

# Alexander Oron

## List of Publications by Year in descending order

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103  
papers

4,638  
citations

218381

26  
h-index

98622

67  
g-index

107  
all docs

107  
docs citations

107  
times ranked

1998  
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynamics of a two-layer flow with an interfacial heat source/sink: viscosity stratification. <i>Journal of Fluid Mechanics</i> , 2022, 934, .	1.4	4
2	Buoyancy instabilities in a liquid layer subjected to an oblique temperature gradient. <i>Journal of Fluid Mechanics</i> , 2022, 937, .	1.4	1
3	Compact patterns in a class of sublinear Gardner equations. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2022, 110, 106384.	1.7	2
4	Thermocapillary instabilities in a liquid layer subjected to an oblique temperature gradient. <i>Journal of Fluid Mechanics</i> , 2021, 906, .	1.4	18
5	Thermocapillary instability in a viscoelastic liquid layer under an imposed oblique temperature gradient. <i>Physics of Fluids</i> , 2021, 33, .	1.6	10
6	Equilibrium shapes and floatability of static and vertically vibrated heavy liquid drops on the surface of a lighter fluid. <i>Journal of Fluid Mechanics</i> , 2021, 922, .	1.4	3
7	Thermocapillary instabilities in a liquid layer subjected to an oblique temperature gradient: Effect of a prescribed normal temperature gradient at the substrate. <i>Physics of Fluids</i> , 2020, 32, .	1.6	7
8	Dynamics of nonisothermal two-thin-fluid-layer systems subjected to harmonic tangential forcing under Rayleigh–Taylor instability conditions. <i>Physics of Fluids</i> , 2020, 32, 082113.	1.6	6
9	Flatons: Flat-top solitons in extended Gardner-like equations. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2020, 91, 105442.	1.7	8
10	Marangoni instability in the linear Jeffreys fluid with a deformable surface. <i>Physical Review Fluids</i> , 2020, 5, .	1.0	10
11	Vibration-induced floatation of a heavy liquid drop on a lighter liquid film. <i>Physics of Fluids</i> , 2019, 31, .	1.6	19
12	Driving mechanisms of ratchet flow in thin liquid films under tangential two-frequency forcing. <i>Physics of Fluids</i> , 2019, 31, 072101.	1.6	1
13	Ratchet flow of thin liquid films induced by a two-frequency tangential forcing. <i>Physics of Fluids</i> , 2018, 30, 022101.	1.6	4
14	Parametric excitation of an axisymmetric flow of a thin liquid film down a vertical fiber. <i>Acta Mechanica</i> , 2018, 229, 549-569.	1.1	2
15	Rayleigh-Taylor instability in thin liquid films subjected to harmonic vibration. <i>Physics of Fluids</i> , 2017, 29, .	1.6	33
16	Thermocapillary modulation of self-rewetting films. <i>Journal of Fluid Mechanics</i> , 2017, 819, 562-591.	1.4	17
17	Thermocapillary flow of a thin liquid film in a confined two-layer system under a hydrophobic plate. <i>Physical Review Fluids</i> , 2017, 2, .	1.0	4
18	Liquid film flow along a substrate with an asymmetric topography sustained by the thermocapillary effect. <i>Physics of Fluids</i> , 2016, 28, .	1.6	15

