

Ivan C Christov

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/1691906/ivan-c-christov-publications-by-year.pdf>

Version: 2024-04-20

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

97
papers

1,968
citations

22
h-index

42
g-index

111
ext. papers

2,373
ext. citations

2.8
avg, IF

5.8
L-index

#	Paper	IF	Citations
97	Challenges in Modeling Hemodynamics in Cerebral Aneurysms Related to Arteriovenous Malformations.. <i>Cardiovascular Engineering and Technology</i> , 2022 , 1	2.2	1
96	Two-fluid modeling of heat transfer in flows of dense suspensions. <i>International Journal of Heat and Mass Transfer</i> , 2022 , 183, 122068	4.9	0
95	Soft hydraulics: from Newtonian to complex fluid flows through compliant conduits. <i>Journal of Physics Condensed Matter</i> , 2021 , 34,	1.8	2
94	Reduced models of unidirectional flows in compliant rectangular ducts at finite Reynolds number. <i>Physics of Fluids</i> , 2021 , 33, 102004	4.4	2
93	Cell spinpods are a simple inexpensive suspension culture device to deliver fluid shear stress to renal proximal tubular cells. <i>Scientific Reports</i> , 2021 , 11, 21296	4.9	1
92	Kink-antikink collisions and multi-bounce resonance windows in higher-order field theories. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2021 , 97, 105748	3.7	15
91	Comment on: Stokes' first problem for heated flat plate with Atangana-Baleanu fractional derivative [Chaos Solitons Fractals 117 (2018) 68]. <i>Chaos, Solitons and Fractals</i> , 2021 , 147, 110999	9.3	
90	Flow and fouling in elastic membrane filters with hierarchical branching pore morphology. <i>Physics of Fluids</i> , 2021 , 33, 062009	4.4	3
89	Revisiting steady viscous flow of a generalized Newtonian fluid through a slender elastic tube using shell theory. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2021 , 101, e201900309	1	10
88	The hydraulic conductivity of a shaped fracture with permeable walls. <i>Mechanics Research Communications</i> , 2021 , 111, 103650	2.2	
87	Diffusion of ellipsoidal granular particles in shear flow. <i>AIChE Journal</i> , 2021 , 67, e17109	3.6	2
86	Tuning a magnetic field to generate spinning ferrofluid droplets with controllable speed via nonlinear periodic interfacial waves. <i>Physical Review E</i> , 2021 , 103, 013103	2.4	4
85	Profiling a soft solid layer to passively control the conduit shape in a compliant microchannel during flow. <i>Physical Review E</i> , 2021 , 104, 015108	2.4	2
84	Shape of spreading and leveling gravity currents in a Hele-Shaw cell with flow-wise width variation. <i>Physical Review Fluids</i> , 2021 , 6,	2.8	1
83	Long-wave equation for a confined ferrofluid interface: periodic interfacial waves as dissipative solitons. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021 , 477,	2.4	1
82	Unsteady fluid-structure interactions in a soft-walled microchannel: A one-dimensional lubrication model for finite Reynolds number. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	5
81	Time-averaged transport in oscillatory squeeze flow of a viscoelastic fluid. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	6

