David M Walker

List of Publications by Year
in descending order

73 papers	1,345 citations	535685 17 h-index	406436 35 g-index
73 all docs	73 docs citations	73 times ranked	1023 citing authors

#	Article	IF	Citations
1	Characterisation of neonatal cardiac dynamics using ordinal partition network. Medical and Biological Engineering and Computing, 2022, 60, 829.	1.6	1
2	Objective Domain Boundaries Detection in New Caledonian Nickel Laterite from Spectra Using Quadrant Scan. Minerals (Basel, Switzerland), 2022, 12, 49.	0.8	3
3	Multiple Sensors Data Integration for Traffic Incident Detection Using the Quadrant Scan. Sensors, 2022, 22, 2933.	2.1	4
4	On using the modularity of recurrence network communities to detect change-point behaviour. Expert Systems With Applications, 2021, 176, 114837.	4.4	11
5	On detecting dynamical regime change using a transformation cost metric between persistent homology diagrams. Chaos, 2021, 31, 123117.	1.0	1
6	Mean local autocovariance provides robust and versatile choice of delay for reconstruction using frequently sampled flowlike data. Physical Review E, 2020, 101, 012214.	0.8	2
7	Quadrant scan for multi-scale transition detection. Chaos, 2019, 29, 103117.	1.0	11
8	Network science meets algebraic topology. National Science Review, 2019, 6, 1064-1065.	4.6	2
9	The reservoirâ€™s perspective on generalized synchronization. Chaos, 2019, 29, 093133.	1.0	25
10	On system behaviour using complex networks of a compression algorithm. Chaos, 2018, 28, 013101.	1.0	13
11	Detecting Determinism in Time Series with Complex Networks Constructed Using a Compression Algorithm. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2018, 28, 1850165.	0.7	2
12	Inferring symmetric and asymmetric interactions between animals and groups from positional data. PLoS ONE, 2018, 13, e0208202.	1.1	6
13	Time series network induced subgraph distance as a metonym for dynamical invariants. Europhysics Letters, 2018, 124, 40001.	0.7	3
14	Spatial Connectivity of Force Chains in a Simple Shear 3D Simulation Exhibiting Shear Bands. Journal of Engineering Mechanics - ASCE, 2017, 143, .	1.6	12
15	A characterization of the coupled evolution of grain fabric and pore space using complex networks: Pore connectivity and optimized flows in the presence of shear bands. Journal of the Mechanics and Physics of Solids, 2016, 88, 227-251.	2.3	12
16	Self-assembly in a near-frictionless granular material: conformational structures and transitions in uniaxial cyclic compression of hydrogel spheres. Soft Matter, 2015, 11, 2157-2173.	1.2	20
17	Structural templates of disordered granular media. International Journal of Solids and Structures, 2015, 54, 20-30.	1.3	6
18	Force chain and contact cycle evolution in a dense granular material under shallow penetration. Nonlinear Processes in Geophysics, 2014, 21, 505-519.	0.6	34

#	Article	IF	Citations
19	Examining overlapping community structures within grain property networks. , 2014, , .		3
20	Uncovering temporal transitions and self-organization during slow aging of dense granular media in the absence of shear bands. Europhysics Letters, 2014, 107, 18005.	0.7	16
21	A complex systems analysis of stick-slip dynamics of a laboratory fault. Chaos, 2014, 24, 013132.	1.0	10
22	Mesoscale and macroscale kinetic energy fluxes from granular fabric evolution. Physical Review E, 2014, 89, 032205.	0.8	12
23	Micromechanics of vortices in granular media: connection to shear bands and implications for continuum modelling of failure in geomaterials. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 1247-1275.	1.7	32
24	Verifying chaotic dynamics from experimental data. IEICE Proceeding Series, 2014, 1, 373-376.	0.0	0
25	Multiscale resolution of networks of granular media network evolutionâ€"a network of networks. IEICE Proceeding Series, 2014, 2, 294-297.	0.0	0
26	Similarity Networks of the Functional Evolution of Cycles in Structural Networks. IEICE Proceeding Series, 2014, 1, 502-505.	0.0	1
27	Transmission of kinematic information in dense granular systems: local and nonlocal network sensing. Acta Geotechnica, 2013, 8, 547-560.	2.9	3
28	Revisiting localized deformation in sand with complex systems. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20120606.	1.0	33
29	Unraveling complexity in interspecies interaction through nonlinear dynamical models. Acta Ethologica, 2013, 16, 21-30.	0.4	6
30	Directed network topologies of smart grain sensors. Physical Review E, 2013, 87, .	0.8	6
31	Characterizing chaotic dynamics from simulations of large strain behavior of a granular material under biaxial compression. Chaos, 2013, 23, 013113.	1.0	9
32	ON REYNOLDS' DILATANCY AND SHEAR BAND EVOLUTION: A NEW PERSPECTIVE. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1330034.	0.7	5
33	Examining evolving structural networks using minimal cycle similarity networks: applications to stick-slip granular dynamics. Nonlinear Theory and Its Applications IEICE, 2013, 4, 148-159.	0.4	3
34	Transport pathways within percolating pore space networks of granular materials. AIP Conference Proceedings, 2013, , .	0.3	1
35	Numerical analysis of separation and mixing dynamics in multiphase granular systems. , 2013, , .		0
36	Minimum cut and shear bands. , 2013, , .		8

