

# Emad E Mahmoud

## List of Publications by Year in descending order

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102  
papers

2,284  
citations

257450

24  
h-index

243625

44  
g-index

104  
all docs

104  
docs citations

104  
times ranked

1039  
citing authors

#	ARTICLE	IF	CITATIONS
1	A numerical study on fractional differential equation with population growth model. Numerical Methods for Partial Differential Equations, 2024, 40, .	3.6	6
2	Nanoparticles shape effect on the efficiency of microheat sinks with tightly packed pin-fins. Chemical Engineering Communications, 2023, 210, 460-470.	2.6	7
3	Numerical evaluation of the effect of nano-additive type on the second-law performance of $\hat{\Gamma}^3$ -AIOOH nano-fluid flow in a wavy microchannel. Chemical Engineering Communications, 2023, 210, 536-548.	2.6	5
4	Investigating the thermal efficiency and pressure drop of a nanofluid within a micro heat sink with a new circular design used to cool electronic equipment. Chemical Engineering Communications, 2022, 209, 1035-1047.	2.6	11
5	FRACTIONAL POWER SERIES APPROACH FOR THE SOLUTION OF FRACTIONAL-ORDER INTEGRO-DIFFERENTIAL EQUATIONS. Fractals, 2022, 30, .	3.7	2
6	Investigation of shape effects of Cu-nanoparticle on heat transfer of MHD rotating flow over nonlinear stretching sheet. AEJ - Alexandria Engineering Journal, 2022, 61, 4457-4466.	6.4	10
7	An Efficient Energy Management Routing and Scalable Topology in Wireless Sensor Network Using Virtual Backbone. Wireless Communications and Mobile Computing, 2022, 2022, 1-10.	1.2	0
8	Bayesian Estimation of Different Scale Parameters Using a LINEX Loss Function. Computational Intelligence and Neuroscience, 2022, 2022, 1-12.	1.7	1
9	Applications of Prabhakar-like Fractional Derivative for the Solution of Viscous Type Fluid with Newtonian Heating Effect. Fractal and Fractional, 2022, 6, 265.	3.3	8
10	On Solutions of Hybrid "Sturm-Liouville" Langevin Equations with Generalized Versions of Caputo Fractional Derivatives. Journal of Function Spaces, 2022, 2022, 1-9.	0.9	1
11	Problem of p- and SV-waves reflection and transmission during two media under three thermoelastic theories and electromagnetic field with and without gravity. Waves in Random and Complex Media, 2021, 31, 1-24.	2.7	22
12	A production inventory model with partial trade credit policy and reliability. AEJ - Alexandria Engineering Journal, 2021, 60, 1325-1338.	6.4	28
13	Control and synchronization of the hyperchaotic attractor for a 5-D self-exciting homopolar disc dynamo. AEJ - Alexandria Engineering Journal, 2021, 60, 1173-1181.	6.4	5
14	On the dissipativity property of negative imaginary systems. AEJ - Alexandria Engineering Journal, 2021, 60, 1403-1410.	6.4	5
15	Accurate spectral algorithm for two-dimensional variable-order fractional percolation equations. Mathematical Methods in the Applied Sciences, 2021, 44, 6228-6238.	2.3	1
16	Analysis and control of a fractional chaotic tumour growth and decay model. Results in Physics, 2021, 20, 103677.	4.1	4
17	Mathematical Modeling on Rotational Magneto-Thermoelastic Phenomenon under Gravity and Laser Pulse considering Four Theories. Complexity, 2021, 2021, 1-15.	1.6	1
18	Analysis and control of the fractional chaotic Hopfield neural network. Advances in Difference Equations, 2021, 2021, .	3.5	4

