

Idan Tuval

List of Publications by Year in descending order

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Version: 2024-02-01

52
papers

3,384
citations

236612

25
h-index

197535

49
g-index

53
all docs

53
docs citations

53
times ranked

2785
citing authors

#	ARTICLE	IF	CITATIONS
1	Microbial narrow-escape is facilitated by wall interactions. <i>Physical Review Research</i> , 2022, 4, .	1.3	6
2	Pelagic diatoms communicate through synchronized beacon natural fluorescence signaling. <i>Science Advances</i> , 2021, 7, eabj5230.	4.7	1
3	On the fate of sinking diatoms: the transport of active buoyancy-regulating cells in the ocean. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020, 378, 20190529.	1.6	8
4	Geometric mixing. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020, 378, 20200168.	1.6	1
5	Photo-bioconvection: towards light control of flows in active suspensions. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020, 378, 20190523.	1.6	10
6	On the Necessary Conditions for Non-Equivalent Solutions of the Rotlet-Induced Stokes Flow in a Sphere: Towards a Minimal Model for Fluid Flow in the Kupffer's Vesicle. <i>Mathematics</i> , 2020, 8, 1.	1.1	173
7	Chemosensing versus mechanosensing in nodal and Kupffer's vesicle cilia and in other left-right organizer organs. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2020, 375, 20190566.	1.8	16
8	Phytoplankton Orientation in a Turbulent Ocean: A Microscale Perspective. <i>Frontiers in Marine Science</i> , 2020, 7, .	1.2	18
9	Chapter 12 Motility and Guidance of Sea Urchin Sperm. , 2020, , 249-276.		3
10	Method for the determination of preferential orientation of marine particles from laser diffraction measurements. <i>Optics Express</i> , 2020, 28, 14085.	1.7	7
11	Sperm chemotaxis is driven by the slope of the chemoattractant concentration field. <i>ELife</i> , 2020, 9, .	2.8	10
12	Light Control of Localized Photobioconvection. <i>Physical Review Letters</i> , 2019, 123, 158101.	2.9	16
13	Turbulence induces clustering and segregation of non-motile, buoyancy-regulating phytoplankton. <i>Journal of the Royal Society Interface</i> , 2019, 16, 20190324.	1.5	12
14	Analysis of sperm chemotaxis. <i>Methods in Cell Biology</i> , 2019, 151, 473-486.	0.5	9
15	Collective sinking promotes selective cell pairing in planktonic pennate diatoms. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 15997-16002.	3.3	21
16	Advection by ocean currents modifies phytoplankton size structure. <i>Journal of the Royal Society Interface</i> , 2017, 14, 20170046.	1.5	13
17	Phototaxis beyond turning: persistent accumulation and response acclimation of the microalga <i>Chlamydomonas reinhardtii</i> . <i>Scientific Reports</i> , 2017, 7, 3447.	1.6	44
18	Frontiers of chaotic advection. <i>Reviews of Modern Physics</i> , 2017, 89, .	16.4	146

