

Kolade M Owolabi

List of Publications by Year in descending order

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111
papers

3,669
citations

109137

35
h-index

149479

56
g-index

118
all docs

118
docs citations

118
times ranked

1160
citing authors

#	ARTICLE	IF	CITATIONS
1	Analysis and numerical simulation of cross reaction–diffusion systems with the Caputo–Fabrizio and Riesz operators. <i>Numerical Methods for Partial Differential Equations</i> , 2023, 39, 1915-1937.	2.0	4
2	Numerical analysis of polio model: A mathematical approach to epidemiological model using derivative with Mittag–Leffler Kernel. <i>Mathematical Methods in the Applied Sciences</i> , 2023, 46, 8175-8192.	1.2	11
3	Fractal Fractional Derivative Operator Method on MCF-7 Cell Line Dynamics. <i>Studies in Systems, Decision and Control</i> , 2022, , 319-339.	0.8	3
4	Modelling and numerical synchronization of chaotic system with fractional-order operator. <i>International Journal of Nonlinear Sciences and Numerical Simulation</i> , 2022, 23, 1269-1287.	0.4	3
5	Spatiotemporal chaos in diffusive systems with the Riesz fractional order operator. <i>Chinese Journal of Physics</i> , 2022, 77, 2258-2275.	2.0	2
6	Modelling the transmission dynamics of Lassa fever with nonlinear incidence rate and vertical transmission. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2022, 597, 127259.	1.2	26
7	Numerical simulation of chaotic maps with the new generalized Caputo-type fractional-order operator. <i>Results in Physics</i> , 2022, 38, 105563.	2.0	9
8	Dynamics of Fractional Chaotic Systems with Chebyshev Spectral Approximation Method. <i>International Journal of Applied and Computational Mathematics</i> , 2022, 8, .	0.9	5
9	Spatiotemporal (target) patterns in sub-diffusive predator-prey system with the Caputo operator. <i>Chaos, Solitons and Fractals</i> , 2022, 160, 112267.	2.5	22
10	Efficient numerical techniques for computing the Riesz fractional-order reaction-diffusion models arising in biology. <i>Chaos, Solitons and Fractals</i> , 2022, 161, 112394.	2.5	27
11	Numerical approach to chaotic pattern formation in diffusive predator–prey system with Caputo fractional operator. <i>Numerical Methods for Partial Differential Equations</i> , 2021, 37, 131-151.	2.0	25
12	Pattern formation in superdiffusion predator–prey–like problems with integer– and noninteger–order derivatives. <i>Mathematical Methods in the Applied Sciences</i> , 2021, 44, 4018-4036.	1.2	19
13	Computational dynamics of predator-prey model with the power-law kernel. <i>Results in Physics</i> , 2021, 21, 103810.	2.0	7
14	Emergent patterns in diffusive Turing-like systems with fractional-order operator. <i>Neural Computing and Applications</i> , 2021, 33, 12703-12720.	3.2	24
15	Computational analysis of different <i>Pseudoplatystoma</i> species patterns the Caputo-Fabrizio derivative. <i>Chaos, Solitons and Fractals</i> , 2021, 144, 110675.	2.5	13
16	Analysis and simulation of herd behaviour dynamics based on derivative with nonlocal and nonsingular kernel. <i>Results in Physics</i> , 2021, 22, 103941.	2.0	11
17	Fractal Fractional Operator Method on HER2+ Breast Cancer Dynamics. <i>International Journal of Applied and Computational Mathematics</i> , 2021, 7, 1.	0.9	21
18	Dynamics of pattern formation process in fractional-order super-diffusive processes: a computational approach. <i>Soft Computing</i> , 2021, 25, 11191-11208.	2.1	12