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19	Chaos control and analysis of fractional order neural network under electromagnetic radiation. Results in Physics, 2021, 21, 103786.	4.1	15
20	Mathematical analysis of COVID-19 via new mathematical model. Chaos, Solitons and Fractals, 2021, 143, 110585.	5.1	40
21	Optical solitons in birefringent fibers with quadratic-cubic nonlinearity using three integration architectures. AIP Advances, 2021, 11, .	1.3	25
22	Quaternion anti-synchronization of a novel realizable fractional chaotic model. Chaos, Solitons and Fractals, 2021, 144, 110715.	5.1	6
23	An efficient approach for fractional nonlinear chaotic model with Mittag-Leffler law. Journal of King Saud University - Science, 2021, 33, 101347.	3.5	10
24	Numerical solution of two-dimensional fractional order Volterra integro-differential equations. AIP Advances, 2021, 11, 035232.	1.3	5
25	Sensitivity analysis and optimal control of COVID-19 dynamics based on SEIQR model. Results in Physics, 2021, 22, 103956.	4.1	27
26	Numerical study of fractional order COVID-19 pandemic transmission model in context of ABO blood group. Results in Physics, 2021, 22, 103852.	4.1	19
27	Application of triple compound combination anti-synchronization among parallel fractional snap systems & electronic circuit implementation. Advances in Difference Equations, 2021, 2021, .	3.5	3
28	Bernstein basis functions based algorithm for solving system of third order initial value problems. AEJ - Alexandria Engineering Journal, 2021, 60, 2395-2404.	6.4	1
29	Impact of pangolin bootleg market on the dynamics of COVID-19 model. Results in Physics, 2021, 23, 103913.	4.1	2
30	Numerical solution of 2D-fuzzy Fredholm integral equations using optimal homotopy asymptotic method. AEJ - Alexandria Engineering Journal, 2021, 60, 2483-2490.	6.4	5
31	Fractional order biological snap oscillator: Analysis and control. Chaos, Solitons and Fractals, 2021, 145, 110763.	5.1	14
32	Evaluating the efficiency of pin-fin micro-heat sink considering different shapes of nanoparticle based on exergy analysis. Journal of Thermal Analysis and Calorimetry, 2021, 145, 1623-1632.	3.6	9
33	Numerical simulation and exergy analysis of a novel nanofluid-cooled heat sink. Journal of Thermal Analysis and Calorimetry, 2021, 145, 1651-1660.	3.6	12
34	Chaos control and Penta-compound combination anti-synchronization on a novel fractional chaotic system with analysis and application. Results in Physics, 2021, 24, 104130.	4.1	12
35	Solution of third order linear and nonlinear boundary value problems of integro-differential equations using Haar Wavelet method. Results in Physics, 2021, 25, 104176.	4.1	9
36	Hybrid price and stock dependent inventory model for perishable goods with advance payment related discount facilities under preservation technology. AEJ - Alexandria Engineering Journal, 2021, 60, 3455-3465.	6.4	38

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37	Haar wavelets multi-resolution collocation procedures for two-dimensional nonlinear Schrödinger equation. AEJ - Alexandria Engineering Journal, 2021, 60, 3057-3071.	6.4	19
38	Fractional chaotic cryptovirology in blockchain - analysis and control. Chaos, Solitons and Fractals, 2021, 148, 110989.	5.1	1
39	Dynamics and Robust Control of a New Realizable Chaotic Nonlinear Model. Complexity, 2021, 2021, 1-17.	1.6	4
40	Theoretical and numerical analysis of novel COVID-19 via fractional order mathematical model. Results in Physics, 2021, 20, 103676.	4.1	18
41	Effects of Energy Dissipation and Deformation Function on the Entanglement, Photon Statistics and Quantum Fisher Information of Three-Level Atom in Photon-Added Coherent States for Morse Potential. Symmetry, 2021, 13, 2188.	2.2	3
42	Entropy Optimized Second Grade Fluid with MHD and Marangoni Convection Impacts: An Intelligent Neuro-Computing Paradigm. Coatings, 2021, 11, 1492.	2.6	17
43	A hyperchaotic detuned laser model with an infinite number of equilibria existing on a plane and its modified complex phase synchronization with time lag. Chaos, Solitons and Fractals, 2020, 130, 109442.	5.1	13
44	Specialized study to perform complex phase synchronization of two chaotic complex systems including a similar structure of direct terms with modifying in nonlinear terms. Mathematical Methods in the Applied Sciences, 2020, 43, 1516-1529.	2.3	1
45	Dynamical analysis and chaos control of the fractional chaotic ecological model. Chaos, Solitons and Fractals, 2020, 141, 110348.	5.1	19
46	Meshless Analysis of Nonlocal Boundary Value Problems in Anisotropic and Inhomogeneous Media. Mathematics, 2020, 8, 2045.	2.2	14
47	Anti-synchronized quad-compound combination among parallel systems of fractional chaotic system with application. AEJ - Alexandria Engineering Journal, 2020, 59, 4183-4200.	6.4	16
48	Third-Order Neutral Delay Differential Equations: New Iterative Criteria for Oscillation. Journal of Function Spaces, 2020, 2020, 1-8.	0.9	2
49	A Grey Wolf-Based Method for Mammographic Mass Classification. Applied Sciences (Switzerland), 2020, 10, 8422.	2.5	8
50	A Hybrid Semantic Knowledge Integration and Sharing Approach for Distributed Smart Environments. Sensors, 2020, 20, 5918.	3.8	2
51	Circular Intensely Orthogonal Double Cover Design of Balanced Complete Multipartite Graphs. Symmetry, 2020, 12, 1743.	2.2	5
52	A Novel Strategy for Complete and Phase Robust Synchronizations of Chaotic Nonlinear Systems. Symmetry, 2020, 12, 1765.	2.2	13
53	Secure communication and synchronizations in light of the stability theory of the hyperchaotic complex nonlinear systems. Journal of Intelligent and Fuzzy Systems, 2020, 38, 2569-2583.	1.4	2
54	Secure communications via complex phase synchronization of pair complex chaotic structures with a similar structure of linear terms with modifying in nonlinear terms. AEJ - Alexandria Engineering Journal, 2020, 59, 1107-1116.	6.4	3

