2.5	16
47	Light emission during shock wave focusing in air and argon. <i>Physics of Fluids</i> , 2007, 19, 106106.	4.0	16
48	The effects of inhomogeneous boundary dilution on the coating flow of an anti-HIV microbicide vehicle. <i>Physics of Fluids</i> , 2011, 23, 093101.	4.0	16
49	Transient swelling, spreading, and drug delivery by a dissolved anti-HIV microbicide-bearing film. <i>Physics of Fluids</i> , 2013, 25, 31901.	4.0	16
50	Optimized translation of microbubbles driven by acoustic fields. <i>Journal of the Acoustical Society of America</i> , 2008, 123, 1916-1930.	1.1	15
51	The consequences of yield stress on deployment of a non-Newtonian anti-HIV microbicide gel. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2011, 166, 1116-1122.	2.4	15
52	On the dynamics of suspended microstructure in unsteady, spatially inhomogeneous, two-dimensional fluid flows. <i>Journal of Fluid Mechanics Digital Archive</i> , 1991, 228, 207.	0.6	14
53	Optimal pulse-inversion imaging for microsphere contrast agents. <i>Ultrasound in Medicine and Biology</i> , 2002, 28, 483-494.	1.5	14
54	Closed-loop feedback control and bifurcation analysis of epileptiform activity via optogenetic stimulation in a mathematical model of human cortex. <i>Physical Review E</i> , 2016, 93, 012416.	2.1	14

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55	The onset of chaotic oscillations and rapid growth of a spherical bubble at subcritical conditions in an incompressible liquid. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991, 3, 551-555.	1.6	13
56	A deformation tensor model of Brownian suspensions of orientable particles—the nonlinear dynamics of closure models. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 1996, 64, 43-69.	2.4	13
57	Translation of bubbles subject to weak acoustic forcing and error in decoupling from volume oscillations. <i>Journal of the Acoustical Society of America</i> , 2006, 120, 670-675.	1.1	12
58	A probabilistic framework for a physiological representation of dynamically evolving sleep state. <i>Journal of Computational Neuroscience</i> , 2014, 37, 105-124.	1.0	12
59	Bubble Proliferation or Dissolution of Cavitation Nuclei in the Beam Path of a Shock-Wave Lithotripter. <i>Physical Review Applied</i> , 2015, 3, .	3.8	12
60	Increasing the Effectiveness of Vaginal Microbicides: A Biophysical Framework to Rethink Behavioral Acceptability. <i>PLoS ONE</i> , 2010, 5, e15501.	2.5	12
61	A deformation tensor model of liquid crystalline polymers. <i>Journal of Rheology</i> , 1995, 39, 873-891.	2.6	10
62	Quantitative Approximation of the Cortical Surface Potential From EEG and ECoG Measurements. <i>IEEE Transactions on Biomedical Engineering</i> , 2004, 51, 1358-1365.	4.2	10
63	Targeted O <sub>2</sub> delivery by blood substitutes: in vitro arteriolar simulations of first- and second-generation products. <i>Microvascular Research</i> , 2008, 76, 169-179.	2.5	10
64	The influence of liquid temperature on the sonoluminescence hot spot. <i>Journal of the Acoustical Society of America</i> , 1998, 104, 2073-2076.	1.1	9
65	Mechanics of liquid–liquid interfaces and mixing enhancement in microscale flows. <i>Journal of Fluid Mechanics</i> , 2010, 652, 207-240.	3.4	8
66	A deformation tensor model for nonlinear rheology of FENE polymer solutions. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2000, 92, 1-25.	2.4	7
67	Modeling the acute effects of exercise on insulin kinetics in type 1 diabetes. <i>Journal of Pharmacokinetics and Pharmacodynamics</i> , 2018, 45, 829-845.	1.8	7
68	Topology and resonances in a quasiperiodically forced oscillator. <i>Physica D: Nonlinear Phenomena</i> , 2004, 197, 69-85.	2.8	6
69	Transport Processes in Vaginal Films that Release Anti-HIV Microbicide Molecules. <i>Biophysical Journal</i> , 2011, 100, 489a.	0.5	6
70	A probabilistic method for determining cortical dynamics during seizures. <i>Journal of Computational Neuroscience</i> , 2015, 38, 559-575.	1.0	6
71	Orientation dynamics and stretching of particles in unsteady, three-dimensional fluid flows: Unsteady attractors. <i>Chaos, Solitons and Fractals</i> , 1994, 4, 913-927.	5.1	5
72	Analytical integration and a numerical method for 1-D compressible flow with diffusive transport. <i>Computers and Fluids</i> , 1996, 25, 1-8.	2.5	5