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19	Robust synchronization of chaotic fractional-order systems with shifted Chebyshev spectral collocation method. <i>Journal of Applied Analysis</i> , 2021, 27, 269-282.	0.2	3
20	Modeling the Transmission Dynamics of COVID-19 Pandemic in Caputo Type Fractional Derivative. <i>Journal of Multiscale Modeling</i> , 2021, 12, .	1.0	39
21	Fractional Adams-Bashforth scheme with the Liouville-Caputo derivative and application to chaotic systems. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2021, 14, 2455.	0.6	8
22	Analysis and pattern formation scenarios in the superdiffusive system of predation described with Caputo operator. <i>Chaos, Solitons and Fractals</i> , 2021, 152, 111468.	2.5	17
23	Numerical simulation of fractional-order reaction-diffusion equations with the Riesz and Caputo derivatives. <i>Neural Computing and Applications</i> , 2020, 32, 4093-4104.	3.2	33
24	Modeling the mechanics of viral kinetics under immune control during primary infection of HIV-1 with treatment in fractional order. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020, 545, 123816.	1.2	92
25	Chaotic dynamics of a fractional order HIV-1 model involving AIDS-related cancer cells. <i>Chaos, Solitons and Fractals</i> , 2020, 140, 110272.	2.5	132
26	Chaotic and spatiotemporal oscillations in fractional reaction-diffusion system. <i>Chaos, Solitons and Fractals</i> , 2020, 141, 110302.	2.5	25
27	Dynamics of multi-pulse splitting process in one-dimensional Gray-Scott system with fractional order operator. <i>Chaos, Solitons and Fractals</i> , 2020, 136, 109835.	2.5	19
28	Computational techniques for highly oscillatory and chaotic wave problems with fractional-order operator. <i>European Physical Journal Plus</i> , 2020, 135, 1.	1.2	14
29	Modelling of Chaotic Processes with Caputo Fractional Order Derivative. <i>Entropy</i> , 2020, 22, 1027.	1.1	17
30	A nonlinear epidemiological model considering asymptotic and quarantine classes for SARS CoV-2 virus. <i>Chaos, Solitons and Fractals</i> , 2020, 138, 109953.	2.5	70
31	Global dynamics of a fractional order model for the transmission of HIV epidemic with optimal control. <i>Chaos, Solitons and Fractals</i> , 2020, 138, 109826.	2.5	132
32	High-dimensional spatial patterns in fractional reaction-diffusion system arising in biology. <i>Chaos, Solitons and Fractals</i> , 2020, 134, 109723.	2.5	48
33	Mathematical modelling of multi-mutation and drug resistance model with fractional derivative. <i>AEJ - Alexandria Engineering Journal</i> , 2020, 59, 2291-2304.	3.4	13
34	Analysis of fractal fractional differential equations. <i>AEJ - Alexandria Engineering Journal</i> , 2020, 59, 1117-1134.	3.4	166
35	Fractional operator method on a multi-mutation and intrinsic resistance model. <i>AEJ - Alexandria Engineering Journal</i> , 2020, 59, 1999-2013.	3.4	20
36	Modelling and analysis of fractal-fractional partial differential equations: Application to reaction-diffusion model. <i>AEJ - Alexandria Engineering Journal</i> , 2020, 59, 2477-2490.	3.4	139

