

Rodrigo Soto

List of Publications by Year in descending order

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89
papers

2,068
citations

236612

25
h-index

264894

42
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92
all docs

92
docs citations

92
times ranked

1415
citing authors

#	ARTICLE	IF	CITATIONS
1	Geometrical characterization of active contraction pulses in epithelial cells using the two-dimensional vertex model. <i>Journal of the Royal Society Interface</i> , 2022, 19, 20210851.	1.5	4
2	Stability of the homogeneous steady state for a model of a confined quasi-two-dimensional granular fluid. <i>EPJ Web of Conferences</i> , 2021, 249, 04005.	0.1	1
3	Active mixtures in a narrow channel: motility diversity changes cluster sizes. <i>Soft Matter</i> , 2021, 17, 2050-2061.	1.2	11
4	Navier–Stokes transport coefficients for a model of a confined quasi-two-dimensional granular binary mixture. <i>Physics of Fluids</i> , 2021, 33, .	1.6	5
5	Apical contacts stemming from incomplete delamination guide progenitor cell allocation through a dragging mechanism. <i>ELife</i> , 2021, 10, .	2.8	6
6	Diversity of self-propulsion speeds reduces motility-induced clustering in confined active matter. <i>Soft Matter</i> , 2021, 17, 9926-9936.	1.2	10
7	Bacteria driving droplets. <i>Soft Matter</i> , 2020, 16, 1359-1365.	1.2	25
8	Vertex model instabilities for tissues subject to cellular activity or applied stresses. <i>Physical Review E</i> , 2020, 102, 052604.	0.8	5
9	Energy nonequipartition in a collisional model of a confined quasi-two-dimensional granular mixture. <i>Physical Review E</i> , 2020, 102, 052904.	0.8	6
10	3D Spatial Exploration by <i>E. coli</i> Echoes Motor Temporal Variability. <i>Physical Review X</i> , 2020, 10, .	2.8	14
11	Run-and-tumble bacteria slowly approaching the diffusive regime. <i>Physical Review E</i> , 2020, 101, 062607.	0.8	19
12	<i>E. coli</i> –super-contaminates– narrow ducts fostered by broad run-time distribution. <i>Science Advances</i> , 2020, 6, eaay0155.	4.7	29
13	Cell migration driven by substrate deformation gradients. <i>Physical Biology</i> , 2019, 16, 066001.	0.8	6
14	Swimming bacteria in Poiseuille flow: The quest for active Bretherton-Jeffery trajectories. <i>Europhysics Letters</i> , 2019, 126, 44003.	0.7	29
15	Magnetotactic bacteria in a droplet self-assemble into a rotary motor. <i>Nature Communications</i> , 2019, 10, 5082.	5.8	41
16	Hyperuniform states generated by a critical friction field. <i>Physical Review E</i> , 2019, 100, 032902.	0.8	4
17	Nonideal rheology of semidilute bacterial suspensions. <i>Physical Review E</i> , 2019, 99, 012613.	0.8	2
18	Case study: Discrete element modeling of wear in mining hoppers. <i>Wear</i> , 2019, 430-431, 120-125.	1.5	21