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73	Interpretation of seizure evolution pathways via a mean-field cortical model. BMC Neuroscience, 2012, 13, .	1.9	5
74	Boundary layers at a dynamic interface: Air-sea exchange of heat and mass. Journal of Geophysical Research: Oceans, 2017, 122, 2781-2794.	2.6	5
75	Topological Bifurcations of Attracting 2-Tori of Quasiperiodically Driven Oscillators. Journal of Nonlinear Science, 2005, 15, 423-452.	2.1	3
76	Epithelial Coating Mechanisms by Semi-Solid Materials: Application to Microbicide Gels. Biophysical Journal, 2010, 98, 604a.	0.5	3
77	Optogenetic induced epileptiform activity in a model human cortex. SpringerPlus, 2015, 4, 155.	1.2	3
78	Pulmonary mechanics and gas exchange: a mathematical framework. International Journal of Engineering Science, 2020, 154, 103276.	5.0	3
79	Modeling the acute effects of exercise on glucose dynamics in healthy nondiabetic subjects. Journal of Pharmacokinetics and Pharmacodynamics, 2021, 48, 225-239.	1.8	3
80	Exploitation of Brownian motions for the optimal control of fiber orientation distributions. Physics of Fluids, 1996, 8, 1384-1388.	4.0	2
81	NESTED INVARIANT 3-TORI EMBEDDED IN A SEA OF CHAOS IN A QUASIPERIODIC FLUID FLOW. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2009, 19, 2181-2191.	1.7	2
82	Adaptive Sliding-Mode Control of a Charged Particle in an Ion Trap. IEEE Transactions on Control Systems Technology, 2009, 17, 1083-1095.	5.2	2
83	Adaptive control of contrast agent microbubbles for shell parameter identification. Journal of the Acoustical Society of America, 2012, 131, 2579-2586.	1.1	2
84	Coupled gel spreading and diffusive transport models describing microbicidal drug delivery. Chemical Engineering Science, 2016, 152, 12-20.	3.8	2
85	Strong flows of dilute suspensions of microstructure. Physics of Fluids A, Fluid Dynamics, 1991, 3, 1438-1438.	1.6	1
86	A new route to chaos: Sequences of topological torus bifurcations. Chaos, 2005, 15, 033108.	2.5	1
87	SADDLE-TYPE TORUS BRAIDS IN QUASIPERIODICALLY DRIVEN SYSTEMS: CROSSOVER MAPS OF TRANSVERSALLY INTERSECTING MANIFOLDS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 3001-3012.	1.7	1
88	Surfactant Scavenging by Microbubble Clouds: Consequences for Capillary Wave Damping. Lecture Notes in Physics, 2001, , 337-352.	0.7	1
89	Sonoluminescence and the convective/diffusive transport of heat and mass. Journal of the Acoustical Society of America, 1996, 100, 2677-2677.	1.1	0
90	Spatial Considerations of Feedback Control for the Suppression of Epileptic Seizures. , 2008, , 495-500.		0

#	ARTICLE	IF	CITATIONS
91	On the convergence of solving a nonlinear Volterra-type integral equation for surface divergence based on surface thermal information. <i>Mathematical Methods in the Applied Sciences</i> , 0, , .	2.3	0