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55	Quaternion nonlinear $L^{\frac{1}{4}}$ model and its novel quaternion complete synchronization. AEJ - Alexandria Engineering Journal, 2020, 59, 1391-1403.	6.4	4
56	Complex modified projective phase synchronization of nonlinear chaotic frameworks with complex variables. AEJ - Alexandria Engineering Journal, 2020, 59, 1265-1273.	6.4	4
57	Signal flow graph and control of realizable autonomous nonlinear Chen model with quaternion variables. AEJ - Alexandria Engineering Journal, 2020, 59, 1287-1305.	6.4	11
58	Product Replacement Policy in a Production Inventory Model with Replacement Period-, Stock-, and Price-Dependent Demand. Journal of Mathematics, 2020, 2020, 1-8.	1.0	13
59	A powerful numerical technique for treating twelfth-order boundary value problems. Open Physics, 2020, 18, 1048-1062.	1.7	1
60	Complex anti-synchronization of two indistinguishable chaotic complex nonlinear models. Measurement and Control, 2019, 52, 922-928.	1.8	7
61	A phenomenal form of complex synchronization and chaotic masking communication between two identical chaotic complex nonlinear structures with unknown parameters. Results in Physics, 2019, 14, 102452.	4.1	9
62	A new memristive model with complex variables and its generalized complex synchronizations with time lag. Results in Physics, 2019, 15, 102619.	4.1	2
63	A New Nine-Dimensional Chaotic Lorenz System with Quaternion Variables: Complicated Dynamics, Electronic Circuit Design, Anti-Anticipating Synchronization, and Chaotic Masking Communication Application. Mathematics, 2019, 7, 877.	2.2	22
64	A general formula of complex synchronizations with complex scaling diagonal matrix and time lag. Results in Physics, 2019, 12, 603-614.	4.1	2
65	Secure communications via modified complex phase synchronization of two hyperchaotic complex models with identical linear structure and adjusting in nonlinear terms. Journal of Intelligent and Fuzzy Systems, 2019, 37, 17-25.	1.4	8
66	Synchronization of time delay systems with non-diagonal complex scaling functions. Chaos, Solitons and Fractals, 2018, 111, 86-95.	5.1	11
67	Dynamical properties and complex anti synchronization with applications to secure communications for a novel chaotic complex nonlinear model. Chaos, Solitons and Fractals, 2018, 106, 273-284.	5.1	38
68	On Phase and Anti-Phase Combination Synchronization of Time Delay Nonlinear Systems. Journal of Computational and Nonlinear Dynamics, 2018, 13, .	1.2	3
69	High dimensional, four positive Lyapunov exponents and attractors with four scroll during a new hyperchaotic complex nonlinear model. AIP Advances, 2018, 8, 065018.	1.3	11
70	Problem of Longitudinal and Secondary Vertically Waves Reflection and Transmission during Two Media in the Context of Three Magneto-thermoelastic Theories with Varies Fields. Applied Mathematics and Information Sciences, 2018, 12, 957-968.	0.5	1
71	Projective synchronization for coupled partially linear complex variable systems with known parameters. Mathematical Methods in the Applied Sciences, 2017, 40, 1214-1222.	2.3	25
72	Dynamical behaviors, control and synchronization of a new chaotic model with complex variables and cubic nonlinear terms. Results in Physics, 2017, 7, 1346-1356.	4.1	24

