Roman Grigoriev

List of Publications by Year
in descending order

46 papers	1,112 citations	430874 18 h-index	414414 32 g-index
55 all docs	55 docs citations	55 times ranked	809 citing authors

#	Article	IF	Citations
1	Robust learning from noisy, incomplete, high-dimensional experimental data via physically constrained symbolic regression. Nature Communications, 2021, 12, 3219.	12.8	53
2	Exact coherent structures and shadowing in turbulent Taylorâ€“Couette flow. Journal of Fluid Mechanics, 2021, 923, .	3.4	12
3	Free-surface flow of confined volatile simple fluids driven by a horizontal temperature gradient: From a comprehensive numerical model to a simplified analytical description. International Journal of Heat and Mass Transfer, 2020, 147, 118934.	4.8	2
4	Capturing Turbulent Dynamics and Statistics in Experiments with Unstable Periodic Orbits. Physical Review Letters, 2020, 125, 064501.	7.8	18
5	The effect of gas-phase transport on Marangoni convection in volatile binary fluids driven by a horizontal temperature gradient. International Journal of Heat and Mass Transfer, 2020, 158, 119999.	4.8	0
6	Using noisy or incomplete data to discover models of spatiotemporal dynamics. Physical Review E, 2020, 101, 010203.	2.1	62
7	A novel subcritical transition to turbulenceÂin Taylorâ€“Couette flow withÂcounter-rotating cylinders. Journal of Fluid Mechanics, 2020, 892, .	3.4	10
8	Robust and optimal sparse regression for nonlinear PDE models. Chaos, 2019, 29, 103113.	2.5	27
9	Heteroclinic and homoclinic connections in a Kolmogorov-like flow. Physical Review E, 2019, 100, 013112.	2.1	11
10	Data-driven discovery of partial differential equation models with latent variables. Physical Review E, 2019, 100, 022219.	2.1	15
11	Robust approach for rotor mapping in cardiac tissue. Chaos, 2019, 29, 053101.	2.5	20
12	Analytical solution for filmwise condensation in confined high-aspect ratio geometry. International Journal of Heat and Mass Transfer, 2019, 133, 561-571.	4.8	2
13	The effect of phase change on stability of convective flow in a layer of volatile liquid driven by a horizontal temperature gradient. Journal of Fluid Mechanics, 2018, 838, 248-283.	3.4	15
14	A numerical study of buoyancy-Marangoni convection of volatile binary fluids in confined geometries. International Journal of Heat and Mass Transfer, 2018, 127, 308-320.	4.8	7
15	Unstable equilibria and invariant manifolds in quasi-two-dimensional Kolmogorov-like flow. Physical Review E, 2018, 98, 023105.	2.1	12
16	Forecasting Fluid Flows Using the Geometry of Turbulence. Physical Review Letters, 2017, 118, 114501.	7.8	41
17	Dynamical mechanism of atrial fibrillation: A topological approach. Chaos, 2017, 27, 093936.	2.5	16
18	Streamwise localization of traveling wave solutions in channel flow. Physical Review E, 2017, 95, 033124.	2.1	8

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19	Bifurcations in a quasi-two-dimensional Kolmogorov-like flow. Journal of Fluid Mechanics, 2017, 828, 837-866.	3.4	27
20	Memory effects, transient growth, and wave breakup in a model of paced atrium. Chaos, 2017, 27, 093917.	2.5	2
21	Adjoint eigenfunctions of temporally recurrent single-spiral solutions in a simple model of atrial fibrillation. Chaos, 2016, 26, 093107.	2.5	18
22	The effect of noncondensables on buoyancyâ€"thermocapillary convection of volatile fluids in confined geometries. International Journal of Heat and Mass Transfer, 2015, 90, 678-688.	4.8	23
23	Exact coherent structures and chaotic dynamics in a model of cardiac tissue. Chaos, 2015, 25, 033108.	2.5	13
24	Unstable spiral waves and local Euclidean symmetry in a model of cardiac tissue. Chaos, 2015, 25, 063116.	2.5	14
25	Buoyancy-thermocapillary convection of volatile fluids under their vapors. International Journal of Heat and Mass Transfer, 2015, 80, 38-49.	4.8	38
26	Experimental study of the effect of noncondensables on buoyancy-thermocapillary convection in a volatile low-viscosity silicone oil. Physics of Fluids, 2014, 26, 122112.	4.0	35
27	Velocity profile in a two-layer Kolmogorov-like flow. Physics of Fluids, 2014, 26, .	4.0	29
28	Buoyancy-thermocapillary convection of volatile fluids under atmospheric conditions. International Journal of Heat and Mass Transfer, 2014, 75, 284-301.	4.8	58
29	Continuous-time control of alternans in long Purkinje fibers. Chaos, 2014, 24, 033124.	2.5	18
30	The effect of noncondensables on the buoyancy-thermocapillary convection in confined and volatile fluids. , 2014, , .		5
31	Shock-induced termination of reentrant cardiac arrhythmias: Comparing monophasic and biphasic shock protocols. Chaos, 2013, 23, 043119.	2.5	12
32	Model-based control of cardiac alternans in Purkinje fibers. Physical Review E, 2011, 84, 041927.	2.1	32
33	Thermocapillary migration of interfacial droplets. Physics of Fluids, 2009, 21, .	4.0	37
34	Mixing properties of steady flow in thermocapillary driven droplets. Physics of Fluids, 2007, 19, 067102.	4.0	18
35	Chaotic mixing in microdroplets. Lab on A Chip, 2006, 6, 1369.	6.0	65
36	Transient dynamics and nonlinear stability of spatially extended systems. Physical Review E, 2006, 74, 036302.	2.1	5

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37	Transient growth in driven contact lines. Physica D: Nonlinear Phenomena, 2005, 209, 105-116.	2.8	14
38	Chaotic mixing in thermocapillary-driven microdroplets. Physics of Fluids, 2005, 17, 033601.	4.0	59
39	Optical Manipulation of Microscale Fluid Flow. Physical Review Letters, 2003, 91, 054501.	7.8	123
40	Contact line instability and pattern selection in thermally driven liquid films. Physics of Fluids, 2003, 15, 1363.	4.0	30
41	Spectral theory for the failure of linear control in a nonlinear stochastic system. Physical Review E, 2002, 66, 065301.	2.1	4
42	Non-normality and the localized control of extended systems. Physical Review E, 2002, 66, 067201.	2.1	6
43	Control of evaporatively driven instabilities of thin liquid films. Physics of Fluids, 2002, 14, 1895-1909.	4.0	47
44	FLUID-FLUID INTERFACE EXPERIMENTS AT THE UNIVERSITY OF CHICAGO. , 2002, , 250-250.		0
45	LARGE FINITE-ELEMENT MODELING OF AXIALLY SYMMETRIC FREE-SURFACE FLOWS. , 2002, , 259-259.		0
46	Level-set Method for Robust Analysis of Optical Mapping Recordings of Fibrillation. , 0, , .		3