Colm P Connaughton

List of Publications by Year
in descending order

69	1,931	304368 22	253896 43
papers	citations	h-index	g-index

70	70	70	1723
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nanosecond laser textured superhydrophobic metallic surfaces and their chemical sensing applications. Applied Surface Science, 2015, 357, 248-254.	3.1	298
2	Laser textured superhydrophobic surfaces and their applications for homogeneous spot deposition. Applied Surface Science, 2016, 365, 153-159.	3.1	236
3	Condensation of Classical Nonlinear Waves. Physical Review Letters, 2005, 95, 263901.	2.9	168
4	Dynamics of Energy Condensation in Two-Dimensional Turbulence. Physical Review Letters, 2007, 99, 084501.	2.9	133
5	Laser textured surface gradients. Applied Surface Science, 2016, 371, 583-589.	3.1	83
6	Warm Cascades and Anomalous Scaling in a Diffusion Model of Turbulence. Physical Review Letters, 2004, 92, 044501.	2.9	82
7	Dimensional analysis and weak turbulence. Physica D: Nonlinear Phenomena, 2003, 184, 86-97.	1.3	58
8	Modulational instability of Rossby and drift waves and generation of zonal jets. Journal of Fluid Mechanics, 2010, 654, 207-231.	1.4	56
9	Epidemic spreading with awareness and different timescales in multiplex networks. Physical Review E, 2019, 100, 032313.	0.8	44
10	Hybrid additive manufacturing of 3D electronic systems. Journal of Micromechanics and Microengineering, 2016, 26, 105005.	1.5	41
11	Stationary Kolmogorov solutions of the Smoluchowski aggregation equation with a source term. Physical Review E, 2004, 69, 061114.	0.8	35
12	Rossby and drift wave turbulence and zonal flows: The Charneyâ€“Hasegawaâ€“Mima model and its extensions. Physics Reports, 2015, 604, 1-71.	10.3	34
13	Discreteness and quasiresonances in weak turbulence of capillary waves. Physical Review E, 2001, 63, 046306.	0.8	32
14	Non-stationary spectra of local wave turbulence. Physica D: Nonlinear Phenomena, 2003, 184, 64-85.	1.3	32
15	Dynamically controlled deposition of colloidal nanoparticle suspension in evaporating drops using laser radiation. Soft Matter, 2016, 12, 4530-4536.	1.2	32
16	Collective Oscillations in Irreversible Coagulation Driven by Monomer Inputs and Large-Cluster Outputs. Physical Review Letters, 2012, 109, 168304.	2.9	31
17	Combining Gaussian processes, mutual information and a genetic algorithm for multi-target optimization of expensive-to-evaluate functions. Engineering Optimization, 2014, 46, 1593-1607.	1.5	30
18	Disease and information spreading at different speeds in multiplex networks. Physical Review E, 2020, 102, 022312.	0.8	26

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19	Clusterâ€“cluster aggregation as an analogue of a turbulent cascade: Kolmogorov phenomenology, scaling laws and the breakdown of self-similarity. Physica D: Nonlinear Phenomena, 2006, 222, 97-115.	1.3	25
20	Numerical solutions of the isotropic 3-wave kinetic equation. Physica D: Nonlinear Phenomena, 2009, 238, 2282-2297.	1.3	24
21	Integration of additive manufacturing and inkjet printed electronics: a potential route to parts with embedded multifunctionality. Manufacturing Review, 2016, 3, 12.	0.9	24
22	Breakdown of Kolmogorov Scaling in Models of Cluster Aggregation. Physical Review Letters, 2005, 94, 194503.	2.9	23
23	Kinetic theory and Boseâ€“Einstein condensation. Comptes Rendus Physique, 2004, 5, 91-106.	0.3	21
24	Feedback of zonal flows on wave turbulence driven by small-scale instability in the Charney-Hasegawa-Mima model. Europhysics Letters, 2011, 96, 25001.	0.7	20
25	Instantaneous gelation in Smoluchowskiâ€™s coagulation equation revisited. Physical Review E, 2011, 84, 011111.	0.8	19
26	Dynamical scaling and the finite-capacity anomaly in three-wave turbulence. Physical Review E, 2010, 81, 036303.	0.8	18
27	Stationary mass distribution and nonlocality in models of coalescence and shattering. Physical Review E, 2018, 97, 022137.	0.8	18
28	Structure functions and breakdown criteria for wave turbulence. Physica D: Nonlinear Phenomena, 2003, 184, 98-113.	1.3	17
29	Craigâ€™s<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>X</mml:mi><mml:mi>Y</mml:mi></mml:mrow></mml:math>distribution and the statistics of Lagrangian power in two-dimensional turbulence. Physical Review E, 2008, 77, 036318.	0.8	17
30	Anomaly detection and classification in traffic flow data from fluctuations in the flowâ€“density relationship. Transportation Research Part C: Emerging Technologies, 2021, 127, 103178.	3.9	16
31	Constant Flux Relation for Driven Dissipative Systems. Physical Review Letters, 2007, 98, 080601.	2.9	14
32	Externally forced triads of resonantly interacting waves: Boundedness and integrability properties. Communications in Nonlinear Science and Numerical Simulation, 2012, 17, 4988-5006.	1.7	14
33	Aggregationâ€“fragmentation processes and decaying three-wave turbulence. Physical Review E, 2010, 81, 035303.	0.8	13
34	The drivers of systemic risk in financial networks: a data-driven machine learning analysis. Chaos, Solitons and Fractals, 2021, 153, 111588.	2.5	13
35	The modulational instability in the extended Hasegawa-Mima equation with a finite Larmor radius. Physics of Plasmas, 2012, 19, 122115.	0.7	12
36	Grid-scale fluctuations and forecast error in wind power. New Journal of Physics, 2016, 18, 023015.	1.2	12