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37	Mathematical Modelling and Analysis of Fractional Epidemic Models Using Derivative with Exponential Kernel. , 2020, , 109-128.		4
38	Dynamical behaviour of fractional-order predator-prey system of Holling-type. Discrete and Continuous Dynamical Systems - Series S, 2020, 13, 823-834.	0.6	8
39	Numerical simulation of multidimensional nonlinear fractional Ginzburg-Landau equations. Discrete and Continuous Dynamical Systems - Series S, 2020, 13, 835-851.	0.6	4
40	Numerical Simulation of Nonlinear Ecological Models with Nonlocal and Nonsingular Fractional Derivative. Forum for Interdisciplinary Mathematics, 2020, , 303-320.	0.8	0
41	Modelling and Analysis of Predation System with Nonlocal and Nonsingular Operator. Forum for Interdisciplinary Mathematics, 2020, , 261-282.	0.8	1
42	Computational study of multi-species fractional reaction-diffusion system with ABC operator. Chaos, Solitons and Fractals, 2019, 128, 280-289.	2.5	44
43	On the dynamics of fractional maps with power-law, exponential decay and Mittag-Leffler memory. Chaos, Solitons and Fractals, 2019, 127, 364-388.	2.5	42
44	Modeling and simulation of nonlinear dynamical system in the frame of nonlocal and non-singular derivatives. Chaos, Solitons and Fractals, 2019, 127, 146-157.	2.5	32
45	Numerical Methods for Fractional Differentiation. Springer Series in Computational Mathematics, 2019, , .	0.1	52
46	Mathematical modeling and analysis of two-variable system with noninteger-order derivative. Chaos, 2019, 29, 013145.	1.0	62
47	Modelling, analysis and simulations of some chaotic systems using derivative with Mittag-Leffler kernel. Chaos, Solitons and Fractals, 2019, 125, 54-63.	2.5	37
48	Mathematical analysis and computational experiments for an epidemic system with nonlocal and nonsingular derivative. Chaos, Solitons and Fractals, 2019, 126, 41-49.	2.5	91
49	Mathematical analysis and numerical simulation of a fractional reaction-diffusion system with Holling-type III functional response. International Journal of Mathematical Modelling and Numerical Optimisation, 2019, 9, 196.	0.1	2
50	Spatiotemporal patterns in the Belousov-Zhabotinskii reaction systems with Atangana-Baleanu fractional order derivative. Physica A: Statistical Mechanics and Its Applications, 2019, 523, 1072-1090.	1.2	93
51	Behavioural study of symbiosis dynamics via the Caputo and Atangana-Baleanu fractional derivatives. Chaos, Solitons and Fractals, 2019, 122, 89-101.	2.5	39
52	Numerical Techniques for Fractional Competition Dynamics with Power-, Exponential- and Mittag-Leffler Laws. Studies in Systems, Decision and Control, 2019, , 313-332.	0.8	1
53	Numerical Solution of Space-Time-Fractional Reaction-Diffusion Equations via the Caputo and Riesz Derivatives. Studies in Systems, Decision and Control, 2019, , 161-188.	0.8	5
54	Mathematical modelling and analysis of love dynamics: A fractional approach. Physica A: Statistical Mechanics and Its Applications, 2019, 525, 849-865.	1.2	37

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55	On the formulation of Adams-Bashforth scheme with Atangana-Baleanu-Caputo fractional derivative to model chaotic problems. <i>Chaos</i> , 2019, 29, 023111.	1.0	126
56	Numerical Solutions and Pattern Formation Process in Fractional Diffusion-Like Equations. <i>Studies in Systems, Decision and Control</i> , 2019, , 195-216.	0.8	3
57	Computational study of noninteger order system of predation. <i>Chaos</i> , 2019, 29, 013120.	1.0	21
58	Review of Fractional Differentiation. <i>Springer Series in Computational Mathematics</i> , 2019, , 1-82.	0.1	6
59	Finite Difference Approximations. <i>Springer Series in Computational Mathematics</i> , 2019, , 83-137.	0.1	3
60	Numerical analysis and pattern formation process for space-fractional superdiffusive systems. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2019, 12, 543-566.	0.6	11
61	High-order solvers for space-fractional differential equations with Riesz derivative. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2019, 12, 567-590.	0.6	12
62	Efficient numerical method for a model arising in biological stoichiometry of tumour dynamics. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2019, 12, 591-613.	0.6	4
63	Numerical solution for a problem arising in angiogenic signalling. <i>AIMS Mathematics</i> , 2019, 4, 43-60.	0.7	4
64	Numerical Approximation of Caputo's Fabrizio Differentiation. <i>Springer Series in Computational Mathematics</i> , 2019, , 175-194.	0.1	0
65	Numerical Approximation of Caputo Differentiation. <i>Springer Series in Computational Mathematics</i> , 2019, , 161-173.	0.1	0
66	Mathematical analysis and numerical simulation of a fractional reaction-diffusion system with Holling-type III functional response. <i>International Journal of Mathematical Modelling and Numerical Optimisation</i> , 2019, 9, 196.	0.1	0
67	Numerical Approximation of Riemann's Liouville Differentiation. <i>Springer Series in Computational Mathematics</i> , 2019, , 139-160.	0.1	0
68	Preface: New trends on numerical analysis and analytical methods with their applications to real world problems. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2019, 12, 1-10.	0.6	1
69	Application to Partial Fractional Differential Equation. <i>Springer Series in Computational Mathematics</i> , 2019, , 251-328.	0.1	0
70	Application to Ordinary Fractional Differential Equations. <i>Springer Series in Computational Mathematics</i> , 2019, , 203-249.	0.1	0
71	Numerical approach to fractional blow-up equations with Atangana-Baleanu derivative in Riemann-Liouville sense. <i>Mathematical Modelling of Natural Phenomena</i> , 2018, 13, 7.	0.9	36
72	Efficient numerical simulation of non-integer-order space-fractional reaction-diffusion equation via the Riemann-Liouville operator. <i>European Physical Journal Plus</i> , 2018, 133, 1.	1.2	26