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19	Directed assembly of active colloidal molecules. <i>New Journal of Physics</i> , 2019, 21, 033041.	1.2	5
20	GPU parallel simulation algorithm of Brownian particles with excluded volume using Delaunay triangulations. <i>Computer Physics Communications</i> , 2018, 229, 148-161.	3.0	8
21	Critical phenomena in quasi-two-dimensional vibrated granular systems. <i>Physical Review E</i> , 2018, 97, 012907.	0.8	11
22	Enskog kinetic theory for a model of a confined quasi-two-dimensional granular fluid. <i>Physical Review E</i> , 2018, 98, .	0.8	11
23	Universality of active wetting transitions. <i>Physical Review E</i> , 2018, 98, .	0.8	10
24	Active colloidal chains with cilia- and flagella-like motion. <i>New Journal of Physics</i> , 2018, 20, 053014.	1.2	12
25	Stability and receptivity of boundary layers in a swirl flow channel. <i>Acta Mechanica</i> , 2018, 229, 4005-4015.	1.1	2
26	Effective two-dimensional model for granular matter with phase separation. <i>Physical Review E</i> , 2018, 98, 022901.	0.8	10
27	Heat transfer enhancement strategies in a swirl flow minichannel heat sink based on hydrodynamic receptivity. <i>International Journal of Heat and Mass Transfer</i> , 2018, 127, 245-256.	2.5	10
28	Wetting Transitions Displayed by Persistent Active Particles. <i>Physical Review Letters</i> , 2017, 119, 078001.	2.9	23
29	Coarsening and clustering in run-and-tumble dynamics with short-range exclusion. <i>Physical Review E</i> , 2016, 94, 022603.	0.8	20
30	Thermal design exploration of a swirl flow microchannel heat sink for high heat flux applications based on numerical simulations. <i>Applied Thermal Engineering</i> , 2016, 109, 22-34.	3.0	15
31	Self-assembly of active colloidal molecules with dynamic function. <i>Physical Review E</i> , 2015, 91, 052304.	0.8	63
32	Effect of the vibration profile on shallow granular systems. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2015, 373, 20150116.	1.6	2
33	Universality and criticality of a second-order granular solid-liquid-like phase transition. <i>Physical Review E</i> , 2015, 91, 012141.	0.8	16
34	Relaxation processes after instantaneous shear-rate reversal in a dense granular flow. <i>Europhysics Letters</i> , 2015, 109, 64002.	0.7	8
35	Shear viscosity of a model for confined granular media. <i>Physical Review E</i> , 2014, 90, 062204.	0.8	14
36	Dynamics of a first-order transition to an absorbing state. <i>Physical Review E</i> , 2014, 89, 042206.	0.8	12

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37	Casimir effect in swimmer suspensions. <i>Physical Review E</i> , 2014, 90, 013024.	0.8	15
38	Self-Assembly of Catalytically Active Colloidal Molecules: Tailoring Activity Through Surface Chemistry. <i>Physical Review Letters</i> , 2014, 112, 068301.	2.9	181
39	Run-and-tumble dynamics in a crowded environment: Persistent exclusion process for swimmers. <i>Physical Review E</i> , 2014, 89, 012706.	0.8	87
40	Induced diffusion of tracers in a bacterial suspension: theory and experiments. <i>Journal of Fluid Mechanics</i> , 2013, 729, 423-444.	1.4	102
41	Capillarylike fluctuations of a solid-liquid interface in a noncohesive granular system. <i>Physical Review E</i> , 2013, 87, 040202.	0.8	20
42	Hydrodynamic modes in a confined granular fluid. <i>Physical Review E</i> , 2013, 87, 022209.	0.8	35
43	Active temperature and velocity correlations produced by a swimmer suspension. <i>Physical Review E</i> , 2013, 87, 053022.	0.8	2
44	Subdiffusive behavior of a dilute non-Brownian suspension under shear. <i>Physical Review E</i> , 2013, 87, 042311.	0.8	1
45	Stochastic resonance on the transverse displacement of swimmers in an oscillatory shear flow. <i>Physical Review E</i> , 2012, 86, 037301.	0.8	2
46	A two-sphere model for bacteria swimming near solid surfaces. <i>Physics of Fluids</i> , 2012, 24, .	1.6	36
47	Fluctuations and Criticality of a Granular Solid-Liquid-Like Phase Transition. <i>Physical Review Letters</i> , 2012, 109, 095701.	2.9	53
48	Characterization of the energy bursts in vibrated shallow granular systems. <i>Granular Matter</i> , 2012, 14, 157-162.	1.1	6
49	Stochastic quantization and Casimir forces. <i>Europhysics Letters</i> , 2011, 96, 50008.	0.7	4
50	Enhanced Diffusion due to Active Swimmers at a Solid Surface. <i>Physical Review Letters</i> , 2011, 106, 048102.	2.9	178
51	Characterization of the melting transition in two dimensions at vanishing external pressure using molecular dynamics simulations. <i>Physical Review B</i> , 2011, 83, .	1.1	1
52	Energy bursts in vibrated shallow granular systems. , 2011, , .		4
53	Dynamical approach to the Casimir effect. <i>Physical Review E</i> , 2011, 83, 031102.	0.8	12
54	Segregation in quasi-two-dimensional granular systems. <i>New Journal of Physics</i> , 2011, 13, 055018.	1.2	20