80	Hydrodynamic Bulge Testing: Materials Characterization Without Measuring Deformation. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2020 , 87,	2.7	3
79	Soft hydraulics in channels with thick walls: The finite-Reynolds-number base state and its stability 2020 ,		1
78	Computational Analysis of Interfacial Dynamics in Angled Hele-Shaw Cells: Instability Regimes. <i>Transport in Porous Media</i> , 2020 , 131, 907-934	3.1	6
77	Transient compressible flow in a compliant viscoelastic tube. <i>Physics of Fluids</i> , 2020 , 32, 112014	4.4	7
76	Long-time asymptotics of non-degenerate non-linear diffusion equations. <i>Journal of Mathematical Physics</i> , 2020 , 61, 081505	1.2	1
75	Kink-Kink and Kink-Antikink Interactions with Long-Range Tails. <i>Physical Review Letters</i> , 2019 , 122, 1716014	14	49
74	On the Deformation of a Hyperelastic Tube Due to Steady Viscous Flow Within. <i>Advanced Structured Materials</i> , 2019 , 17-35	0.6	3
73	A two-fluid model for numerical simulation of shear-dominated suspension flows. <i>International Journal of Multiphase Flow</i> , 2019 , 120, 103079	3.6	9
72	Solving Nonlinear Parabolic Equations by a Strongly Implicit Finite Difference Scheme. <i>Mathematics of Planet Earth</i> , 2019 , 305-342	0.4	0
71	Higher-Order Field Theories: (ϕ^6) , (ϕ^8) and Beyond. <i>Advances in Dynamics, Patterns, Cognition</i> , 2019 , 253-279	0.7	2
70	Theory of the flow-induced deformation of shallow compliant microchannels with thick walls. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2019 , 475, 20190513	2.4	8
69	Non-Newtonian fluid-structure interactions: Static response of a microchannel due to internal flow of a power-law fluid. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2019 , 264, 62-72	2.7	22
68	Long-range interactions of kinks. <i>Physical Review D</i> , 2019 , 99,	4.9	45
67	On the Enhancement of Heat Transfer and Reduction of Entropy Generation by Asymmetric Slip in Pressure-Driven Non-Newtonian Microflows. <i>Journal of Heat Transfer</i> , 2019 , 141,	1.8	3
66	Flow rate-pressure drop relation for deformable shallow microfluidic channels. <i>Journal of Fluid Mechanics</i> , 2018 , 841, 267-286	3.7	43
65	Static response of deformable microchannels: a comparative modelling study. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 054002	1.8	8
64	Acoustic shock and acceleration waves in selected inhomogeneous fluids. <i>Mechanics Research Communications</i> , 2018 , 93, 80-88	2.2	4
63	Cutting and shuffling with diffusion: Evidence for cut-offs in interval exchange maps. <i>Physical Review E</i> , 2018 , 98, 022221	2.4	3

62	Peakcompactons: Peaked compact nonlinear waves. <i>International Journal of Modern Physics B</i> , 2017 , 31, 1742008	1.1	
61	On mechanical waves and Doppler shifts from moving boundaries. <i>Mathematical Methods in the Applied Sciences</i> , 2017 , 40, 4481-4492	2.3	6
60	Nonlinear waves in electromigration dispersion in a capillary. <i>Wave Motion</i> , 2017 , 71, 42-52	1.8	2
59	Pseudolocalized three-dimensional solitary waves as quasi-particles. <i>Wave Motion</i> , 2017 , 71, 25-41	1.8	0
58	Kink dynamics in a parametric \mathbb{R}^6 system: a model with controllably many internal modes. <i>Journal of High Energy Physics</i> , 2017 , 2017, 1	5.4	28
57	Topological defects with power-law tails. <i>Journal of Physics: Conference Series</i> , 2017 , 798, 012087	0.3	18
56	Acoustic traveling waves in thermoviscous perfect gases: Kinks, acceleration waves, and shocks under the Taylor-Lighthill balance. <i>Mathematics and Computers in Simulation</i> , 2016 , 127, 2-18	3.3	14
55	On the pseudolocalized solutions in multi-dimension of Boussinesq equation. <i>Mathematics and Computers in Simulation</i> , 2016 , 127, 19-27	3.3	1
54	Comment on "Locomotion of a microorganism in weakly viscoelastic liquids". <i>Physical Review E</i> , 2016 , 94, 057101	2.4	2
53	Stress retardation versus stress relaxation in linear viscoelasticity. <i>Mechanics Research Communications</i> , 2016 , 72, 59-63	2.2	9
52	Nonlinear acoustics and shock formation in lossless barotropic Green-Naghdi fluids. <i>Evolution Equations and Control Theory</i> , 2016 , 5, 349-365	2	6
51	A Parametric Study of Mixing in a Granular Flow a Biaxial Spherical Tumbler. <i>Springer Proceedings in Mathematics and Statistics</i> , 2016 , 143-154	0.2	
50	Introduction: energy and the subsurface. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016 , 374,	3	1
49	Flow regimes for fluid injection into a confined porous medium. <i>Journal of Fluid Mechanics</i> , 2015 , 767, 881-909	3.7	39
48	Corrigendum and addendum: modeling weakly nonlinear acoustic wave propagation. <i>Quarterly Journal of Mechanics and Applied Mathematics</i> , 2015 , 68, 231-233	1	6
47	Comment on "The velocity field due to an oscillating plate in an Oldroyd-B fluid" by C.C. Hopkins and J.R. de Bruyn [Can. J. Phys. 92, 533 (2014)]. <i>Canadian Journal of Physics</i> , 2015 , 93, 1651-1652	1.1	
46	Corrections to Morse and Ingard's variational-based treatment of weakly-nonlinear acoustics in lossless gases. <i>Journal of the Acoustical Society of America</i> , 2015 , 138, 361-2	2.2	1
45	On a hierarchy of nonlinearly dispersive generalized Korteg - de Vries evolution equations. <i>Proceedings of the Estonian Academy of Sciences</i> , 2015 , 64, 212	1.6	2