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73	Robustness of fractional difference schemes via the Caputo subdiffusion-reaction equations. <i>Chaos, Solitons and Fractals</i> , 2018, 111, 119-127.	2.5	53
74	New numerical approach for fractional differential equations. <i>Mathematical Modelling of Natural Phenomena</i> , 2018, 13, 3.	0.9	209
75	Mathematical and computational studies of fractional reaction-diffusion system modelling predator-prey interactions. <i>Journal of Numerical Mathematics</i> , 2018, .	1.8	3
76	Modelling and simulation of a dynamical system with the Atangana-Baleanu fractional derivative. <i>European Physical Journal Plus</i> , 2018, 133, 1.	1.2	72
77	Modelling and formation of spatiotemporal patterns of fractional predation system in subdiffusion and superdiffusion scenarios. <i>European Physical Journal Plus</i> , 2018, 133, 1.	1.2	28
78	Numerical simulations of chaotic and complex spatiotemporal patterns in fractional reaction-diffusion systems. <i>Computational and Applied Mathematics</i> , 2018, 37, 2166-2189.	1.3	43
79	Dynamical study of two predators and one prey system with fractional Fourier transform method. <i>Numerical Methods for Partial Differential Equations</i> , 2018, 34, 1614-1636.	2.0	7
80	Mathematical analysis and numerical simulation of chaotic noninteger order differential systems with Riemann-Liouville derivative. <i>Numerical Methods for Partial Differential Equations</i> , 2018, 34, 274-295.	2.0	40
81	Numerical simulations of multilingual competition dynamics with nonlocal derivative. <i>Chaos, Solitons and Fractals</i> , 2018, 117, 175-182.	2.5	20
82	Numerical patterns in system of integer and non-integer order derivatives. <i>Chaos, Solitons and Fractals</i> , 2018, 115, 143-153.	2.5	21
83	Numerical patterns in reaction-diffusion system with the Caputo and Atangana-Baleanu fractional derivatives. <i>Chaos, Solitons and Fractals</i> , 2018, 115, 160-169.	2.5	47
84	Analysis and numerical simulation of multicomponent system with Atangana-Baleanu fractional derivative. <i>Chaos, Solitons and Fractals</i> , 2018, 115, 127-134.	2.5	43
85	Chaotic behaviour in system of noninteger-order ordinary differential equations. <i>Chaos, Solitons and Fractals</i> , 2018, 115, 362-370.	2.5	56
86	Focus Point on Modelling Complex Real-World Problems with Fractal and New Trends of Fractional Differentiation. <i>European Physical Journal Plus</i> , 2018, 133, 1.	1.2	8
87	Riemann-Liouville Fractional Derivative and Application to Model Chaotic Differential Equations. <i>Progress in Fractional Differentiation and Applications</i> , 2018, 4, 99-110.	1.1	22
88	Numerical analysis of polio model: A new approach to epidemiological model using derivative with Mittag-Leffler Kernel. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2018, .	0.6	0
89	Numerical Simulation of Noninteger Order System in Subdiffusive, Diffusive, and Superdiffusive Scenarios. <i>Journal of Computational and Nonlinear Dynamics</i> , 2017, 12, .	0.7	31
90	Barycentric Jacobi Spectral Method for Numerical Solutions of the Generalized Burgers-Huxley Equation. <i>International Journal of Nonlinear Sciences and Numerical Simulation</i> , 2017, 18, 67-81.	0.4	5