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37	Driven Brownian coagulation of polymers. Journal of Chemical Physics, 2012, 136, 204901.	1.2	11
38	Importance sampling variance reduction for the Fokkerâ€“Planck rarefied gas particle method. Journal of Computational Physics, 2016, 325, 116-128.	1.9	11
39	Explosive condensation in symmetric mass transport models. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P11031.	0.9	10
40	Fitness voter model: Damped oscillations and anomalous consensus. Physical Review E, 2017, 96, 032313.	0.8	10
41	Constant flux relation for diffusion-limited cluster-cluster aggregation. Physical Review E, 2008, 78, 041403.	0.8	9
42	Probability distribution of power fluctuations in turbulence. Physical Review E, 2009, 79, 016309.	0.8	9
43	Application of dimensionality reduction to visualisation of high-throughput data and building of a classification model in formulated consumer product design. Chemical Engineering Research and Design, 2012, 90, 2179-2185.	2.7	9
44	Percolation transition in the kinematics of nonlinear resonance broadening in Charneyâ€“Hasegawaâ€“Mima model of Rossby wave turbulence. New Journal of Physics, 2013, 15, 083011.	1.2	9
45	Universality properties of steady driven coagulation with collisional evaporation. Europhysics Letters, 2017, 117, 10002.	0.7	9
46	Narrative structure ofA Song of Ice and Firecreates a fictional world with realistic measures of social complexity. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 28582-28588.	3.3	9
47	Assessment of Reward Functions for Reinforcement Learning Traffic Signal Control under Real-World Limitations. , 2020, , .		9
48	Machine-Learningâ€“Based Forecasting of Dengue Fever in Brazilian Cities Using Epidemiologic and Meteorological Variables. American Journal of Epidemiology, 2022, 191, 1803-1812.	1.6	8
49	Developing homogeneous isotropic turbulence. Physica D: Nonlinear Phenomena, 2012, 241, 232-236.	1.3	7
50	Constant flux relation for aggregation models with desorption and fragmentation. Physica A: Statistical Mechanics and Its Applications, 2007, 384, 108-114.	1.2	5
51	Enabling Rapid Production and Mass Customisation of Electronics Using Digitally Driven Hybrid Additive Manufacturing Techniques. , 2016, , .		5
52	A Non-Parametric Hawkes Process Model of Primary and Secondary Accidents on a UK Smart Motorway. Journal of the Royal Statistical Society Series C: Applied Statistics, 2021, 70, 80-97.	0.5	5
53	Non-equilibrium Phase Diagram for a Model with Coalescence, Evaporation and Deposition. Journal of Statistical Physics, 2013, 152, 1115-1144.	0.5	4
54	Estimating Baseline Travel Times for the UK Strategic Road Network. , 2018, , .		4

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55	Dynamic and Interpretable Hazard-Based Models of Traffic Incident Durations. Frontiers in Future Transportation, 2021, 2, .	1.3	4
56	Mixed flux-equipartition solutions of a diffusion model of nonlinear cascades. Europhysics Letters, 2011, 95, 24005.	0.7	3
57	On the non-equilibrium phase transition in evaporationâ€“deposition models. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P09016.	0.9	2
58	Wave turbulence in the two-layer ocean model. Journal of Fluid Mechanics, 2014, 756, 309-327.	1.4	2
59	Micro electronic systems via multifunctional additive manufacturing. Rapid Prototyping Journal, 2018, 24, 752-763.	1.6	2
60	Some remarks on the inverse Smoluchowski problem for cluster-cluster aggregation. Journal of Physics: Conference Series, 2011, 333, 012005.	0.3	1
61	Role of zero clusters in exchange-driven growth with and without input. Physical Review E, 2020, 101, 052134.	0.8	1
62	Assessment of Reward Functions in Reinforcement Learning for Multi-Modal Urban Traffic Control under Real-World limitations. , 2021, , .		1
63	Wavelet Augmented Regression Profiling (WARP): improved long-term estimation of travel time series with recurrent congestion. , 2020, , .		1
64	Scaling properties of one-dimensional clusterâ€“cluster aggregation with LÃ©vy diffusion. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P05003.	0.9	0
65	Nonlinear least-squares method for the inverse droplet coagulation problem. Physical Review E, 2013, 88, 012138.	0.8	0
66	Generation of superhydrophobic surfaces and wettability gradients on metallic substrates by nanosecond laser irradiation. , 2015, , .		0
67	Interactions of point vortices in the Zabusky-McWilliams model with a background flow. Discrete and Continuous Dynamical Systems - Series B, 2012, 17, 1795-1807.	0.5	0
68	Large Scale Performance Assessment of the Lighthill-Whitham-Richards Model on a Smart Motorway. , 2018, , .		0
69	Discovering Causal Factors of Drought in Ethiopia. , 2020, , .		0