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19	Nonlinear dynamics of a thin liquid film deposited on a laterally oscillating corrugated surface in the high-frequency limit. <i>Physics of Fluids</i> , 2016, 28, 112101.	1.6	5
20	Nonlinear effect of surface disturbances on mass flux and its modeling in Marangoni dropwise condensation. <i>International Journal of Heat and Mass Transfer</i> , 2016, 94, 419-425.	2.5	1
21	Mass variation of a thin liquid film driven by an acoustic wave. <i>Physics of Fluids</i> , 2015, 27, .	1.6	2
22	Healing of an axisymmetric thin liquid film on a harmonically oscillating horizontal cylindrical surface. <i>Acta Mechanica</i> , 2015, 226, 3587-3596.	1.1	2
23	Long-wave Marangoni convection in a layer of surfactant solution: Bifurcation analysis. <i>Physics of Fluids</i> , 2015, 27, .	1.6	6
24	Fifth International Symposium on Bifurcations and Instabilities in Fluid Dynamics (BIFD2013). <i>Fluid Dynamics Research</i> , 2014, 46, 041001.	0.6	3
25	Long-wave Marangoni convection in a layer of surfactant solution. <i>Physics of Fluids</i> , 2014, 26, .	1.6	9
26	Creating localized-droplet train by traveling thermal waves. <i>Physics of Fluids</i> , 2014, 26, .	1.6	5
27	On compactons induced by a non-convex convection. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2014, 19, 1329-1337.	1.7	14
28	Oscillatory Longwave Marangoni Convection in a Binary Liquid. Part 2: Square Patterns. <i>SIAM Journal on Applied Mathematics</i> , 2014, 74, 1005-1024.	0.8	2
29	Stability analysis of a thin liquid film on an axially oscillating cylindrical surface in the high-frequency limit. <i>Physical Review E</i> , 2014, 90, 023007.	0.8	5
30	Effect of sonic waves on gas filtration by granular beds. <i>Journal of Aerosol Science</i> , 2013, 57, 125-130.	1.8	9
31	Nonlinear pattern formation in thin liquid films under external vibrations. <i>Physical Review E</i> , 2013, 88, 023025.	0.8	24
32	Nonlinear dynamics of a thin liquid film on an axially oscillating cylindrical surface subjected to double-frequency forcing. <i>Physical Review E</i> , 2013, 87, 052403.	0.8	6
33	Oscillatory Longwave Marangoni Convection in a Binary Liquid: Rhombic Patterns. <i>SIAM Journal on Applied Mathematics</i> , 2013, 73, 2203-2223.	0.8	7
34	Nonlinear dynamics of long-wave Marangoni convection in a binary mixture with the Soret effect. <i>Physics of Fluids</i> , 2013, 25, .	1.6	15
35	Fluid transport in thin liquid films using traveling thermal waves. <i>Physics of Fluids</i> , 2013, 25, 072101.	1.6	11
36	Nonlinear dynamics of a thin nonisothermal liquid film on an axially oscillating cylindrical surface. <i>Physical Review E</i> , 2011, 84, 061605.	0.8	11

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37	Novel pattern forming states for Marangoni convection in volatile binary liquids. <i>Physics of Fluids</i> , 2011, 23, .	1.6	27
38	Oscillatory long-wave Marangoni convection in a layer of a binary liquid: Hexagonal patterns. <i>Physical Review E</i> , 2011, 84, 056327.	0.8	8
39	Nonlinear dynamics of confined thin liquid-vapor bilayer systems with phase change. <i>Physics of Fluids</i> , 2011, 23, .	1.6	13
40	Analysis of time-dependent nonlinear dynamics of the axisymmetric liquid film on a vertical circular cylinder: Energy integral model. <i>Physics of Fluids</i> , 2011, 23, 012105.	1.6	7
41	Nonlinear dynamics of a thin liquid film on an axially oscillating cylindrical surface. <i>Physics of Fluids</i> , 2010, 22, .	1.6	22
42	The height of a static liquid column pulled out of an infinite pool. <i>Physics of Fluids</i> , 2010, 22, 102101.	1.6	11
43	Third International Symposium on Instability and Bifurcations in Fluid Dynamics. <i>Journal of Physics: Conference Series</i> , 2010, 216, 011001.	0.3	0
44	Long-wave oscillatory convection in a binary liquid: Hexagonal patterns. <i>Europhysics Letters</i> , 2009, 86, 14005.	0.7	8
45	Energy integral method model for the nonlinear dynamics of an axisymmetric thin liquid film falling on a vertical cylinder. <i>Physics of Fluids</i> , 2009, 21, .	1.6	26
46	Weighted-residual integral boundary-layer model of temporally excited falling liquid films. <i>European Journal of Mechanics, B/Fluids</i> , 2009, 28, 37-60.	1.2	15
47	Numerical analysis of a weighted-residual integral boundary-layer model for nonlinear dynamics of falling liquid films. <i>European Journal of Mechanics, B/Fluids</i> , 2009, 28, 1-36.	1.2	12
48	Marangoni convection in a binary liquid layer with Soret effect at small Lewis number: Linear stability analysis. <i>Physics of Fluids</i> , 2009, 21, 054101.	1.6	27
49	Capillary rise of a meniscus with phase change. <i>Journal of Colloid and Interface Science</i> , 2008, 327, 145-151.	5.0	40
50	Weighted-residual integral boundary-layer model for the nonlinear dynamics of thin liquid films falling on an undulating vertical wall. <i>Physics of Fluids</i> , 2008, 20, .	1.6	33
51	Stability of a two-layer binary-fluid system with a diffuse interface. <i>Physics of Fluids</i> , 2008, 20, 112105.	1.6	19
52	Long-Wave Coupled Marangoni - Rayleigh Instability in a Binary Liquid Layer in the Presence of the Soret Effect. <i>Mathematical Modelling of Natural Phenomena</i> , 2008, 3, 1-26.	0.9	7
53	Three-dimensional oscillatory long-wave Marangoni convection in a binary liquid layer with the Soret effect: Bifurcation analysis. <i>Physics of Fluids</i> , 2007, 19, .	1.6	24
54	Dynamics of thin liquid films falling on vertical cylindrical surfaces subjected to ultrasound forcing. <i>Physical Review E</i> , 2007, 76, 045301.	0.8	15