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91	Numerical approximation of nonlinear fractional parabolic differential equations with Caputo's Fabrizio derivative in Riemann's Liouville sense. <i>Chaos, Solitons and Fractals</i> , 2017, 99, 171-179.	2.5	71
92	Mathematical study of multispecies dynamics modeling predator-prey spatial interactions. <i>Journal of Numerical Mathematics</i> , 2017, 25, 1-16.	1.8	21
93	Mathematical analysis and numerical simulation of two-component system with non-integer-order derivative in high dimensions. <i>Advances in Difference Equations</i> , 2017, 2017, .	3.5	19
94	Mathematical modelling and analysis of two-component system with Caputo fractional derivative order. <i>Chaos, Solitons and Fractals</i> , 2017, 103, 544-554.	2.5	49
95	Analysis of Mathematics and Numerical Pattern Formation in Superdiffusive Fractional Multicomponent System. <i>Advances in Applied Mathematics and Mechanics</i> , 2017, 9, 1438-1460.	0.7	16
96	Analysis and application of new fractional Adams-Bashforth scheme with Caputo's Fabrizio derivative. <i>Chaos, Solitons and Fractals</i> , 2017, 105, 111-119.	2.5	89
97	Spatiotemporal Dynamics of Fractional Predator-Prey System with Stage Structure for the Predator. <i>International Journal of Applied and Computational Mathematics</i> , 2017, 3, 903-924.	0.9	15
98	Robust and adaptive techniques for numerical simulation of nonlinear partial differential equations of fractional order. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2017, 44, 304-317.	1.7	99
99	Fourier spectral method for higher order space fractional reaction-diffusion equations. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2016, 40, 112-128.	1.7	120
100	Numerical solution of diffusive HBV model in a fractional medium. <i>SpringerPlus</i> , 2016, 5, 1643.	1.2	37
101	Numerical solution of fractional-in-space nonlinear Schrödinger equation with the Riesz fractional derivative. <i>European Physical Journal Plus</i> , 2016, 131, 1.	1.2	66
102	Solution of Pattern Waves for Diffusive Fisher-like Non-linear Equations with Adaptive Methods. <i>International Journal of Nonlinear Sciences and Numerical Simulation</i> , 2016, 17, 291-304.	0.4	8
103	Mathematical analysis and numerical simulation of patterns in fractional and classical reaction-diffusion systems. <i>Chaos, Solitons and Fractals</i> , 2016, 93, 89-98.	2.5	65
104	Mathematical study of two-variable systems with adaptive numerical methods. <i>Numerical Analysis and Applications</i> , 2016, 9, 218-230.	0.2	9
105	Effect of spatial configuration of an extended nonlinear Kierstead-Slobodkin reaction-transport model with adaptive numerical scheme. <i>SpringerPlus</i> , 2016, 5, 303.	1.2	13
106	Numerical simulations of multicomponent ecological models with adaptive methods. <i>Theoretical Biology and Medical Modelling</i> , 2016, 13, 1.	2.1	61
107	Existence and Permanence in a Diffusive KiSS Model with Robust Numerical Simulations. <i>International Journal of Differential Equations</i> , 2015, 2015, 1-8.	0.3	8
108	Robust IMEX Schemes for Solving Two-Dimensional Reaction-Diffusion Models. <i>International Journal of Nonlinear Sciences and Numerical Simulation</i> , 2015, 16, 271-284.	0.4	31

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109	Numerical Solution of Singular Patterns in One-dimensional Gray-Scott-like Models. International Journal of Nonlinear Sciences and Numerical Simulation, 2014, 15, 437-462.	0.4	43
110	Higher-order time-stepping methods for time-dependent reaction-diffusion equations arising in biology. Applied Mathematics and Computation, 2014, 240, 30-50.	1.4	73
111	Mathematical analysis and numerical simulation of a tumor-host model with chemotherapy application. Communications in Mathematical Biology and Neuroscience, 0, , .	0.0	2