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73	Chaos control of integer and fractional orders of chaotic Burkeâ€“Shaw system using time delayed feedback control. <i>Chaos, Solitons and Fractals</i> , 2017, 104, 680-692.	5.1	58
74	A novel sort of adaptive complex synchronizations of two indistinguishable chaotic complex nonlinear models with uncertain parameters and its applications in secure communications. <i>Results in Physics</i> , 2017, 7, 4174-4182.	4.1	12
75	An unusual kind of complex synchronizations and its applications in secure communications. <i>European Physical Journal Plus</i> , 2017, 132, 1.	2.6	17
76	Bifurcations and chaos of time delay Lorenz system with dimension $2n+1$ . <i>European Physical Journal Plus</i> , 2017, 132, 1.	2.6	14
77	A New Nonlinear Chaotic Complex Model and Its Complex Antilag Synchronization. <i>Complexity</i> , 2017, 2017, 1-13.	1.6	18
78	On modified time delay hyperchaotic complex $L^{\frac{1}{4}}$ system. <i>Nonlinear Dynamics</i> , 2015, 80, 855-869.	5.2	25
79	Analytical and Numerical Study of the Projective Synchronization of the Chaotic Complex Nonlinear Systems with Uncertain Parameters and Its Applications in Secure Communication. <i>Mathematical Problems in Engineering</i> , 2014, 2014, 1-10.	1.1	14
80	Complex complete synchronization of two nonidentical hyperchaotic complex nonlinear systems. <i>Mathematical Methods in the Applied Sciences</i> , 2014, 37, 321-328.	2.3	60
81	Complex lag synchronization of two identical chaotic complex nonlinear systems. <i>Open Physics</i> , 2014, 12, .	1.7	5
82	Generation and suppression of a new hyperchaotic nonlinear model with complex variables. <i>Applied Mathematical Modelling</i> , 2014, 38, 4445-4459.	4.2	14
83	Complex modified projective synchronization of two chaotic complex nonlinear systems. <i>Nonlinear Dynamics</i> , 2013, 73, 2231-2240.	5.2	62
84	Modified projective phase synchronization of chaotic complex nonlinear systems. <i>Mathematics and Computers in Simulation</i> , 2013, 89, 69-85.	4.4	39
85	On projective synchronization of hyperchaotic complex nonlinear systems based on passive theory for secure communications. <i>Physica Scripta</i> , 2013, 87, 055002.	2.5	53
86	Controlling hyperchaotic complex systems with unknown parameters based on adaptive passive method. <i>Chinese Physics B</i> , 2013, 22, 060508.	1.4	14
87	Passive control of n-dimensional chaotic complex nonlinear systems. <i>JVC/Journal of Vibration and Control</i> , 2013, 19, 1061-1071.	2.6	28
88	Anti-lag synchronisation of hyperchaotic complex non-linear systems. <i>International Journal of Computing Science and Mathematics</i> , 2013, 4, 197.	0.3	1
89	Lag synchronization of hyperchaotic complex nonlinear systems via passive control. <i>Applied Mathematics and Information Sciences</i> , 2013, 7, 1429-1436.	0.5	20
90	Dynamics and synchronization of new hyperchaotic complex Lorenz system. <i>Mathematical and Computer Modelling</i> , 2012, 55, 1951-1962.	2.0	85

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91	Adaptive anti-lag synchronization of two identical or non-identical hyperchaotic complex nonlinear systems with uncertain parameters. <i>Journal of the Franklin Institute</i> , 2012, 349, 1247-1266.	3.4	60
92	Lag synchronization of hyperchaotic complex nonlinear systems. <i>Nonlinear Dynamics</i> , 2012, 67, 1613-1622.	5.2	92
93	MODIFIED PROJECTIVE LAG SYNCHRONIZATION OF TWO NONIDENTICAL HYPERCHAOTIC COMPLEX NONLINEAR SYSTEMS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2011, 21, 2369-2379.	1.7	31
94	Phase and antiphase synchronization of two identical hyperchaotic complex nonlinear systems. <i>Nonlinear Dynamics</i> , 2010, 61, 141-152.	5.2	111
95	Complete synchronization of chaotic complex nonlinear systems with uncertain parameters. <i>Nonlinear Dynamics</i> , 2010, 62, 875-882.	5.2	186
96	Synchronization and control of hyperchaotic complex Lorenz system. <i>Mathematics and Computers in Simulation</i> , 2010, 80, 2286-2296.	4.4	75
97	Chaos synchronization of two different chaotic complex Chen and $L\ddot{A}^{1/4}$ systems. <i>Nonlinear Dynamics</i> , 2009, 55, 43-53.	5.2	66
98	On the hyperchaotic complex $L\ddot{A}^{1/4}$ system. <i>Nonlinear Dynamics</i> , 2009, 58, 725-738.	5.2	110
99	Chaotic synchronization of two complex nonlinear oscillators. <i>Chaos, Solitons and Fractals</i> , 2009, 42, 2858-2864.	5.1	10
100	ANALYSIS OF HYPERCHAOTIC COMPLEX LORENZ SYSTEMS. <i>International Journal of Modern Physics C</i> , 2008, 19, 1477-1494.	1.7	92
101	ACTIVE CONTROL AND GLOBAL SYNCHRONIZATION OF THE COMPLEX CHEN AND $L\ddot{A}^{\infty}$ SYSTEMS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2007, 17, 4295-4308.	1.7	169
102	Numerical study of heat transfer and friction drag in MHD viscous flow of a nanofluid subject to the curved surface. <i>Waves in Random and Complex Media</i> , 0, , 1-16.	2.7	8