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55	Marangoni convection in binary mixtures. <i>Physical Review E</i> , 2007, 76, 016306.	0.8	25
56	Long-wave Marangoni instability in a binary liquid layer on a thick solid substrate. <i>Physical Review E</i> , 2007, 76, 026309.	0.8	18
57	Long-Wave Marangoni Instability in a Binary-Liquid Layer with a Deformable Interface in the Presence of the Soret Effect: The Case of Finite Biot Numbers. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2007, 32, .	2.4	3
58	Bifurcations of a weighted-residual integral boundary-layer model for nonlinear dynamics of falling liquid films. <i>Journal of Physics: Conference Series</i> , 2007, 64, 012007.	0.3	1
59	Suppression of the Rayleigh-Taylor instability of thin liquid films by the Marangoni effect. <i>Physics of Fluids</i> , 2007, 19, .	1.6	33
60	Linear and nonlinear theory of long-wave Marangoni instability with the Soret effect at finite Biot numbers. <i>Physics of Fluids</i> , 2006, 18, 054104.	1.6	25
61	Long-wave Marangoni instability in a binary-liquid layer with deformable interface in the presence of Soret effect: Linear theory. <i>Physics of Fluids</i> , 2005, 17, 104104.	1.6	49
62	Long-wavelength thermocapillary instability with the Soret effect. <i>Physical Review E</i> , 2004, 69, 016313.	0.8	62
63	STABILITY AND BIFURCATIONS OF PARAMETRICALLY EXCITED THIN LIQUID FILMS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2004, 14, 4117-4141.	0.7	19
64	Subcritical and supercritical bifurcations of the first- and second-order Benney equations. <i>Journal of Engineering Mathematics</i> , 2004, 50, 121-140.	0.6	46
65	Short commentary: Theory of thin liquid films: some questions and challenges. <i>European Physical Journal E</i> , 2003, 12, 455-458.	0.7	3
66	Nonlinear dynamics of temporally excited falling liquid films. <i>Physics of Fluids</i> , 2002, 14, 2622-2636.	1.6	51
67	Nonlinear evolution of nonuniformly heated falling liquid films. <i>Physics of Fluids</i> , 2002, 14, 4130-4151.	1.6	84
68	Dynamics of a condensing liquid film under conjoining/disjoining pressures. <i>Physics of Fluids</i> , 2001, 13, 1107-1117.	1.6	47
69	Nonlinear dynamics of irradiated thin volatile liquid films. <i>Physics of Fluids</i> , 2000, 12, 29-41.	1.6	32
70	Three-Dimensional Nonlinear Dynamics of Thin Liquid Films. <i>Physical Review Letters</i> , 2000, 85, 2108-2111.	2.9	88
71	Nonlinear dynamics of three-dimensional long-wave Marangoni instability in thin liquid films. <i>Physics of Fluids</i> , 2000, 12, 1633-1645.	1.6	111
72	Dewetting of a Hot Coated Solid Surface. <i>Fluid Mechanics and Its Applications</i> , 2000, , 205-216.	0.1	0

