Vakhtang Putkaradze

List of Publications by Year
in descending order

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46 papers	651 citations	759233 12 h-index	580821 25 g-index
46 all docs	46 docs citations	46 times ranked	497 citing authors

#	Article	IF	Citations
1	Shallow-water approach to the circular hydraulic jump. Journal of Fluid Mechanics, 1993, 254, 635-648.	3.4	166
2	Formation of clumps and patches in self-aggregation of finite-size particles. Physica D: Nonlinear Phenomena, 2006, 220, 183-196.	2.8	61
3	Aggregation of Finite-Size Particles with Variable Mobility. Physical Review Letters, 2005, 95, 226106.	7.8	56
4	Braiding patterns on an inclined plane. Nature, 2004, 430, 165-165.	27.8	55
5	Symmetry Reduced Dynamics of Charged Molecular Strands. Archive for Rational Mechanics and Analysis, 2010, 197, 811-902.	2.4	47
6	Meandering Fluid Streams in the Presence of Flow-Rate Fluctuations. Physical Review Letters, 2008, 101, 114501.	7.8	17
7	Relaxation dynamics of nucleosomal DNA. Physical Chemistry Chemical Physics, 2009, 11, 10633.	2.8	17
8	Inflatable free-standing flexible solar towers. Solar Energy, 2013, 98, 85-98.	6.1	17
9	On the dynamics of a rolling ball actuated by internal point masses. Meccanica, 2018, 53, 3839-3868.	2.0	15
10	Instabilities, Bifurcations, and Multiple Solutions in Expanding Channel Flows. Physical Review Letters, 2006, 97, 144502.	7.8	14
11	Recording oscillations of sub-micron size cantilevers by extreme ultraviolet Fourier transform holography. Optics Express, 2014, 22, 4161.	3.4	13
12	Nonlocal orientation-dependent dynamics of charged strands and ribbons. Comptes Rendus Mathematique, 2009, 347, 1093-1098.	0.3	12
13	On Flexible Tubes Conveying Fluid: Geometric Nonlinear Theory, Stability and Dynamics. Journal of Nonlinear Science, 2015, 25, 889-936.	2.1	12
14	Stability of helical tubes conveying fluid. Journal of Fluids and Structures, 2018, 78, 146-174.	3.4	12
15	Boundary Effects on Exact Solutions of the Lagrangian-Averaged Navierâ€“Stokes-Î± Equations. Journal of Statistical Physics, 2003, 113, 841-854.	1.2	11
16	Geometric gradient-flow dynamics with singular solutions. Physica D: Nonlinear Phenomena, 2008, 237, 2952-2965.	2.8	11
17	Manipulation of Single Atoms by Atomic Force Microscopy as a Resonance Effect. Physical Review Letters, 2009, 102, 215502.	7.8	9
18	Exact geometric theory of dendronized polymer dynamics. Advances in Applied Mathematics, 2012, 48, 535-574.	0.7	9

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19	Dynamics of Elastic Rods in Perfect Friction Contact. Physical Review Letters, 2012, 109, 244303.	7.8	8
20	Variational discretizations for the dynamics of fluid-conveying flexible tubes. Comptes Rendus - Mecanique, 2016, 344, 769-775.	2.1	8
21	Intrinsic localized modes in two-dimensional vibrations of crystalline pillars and their application for sensing. Journal of Applied Physics, 2012, 112, .	2.5	7
22	Exact geometric theory for flexible, fluid-conducting tubes. Comptes Rendus - Mecanique, 2014, 342, 79-84.	2.1	7
23	Constraint Control of Nonholonomic Mechanical Systems. Journal of Nonlinear Science, 2018, 28, 193-234.	2.1	7
24	On the Optimal Control of a Rolling Ball Robot Actuated by Internal Point Masses. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2020, 142, .	1.6	6
25	Rotating concentric circular peakons. Nonlinearity, 2004, 17, 2163-2186.	1.4	5
26	Geometric Theory of Flexible and Expandable Tubes Conveying Fluid: Equations, Solutions and Shock Waves. Journal of Nonlinear Science, 2019, 29, 377-414.	2.1	5
27	Geometric variational approach to the dynamics of porous medium, filled with incompressible fluid. Acta Mechanica, 2020, 231, 3897-3924.	2.1	5
28	Kinetic models of oriented self-assembly. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 344010.	2.1	4
29	Dynamics of elastic strands with rolling contact. Physica D: Nonlinear Phenomena, 2015, 294, 6-23.	2.8	4
30	Dynamics and optimal control of flexible solar updraft towers. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20140539.	2.1	4
31	On Noisy Extensions of Nonholonomic Constraints. Journal of Nonlinear Science, 2016, 26, 1571-1613.	2.1	4
32	On the Normal Force and Static Friction Acting on a Rolling Ball Actuated by Internal Point Masses. Regular and Chaotic Dynamics, 2019, 24, 145-170.	0.8	4
33	Integrability and Chaos in Figure Skating. Journal of Nonlinear Science, 2020, 30, 831-850.	2.1	4
34	Actively deforming porous media in an incompressible fluid: A variational approach. Physica D: Nonlinear Phenomena, 2021, 426, 132984.	2.8	4
35	Global estimates and shocks for the noiseless conserved Kardar - Parisi - Zhang equation. Nonlinearity, 1997, 10, 823-847.	1.4	2
36	Energy absorption at synchronization in phase between coupled Duffing systems. International Journal of Dynamics and Control, 2015, 3, 189-194.	2.5	2

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37	Dynamics regularization with tree-like structures. Applied Mathematical Modelling, 2018, 55, 205-223.	4.2	2
38	A simplified model for flows with eddies in symmetrically expanding channels. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 370, 58-63.	2.1	1
39	Ordered and Disordered Dynamics in Monolayers of Rolling Particles. Physical Review Letters, 2010, 105, 244302.	7.8	1
40	Reduced systems for Intrinsic Localized Modes on an infinite oscillator array. Nonlinear Theory and Its Applications IEICE, 2013, 4, 244-255.	0.6	1
41	Swirling fluid flow in flexible, expandable elastic tubes: Variational approach, reductions and integrability. Physica D: Nonlinear Phenomena, 2020, 401, 132172.	2.8	1
42	Numerical simulations of a rolling ball robot actuated by internal point masses. Numerical Algebra, Control and Optimization, 2021, 11, 143.	1.6	1
43	Greetings and Foreword. Nonlinear Theory and Its Applications IEICE, 2014, 5, 409-409.	0.6	0
44	Geometric Analysis of Noisy Perturbations to Nonholonomic Constraints. Springer Proceedings in Mathematics and Statistics, 2017, , 57-75.	0.2	0
45	Dynamics of non-holonomic systems with stochastic transport. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20170479.	2.1	0
46	Variational Methods for Fluid-Structure Interactions. , 2020, , 175-205.		0