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55	Sudden Chain Energy Transfer Events in Vibrated Granular Media. <i>Physical Review Letters</i> , 2011, 106, 088001.	2.9	49
56	Brazil nut effect: Influence of friction and jamming on the transition line. , 2009, , .		0
57	Extended event driven molecular dynamics for simulating dense granular matter. <i>European Physical Journal: Special Topics</i> , 2009, 179, 33-41.	1.2	8
58	Competition of Brazil nut effect, buoyancy, and inelasticity induced segregation in a granular mixture. <i>European Physical Journal: Special Topics</i> , 2009, 179, 207-219.	1.2	33
59	Violation of the action-reaction principle and self-forces induced by nonequilibrium fluctuations. <i>Physical Review E</i> , 2008, 78, 020102.	0.8	25
60	Rise of a Brazil nut: A transition line. <i>Physical Review E</i> , 2008, 78, 031301.	0.8	18
61	Segregation induced by inelasticity in a vibrofluidized granular mixture. <i>Physical Review E</i> , 2008, 77, 061301.	0.8	51
62	Ring approximation at equilibrium: The hard sphere pair correlation function. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007, 379, 409-416.	1.2	2
63	Generalized Casimir forces in nonequilibrium systems. <i>Physical Review E</i> , 2007, 76, 011113.	0.8	22
64	Casimir forces in granular and other non equilibrium systems. <i>Granular Matter</i> , 2007, 10, 29-36.	1.1	6
65	Approach to a non-equilibrium steady state. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006, 369, 379-386.	1.2	4
66	Hydrodynamic boundary condition in vibrofluidized granular systems. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006, 369, 301-308.	1.2	4
67	Fluctuation-Induced Casimir Forces in Granular Fluids. <i>Physical Review Letters</i> , 2006, 96, 178001.	2.9	53
68	Confined suspension jet and long-range hydrodynamic interactions: A destabilization scenario. <i>Physics of Fluids</i> , 2006, 18, 083301.	1.6	4
69	Steady quasi-homogeneous granular gas state. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2005, 356, 54-60.	1.2	7
70	Free surface instability in a confined suspension jet. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2005, 356, 196-201.	1.2	1
71	Dynamics of a suspension confined in a thin cell. <i>Physics of Fluids</i> , 2005, 17, 093103.	1.6	25
72	Friction and convection in a vertically vibrated granular system. <i>Physical Review E</i> , 2005, 72, 011305.	0.8	32

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73	Granular systems on a vibrating wall: The kinetic boundary condition. <i>Physical Review E</i> , 2004, 69, 061305.	0.8	15
74	van der Waals normal form for a one-dimensional hydrodynamic model. <i>Physical Review E</i> , 2004, 70, 031302.	0.8	26
75	van der Waals-like transition in fluidized granular matter: hydrodynamic description. <i>Nonlinear Phenomena and Complex Systems</i> , 2004, , 341-352.	0.0	0
76	Temperature inversion in granular fluids under gravity. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 322, 73-80.	1.2	28
77	Granular systems on a vibrating wall: the hydrodynamic boundary condition. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 327, 88-93.	1.2	3
78	van der Waals's Like Transition in Fluidized Granular Matter. <i>Physical Review Letters</i> , 2002, 89, 044301.	2.9	81
79	Statistical mechanics of fluidized granular media: Short-range velocity correlations. <i>Physical Review E</i> , 2001, 63, 041303.	0.8	63
80	Precollisional velocity correlations in a hard-disk fluid with dissipative collisions. <i>Physical Review E</i> , 2001, 64, 031306.	0.8	34
81	Nonlinear analysis of the shearing instability in granular gases. <i>Physical Review E</i> , 2000, 62, 3836-3842.	0.8	26
82	Hydrodynamic theory for granular gases. <i>Physical Review E</i> , 2000, 62, 2521-2530.	0.8	58
83	Departure from Fourier's Law for Fluidized Granular Media. <i>Physical Review Letters</i> , 1999, 83, 5003-5006.	2.9	76
84	Cluster birth-death processes in a vapor at equilibrium. <i>Journal of Chemical Physics</i> , 1999, 110, 7316-7325.	1.2	9
85	Kinetic effects in a non-ideal gas of clusters. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1998, 257, 521-525.	1.2	4
86	Cluster velocity distributions in a vapor at equilibrium. <i>Journal of Chemical Physics</i> , 1998, 108, 8989-8994.	1.2	6
87	Nonideal gas of clusters at equilibrium. <i>Physical Review E</i> , 1997, 56, 2851-2857.	0.8	8
88	Free thermal convection driven by nonlocal effects. <i>Physical Review E</i> , 1995, 52, 4533-4536.	0.8	6
89	Microbial Adhesion on Circular Obstacles: An Optimization Study. <i>Frontiers in Physics</i> , 0, 10, .	1.0	3