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73	Dewetting of a Heated Surface by an Evaporating Liquid Film under Conjoining/Disjoining Pressures. <i>Journal of Colloid and Interface Science</i> , 1999, 218, 152-166.	5.0	115
74	Regularization of Singularities in the Theory of Thin Liquid Films. , 1999, , 339-348.		0
75	Stabilization of thin liquid films by internal heat generation. <i>Physics of Fluids</i> , 1998, 10, 537-539.	1.6	20
76	Regular and irregular regimes of binary fluid convection excited by parametric resonance. <i>Physical Review E</i> , 1997, 55, 3743-3746.	0.8	1
77	Evolution and formation of dispersive-dissipative patterns. <i>Physical Review E</i> , 1997, 55, R1267-R1270.	0.8	10
78	Long-scale evolution of thin liquid films. <i>Reviews of Modern Physics</i> , 1997, 69, 931-980.	16.4	2,461
79	Linear stability of a tri-layer fluid system driven by the thermocapillary effect. <i>Acta Astronautica</i> , 1997, 40, 655-661.	1.7	3
80	Coupled double-diffusive thermocapillary instability: Linear and nonlinear analysis. <i>Journal of Engineering Mathematics</i> , 1997, 32, 343-364.	0.6	4
81	Thermal singularities in film rupture. <i>Physics of Fluids</i> , 1996, 8, 3433-3435.	1.6	26
82	Marangoni instability in a liquid sheet. <i>Advances in Space Research</i> , 1995, 16, 83-86.	1.2	9
83	Instability of a non-wetting film with interfacial viscous stress. <i>Journal of Fluid Mechanics</i> , 1995, 298, 287-309.	1.4	23
84	On a nonlinear thermocapillary effect in thin liquid layers. <i>Journal of Fluid Mechanics</i> , 1994, 273, 361-374.	1.4	87
85	Capillary instability of thin liquid film on a cylinder. <i>Physics of Fluids A, Fluid Dynamics</i> , 1993, 5, 91-98.	1.6	38
86	Stability of a falling liquid film in the presence of interfacial viscous stress. <i>Physics of Fluids A, Fluid Dynamics</i> , 1993, 5, 506-508.	1.6	14
87	Stable localized patterns in thin liquid films. <i>Physical Review Letters</i> , 1992, 68, 2948-2951.	2.9	53
88	Bounded and unbounded patterns of the Benney equation. <i>Physics of Fluids A, Fluid Dynamics</i> , 1992, 4, 1102-1104.	1.6	48
89	Formation of patterns induced by thermocapillarity and gravity. <i>Journal De Physique II</i> , 1992, 2, 131-146.	0.9	77
90	Bifurcations and pattern formation in the "regularized" Kuramoto-Sivashinsky equation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1992, 163, 299-308.	0.9	15

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91	Evolution of two-dimensional waves in externally perturbed flow on a vertical cylinder. <i>Physical Review A</i> , 1991, 43, 4558-4561.	1.0	26
92	Evolution and breaking of liquid film flowing on a vertical cylinder. <i>Physics of Fluids A, Fluid Dynamics</i> , 1989, 1, 1763-1766.	1.6	61
93	Nonlinear evolution and breaking of interfacial Rayleigh-Taylor waves. <i>Physics of Fluids A, Fluid Dynamics</i> , 1989, 1, 1155-1165.	1.6	20
94	Evolution of the coupled Bénard-Marangoni convection. <i>Physical Review A</i> , 1989, 39, 2063-2069.	1.0	16
95	The dynamic behavior of charged aerosols. <i>Journal of Colloid and Interface Science</i> , 1989, 133, 66-79.	5.0	29
96	Electrostatic precipitation of charged particles from a turbulent flow between coaxial cylinders. <i>Journal of Colloid and Interface Science</i> , 1989, 127, 401-416.	5.0	1
97	The dynamic behavior of charged aerosols. <i>Journal of Colloid and Interface Science</i> , 1989, 133, 57-65.	5.0	9
98	The dynamic behavior of charged aerosols. <i>Journal of Colloid and Interface Science</i> , 1989, 133, 80-90.	5.0	22
99	Turbulent deposition of charged particles under the influence of an external electric field. <i>Journal of Colloid and Interface Science</i> , 1988, 121, 531-542.	5.0	9
100	An asymptotic description of electrostatic precipitation of charged particles in turbulent flow. <i>Journal of Aerosol Science</i> , 1987, 18, 357-367.	1.8	6
101	On turbulent deposition of particles to rough surfaces. <i>Journal of Aerosol Science</i> , 1986, 17, 903-920.	1.8	7
102	Some symmetries of the nonlinear heat and wave equations. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1986, 118, 172-176.	0.9	110
103	Hydrodynamic response of fuel rod with longitudinal fins to upstream generated vortices. <i>Nuclear Engineering and Design</i> , 1984, 83, 123-129.	0.8	0