44	Shear dispersion in dense granular flows. <i>Granular Matter</i> , 2014 , 16, 509-515	2.6	13
43	Successive phase transitions and kink solutions in $\phi(8)$, $\phi(10)$, and $\phi(12)$ field theories. <i>Physical Review E</i> , 2014 , 90, 023208	2.4	49
42	A Study in Three-Dimensional Chaotic Dynamics: Granular Flow and Transport in a Bi-Axial Spherical Tumbler. <i>SIAM Journal on Applied Dynamical Systems</i> , 2014 , 13, 901-943	2.8	16
41	On an instability exhibited by the ballistic-diffusive heat conduction model of Xu and Hu. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2014 , 470, 20130557	2.4	4
40	Influence of heterogeneity on second-kind self-similar solutions for viscous gravity currents. <i>Journal of Fluid Mechanics</i> , 2014 , 747, 218-246	3.7	26
39	Two-phase fluid displacement and interfacial instabilities under elastic membranes. <i>Physical Review Letters</i> , 2013 , 111, 034502	7.4	45
38	On a difficulty in the formulation of initial and boundary conditions for eigenfunction expansion solutions for the start-up of fluid flow. <i>Mechanics Research Communications</i> , 2013 , 51, 86-92	2.2	6
37	A mapping method for distributive mixing with diffusion: Interplay between chaos and diffusion in time-periodic sine flow. <i>Physics of Fluids</i> , 2013 , 25, 052102	4.4	18
36	Collision dynamics of elliptically polarized solitons in Coupled Nonlinear Schrödinger Equations. <i>Mathematics and Computers in Simulation</i> , 2012 , 82, 1321-1332	3.3	8
35	Hidden solitons in the Zabusky-Kruskal experiment: Analysis using the periodic, inverse scattering transform. <i>Mathematics and Computers in Simulation</i> , 2012 , 82, 1069-1078	3.3	9
34	Mixing by cutting and shuffling 3D granular flow in spherical tumblers. <i>Chemical Engineering Science</i> , 2012 , 73, 195-207	4.4	19
33	Comments on: Starting solutions for some unsteady unidirectional flows of a second grade fluid [Int. J. Eng. Sci. 43 (2005) 781]. <i>International Journal of Engineering Science</i> , 2012 , 51, 326-332	5.7	6
32	Resolving a paradox of anomalous scalings in the diffusion of granular materials. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 16012-7	11.5	22
31	Parameters and scalings for dry and immersed granular flowing layers in rotating tumblers. <i>Physical Review E</i> , 2012 , 86, 011304	2.4	31
30	CUTTING AND SHUFFLING A LINE SEGMENT: MIXING BY INTERVAL EXCHANGE TRANSFORMATIONS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2012 , 22, 1230041	2	15
29	Stretching and folding versus cutting and shuffling: An illustrated perspective on mixing and deformations of continua. <i>American Journal of Physics</i> , 2011 , 79, 359-367	0.7	16
28	An improved formula for the frequency shift due to a variable phase speed. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011 , 44, 112001	2	
27	Comments on: Energetic balance for the Rayleigh-Stokes problem of an Oldroyd-B fluid [Nonlinear Anal. RWA 12 (2011) 1]. <i>Nonlinear Analysis: Real World Applications</i> , 2011 , 12, 3687-3690	2.1	4