#	ARTICLE	IF	CITATIONS
19	Geometric phases in discrete dynamical systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016, 380, 3485-3489.	0.9	2
20	Microalgae Scatter off Solid Surfaces by Hydrodynamic and Contact Forces. <i>Physical Review Letters</i> , 2015, 115, 258102.	2.9	69
21	Synchronized Cell Motion without Fluid Interactions. <i>Physics Magazine</i> , 2015, 8, .	0.1	1
22	Geometric Mixing, Peristalsis, and the Geometric Phase of the Stomach. <i>PLoS ONE</i> , 2015, 10, e0130735.	1.1	12
23	Microscale Patches of Nonmotile Phytoplankton. <i>Physical Review Letters</i> , 2015, 114, 128102.	2.9	15
24	Brinicles as a Case of Inverse Chemical Gardens. <i>Langmuir</i> , 2013, 29, 7655-7660.	1.6	33
25	Runaway Electrification of Friable Self-Replicating Granular Matter. <i>Langmuir</i> , 2013, 29, 12874-12878.	1.6	1
26	Antiphase Synchronization in a Flagellar-Dominance Mutant of <i>Chlamydomonas</i> . <i>Physical Review Letters</i> , 2013, 111, 158101.	2.9	57
27	Emergence of Synchronized Beating during the Regrowth of Eukaryotic Flagella. <i>Physical Review Letters</i> , 2011, 107, 148103.	2.9	59
28	Anchor Ice and Benthic Disturbance in Shallow Antarctic Waters: Interspecific Variation in Initiation and Propagation of Ice Crystals. <i>Biological Bulletin</i> , 2011, 221, 155-163.	0.7	35
29	Fidelity of adaptive phototaxis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 11171-11176.	3.3	123
30	Direct Measurement of the Flow Field around Swimming Microorganisms. <i>Physical Review Letters</i> , 2010, 105, 168101.	2.9	339
31	Dancing <i>Volvox</i> : Hydrodynamic Bound States of Swimming Algae. <i>Physical Review Letters</i> , 2009, 102, 168101.	2.9	291
32	Noise and Synchronization in Pairs of Beating Eukaryotic Flagella. <i>Physical Review Letters</i> , 2009, 103, 168103.	2.9	191
33	<i>Chlamydomonas</i> Swims with Two "Gears" in a Eukaryotic Version of Run-and-Tumble Locomotion. <i>Science</i> , 2009, 325, 487-490.	6.0	371
34	Fluid dynamics in developmental biology: Moving fluids that shape ontogeny. <i>HFSP Journal</i> , 2009, 3, 77-93.	2.5	63
35	Fluid dynamics of nodal flow and "right" patterning in development. <i>Developmental Dynamics</i> , 2008, 237, 3477-3490.	0.8	24
36	Fluid dynamics of establishing "right" patterning in development. <i>Birth Defects Research Part C: Embryo Today Reviews</i> , 2008, 84, 95-101.	3.6	6

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37	Microfluidics of cytoplasmic streaming and its implications for intracellular transport. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 3663-3667.	3.3	102
38	Dynamics of tidal synchronization and orbit circularization of celestial bodies. Physical Review E, 2008, 78, 036216.	0.8	10
39	Nature's Microfluidic Transporter: Rotational Cytoplasmic Streaming at High Péclet Numbers. Physical Review Letters, 2008, 101, 178102.	2.9	39
40	Ostwald Ripening, Chiral Crystallization, and the Common-Ancestor Effect. Physical Review Letters, 2007, 98, 165501.	2.9	78
41	Embryonic nodal flow and the dynamics of nodal vesicular parcels. Journal of the Royal Society Interface, 2007, 4, 49-56.	1.5	46
42	AC Electrokinetic Stirring and Focusing of Nanoparticles. , 2006, , 243-255.		0
43	Dynamic modeling of the electric transportation network. Europhysics Letters, 2005, 71, 318-324.	0.7	33
44	Control of Particles in Microelectrode Devices. Physical Review Letters, 2005, 95, 236002.	2.9	29
45	Bacterial swimming and oxygen transport near contact lines. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 2277-2282.	3.3	539
46	Opening up fractal structures of three-dimensional flows via leaking. Europhysics Letters, 2004, 65, 633-639.	0.7	25
47	Chiral Symmetry Breaking during Crystallization: An Advection-Mediated Nonlinear Autocatalytic Process. Physical Review Letters, 2004, 93, 035502.	2.9	65
48	Fluid-dynamical basis of the embryonic development of left-right asymmetry in vertebrates. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 7234-7239.	3.3	177
49	Bailout Embedding as a Blowout Bifurcation. Progress of Theoretical Physics Supplement, 2003, 150, 465-468.	0.2	0
50	Bubbling and on-off intermittency in bailout embeddings. Physical Review E, 2003, 68, 016217.	0.8	5
51	Bailout Embeddings and Neutrally Buoyant Particles in Three-Dimensional Flows. Physical Review Letters, 2002, 89, 264501.	2.9	28
52	NOISE-INDUCED ORDER OUT OF CHAOS BY BAILOUT EMBEDDING. Fluctuation and Noise Letters, 2002, 02, R161-R174.	1.0	2