#	Article	IF	Citations
37	A nonlinear dynamical systems modelling approach unveils chaotic dynamics in simulations of large strain behaviour of a granular material under biaxial compression. AIP Conference Proceedings, 2013, , .	0.3	0
38	Global Markov modelling and analysis of the dynamics of granular deformation and flow. , 2013, , .		0
39	Distinguishing and predicting granular failure via multiscale evolution of contact cycle topologies. , 2013, , .		0
40	Understanding multi-scale structural evolution in granular systems through gMEMS. , 2013, , .		2
41	Taxonomy of granular rheology from grain property networks. Physical Review E, 2012, 85, 011304.	0.8	46
42	Transition dynamics and magic-number-like behavior of frictional granular clusters. Physical Review E, 2012, 86, 011306.	0.8	37
43	ANALYSIS OF GRAIN-SCALE MEASUREMENTS OF SAND USING KINEMATICAL COMPLEX NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1230042.	0.7	16
44	Discovering Community Structures and Dynamical Networks from Grain-Scale Kinematics of Shear Bands in Sand. Springer Series in Geomechanics and Geoengineering, 2011, , 67-73.	0.0	1
45	Percolating contact subnetworks on the edge of isostaticity. Granular Matter, 2011, 13, 233-240.	1.1	19
46	Complex networks in confined comminution. Physical Review E, 2011, 84, 021301.	0.8	10
47	Deciphering Dâ€™Alemberts Dream: New Tools for Uncovering Rules for Self-Organized Pattern Formation in Geomaterials. Springer Series in Geomechanics and Geoengineering, 2011, , 11-20.	0.0	0
48	Parameter inference in small world network disease models with approximate Bayesian Computational methods. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 540-548.	1.2	20
49	Inferring networks from multivariate symbolic time series to unravel behavioural interactions among animals. Animal Behaviour, 2010, 79, 351-359.	0.8	17
50	Evolution of functional connectivity in contact and force chain networks: Feature vectors, k-cores and minimal cycles. Comptes Rendus - Mecanique, 2010, 338, 556-569.	2.1	30
51	Topological evolution in dense granular materials: A complex networks perspective. International Journal of Solids and Structures, 2010, 47, 624-639.	1.3	111
52	Force cycles and force chains. Physical Review E, 2010, 81, 011302.	0.8	194
53	Epidemic dynamics on scale-free networks with piecewise linear infectivity and immunization. Physical Review E, 2008, 77, 036113.	0.8	199
54	Scale-Free Distribution of Avian Influenza Outbreaks. Physical Review Letters, 2007, 99, 188702.	2.9	86

#	Article	IF	Citations
55	Maximizing intake under challenging foraging conditions at two spatial scales in Soay sheep. Animal Behaviour, 2007, 73, 339-348.	0.8	2
56	Detecting Unstable Fixed Points Using Kalman Filters With Constraints. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2006, 53, 2818-2827.	0.1	6
57	Selecting nonlinear stochastic process rate models using information criteria. Physica D: Nonlinear Phenomena, 2006, 213, 190-196.	1.3	0
58	Super-spreaders and the rate of transmission of the SARS virus. Physica D: Nonlinear Phenomena, 2006, 215, 146-158.	1.3	82
59	Stochastic modelling of ecological processes using hybrid Gibbs samplers. Ecological Modelling, 2006, 198, 40-52.	1.2	18
60	PARAMETER ESTIMATION USING KALMAN FILTERS WITH CONSTRAINTS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 1067-1078.	0.7	31
61	Sex Differences in Feeding Behaviour at Feeding Station Scale in Soay Sheep (Ovis Aries). Behaviour, 2004, 141, 999-1020.	0.4	7
62	CONTROLLERS FOR NONLINEAR SYSTEMS USING NORMAL FORMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 459-465.	0.7	3
63	Kalman Filtering of Time Series Data. Studies in Computational Finance, 2002, , 137-157.	0.1	4
64	Radial-basis models for feedback systems with fading memory. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2001, 48, 1147-1151.	0.1	14
65	Compactness of symbolic sequences from chaotic systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 274, 200-205.	0.9	0
66	Measurement driven models of nonlinear electronic components. , 2000, , .		2
67	Behavioral models of microwave circuits with fading memory. , 2000, , .		0
68	Constructing transportable behavioural models for nonlinear electronic devices. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 255, 236-242.	0.9	10
69	Phase space reconstruction using input-output time series data. Physical Review E, 1999, 60, 4008-4013.	0.8	15
70	Exploiting the periodic structure of chaotic systems for noise reduction of nonlinear signals. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 242, 63-73.	0.9	4
71	Local filtering of noisy nonlinear time series. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 249, 209-217.	0.9	4
72	Reconstructing Nonlinear Dynamics by Extended Kalman Filtering. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1998, 08, 557-569.	0.7	17

#	Article	IF	Citations
73	Noise Reduction of Chaotic Systems by Kalman Filtering and by Shadowing. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1997, 07, 769-779.	0.7	22