26	Dissipative acoustic solitons under a weakly-nonlinear, Lagrangian-averaged Euler-Euler model of single-phase lossless fluids. <i>Wave Motion</i> , 2011 , 48, 782-790	1.8	10
25	Perturbation solution for the 2D Boussinesq equation. <i>Mechanics Research Communications</i> , 2011 , 38, 274-281	2.2	9
24	Frame indifferent formulation of Maxwell's elastic-fluid model and the rational continuum mechanics of the electromagnetic field. <i>Mechanics Research Communications</i> , 2011 , 38, 334-339	2.2	16
23	From streamline jumping to strange eigenmodes: Bridging the Lagrangian and Eulerian pictures of the kinematics of mixing in granular flows. <i>Physics of Fluids</i> , 2011 , 23, 103302	4.4	23
22	Streamline jumping: a mixing mechanism. <i>Physical Review E</i> , 2010 , 81, 046307	2.4	20
21	Chaotic mixing via streamline jumping in quasi-two-dimensional tumbled granular flows. <i>Chaos</i> , 2010 , 20, 023102	3.3	19
20	On the Propagation of Second-Sound in Nonlinear Media: Shock, Acceleration and Traveling Wave Results. <i>Journal of Thermal Stresses</i> , 2010 , 33, 1109-1135	2.2	21
19	Comment on "On a class of exact solutions of the equations of motion of a second grade fluid" by C. Fetecău and J. Zierp (Acta Mech. 150, 135-138, 2001). <i>Acta Mechanica</i> , 2010 , 215, 25-28	2.1	13
18	Stokes' first problem for some non-Newtonian fluids: Results and mistakes. <i>Mechanics Research Communications</i> , 2010 , 37, 717-723	2.2	30
17	On frame indifferent formulation of the Maxwell-Cattaneo model of finite-speed heat conduction. <i>Mechanics Research Communications</i> , 2009 , 36, 481-486	2.2	639
16	Shock and traveling wave phenomena on an externally damped, non-linear string. <i>International Journal of Non-Linear Mechanics</i> , 2009 , 44, 511-519	2.8	7
15	On the nonlinear continuum mechanics of space and the notion of luminiferous medium. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 2009 , 71, e2028-e2044	1.3	7
14	Internal solitary waves in the ocean: Analysis using the periodic, inverse scattering transform. <i>Mathematics and Computers in Simulation</i> , 2009 , 80, 192-201	3.3	15
13	The concept of a quasi-particle and the non-probabilistic interpretation of wave mechanics. <i>Mathematics and Computers in Simulation</i> , 2009 , 80, 91-101	3.3	6
12	Shock bifurcation and emergence of diffusive solitons in a nonlinear wave equation with relaxation. <i>New Journal of Physics</i> , 2008 , 10, 043027	2.9	8
11	New non-oscillatory central schemes on unstructured triangulations for hyperbolic systems of conservation laws. <i>Journal of Computational Physics</i> , 2008 , 227, 5736-5757	4.1	39
10	Physical dynamics of quasi-particles in nonlinear wave equations. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008 , 372, 841-848	2.3	35
9	On the evolution of localized wave packets governed by a dissipative wave equation. <i>Wave Motion</i> , 2008 , 45, 154-161	1.8	9

8	Fourier, Scattering, and Wavelet Transforms: Applications to Internal Gravity Waves with Comparisons to Linear Tidal Data. <i>Lecture Notes in Earth Sciences</i> , 2008 , 223-244		
7	Modeling weakly nonlinear acoustic wave propagation. <i>Quarterly Journal of Mechanics and Applied Mathematics</i> , 2007 , 60, 473-495	1	41
6	Nonlinear acoustic propagation in homentropic perfect gases: A numerical study. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2006 , 353, 273-280	2.3	30
5	A simple finite difference scheme for modeling the finite-time blow-up of acoustic acceleration waves. <i>Journal of Sound and Vibration</i> , 2005 , 281, 1207-1216	3.9	28
4	Interacting localized waves for the regularized long wave equation via a Galerkin spectral method. <i>Mathematics and Computers in Simulation</i> , 2005 , 69, 257-268	3.3	13
3	An energy-consistent dispersive shallow-water model. <i>Wave Motion</i> , 2001 , 34, 161-174	1.8	57
2	Dissipative solitons. <i>Physica D: Nonlinear Phenomena</i> , 1995 , 86, 323-347	3.3	120
1	INELASTIC INTERACTION OF BOUSSINESQ SOLITONS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 1994 , 04, 1095-1112	2	36