

Muhammad Usman

List of Publications by Year in descending order

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1,203
citations

361413

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all docs

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docs citations

58
times ranked

740
citing authors

#	ARTICLE	IF	CITATIONS
1	Shape effects of MoS ₂ nanoparticles on rotating flow of nanofluid along a stretching surface with variable thermal conductivity: A Galerkin approach. <i>International Journal of Heat and Mass Transfer</i> , 2018, 124, 706-714.	4.8	118
2	Least square study of heat transfer of water based Cu and Ag nanoparticles along a converging/diverging channel. <i>Journal of Molecular Liquids</i> , 2018, 249, 856-867.	4.9	66
3	Thermal management of MHD nanofluid within the porous medium enclosed in a wavy shaped cavity with square obstacle in the presence of radiation heat source. <i>International Journal of Heat and Mass Transfer</i> , 2019, 139, 87-94.	4.8	58
4	Numerical investigation of fractional-order unsteady natural convective radiating flow of nanofluid in a vertical channel. <i>AIMS Mathematics</i> , 2019, 4, 1416-1429.	1.6	51
5	Heat and fluid flow of water and ethylene-glycol based Cu-nanoparticles between two parallel squeezing porous disks: LSGM approach. <i>International Journal of Heat and Mass Transfer</i> , 2018, 123, 888-895.	4.8	47
6	An efficient analysis for N-soliton, Lump and lump-kink solutions of time-fractional (2+1)-Kadomtsev-Petviashvili equation. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2019, 528, 121320.	2.6	45
7	Natural convection effects on heat and mass transfer of slip flow of time-dependent Prandtl fluid. <i>Journal of Computational Design and Engineering</i> , 2019, 6, 584-592.	3.1	45
8	Differential transform method for unsteady nanofluid flow and heat transfer. <i>AEJ - Alexandria Engineering Journal</i> , 2018, 57, 1867-1875.	6.4	43
9	Melting heat transfer analysis of Sisko fluid over a moving surface with nonlinear thermal radiation via Collocation method. <i>International Journal of Heat and Mass Transfer</i> , 2018, 126, 1034-1042.	4.8	41
10	An efficient algorithm based on Gegenbauer wavelets for the solutions of variable-order fractional differential equations. <i>European Physical Journal Plus</i> , 2018, 133, 1.	2.6	40
11	Thermal and velocity slip effects on MHD mixed convection flow of Williamson nanofluid along a vertical surface: Modified Legendre wavelets approach. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018, 104, 130-137.	2.7	34
12	A Galerkin approach to analyze MHD flow of nanofluid along converging/diverging channels. <i>Archive of Applied Mechanics</i> , 2021, 91, 1907-1924.	2.2	33
13	Gegenbauer wavelets collocation-based scheme to explore the solution of free bio-convection of nanofluid in 3D nearby stagnation point. <i>Neural Computing and Applications</i> , 2019, 31, 8003-8019.	5.6	32
14	Scalable Synthesis of Sm ₂ O ₃ /Fe ₂ O ₃ Hierarchical Oxygen Vacancy-Based Gyroid-Inspired Morphology: With Enhanced Electrocatalytic Activity for Oxygen Evolution Performance. <i>Energy & Fuels</i> , 2021, 35, 17820-17832.	5.1	32
15	Examination of carbon-water nanofluid flow with thermal radiation under the effect of Marangoni convection. <i>Engineering Computations</i> , 2017, 34, 2330-2343.	1.4	30
16	Compact Ultra-Wide Band MIMO Antenna System for Lower 5G Bands. <i>Wireless Communications and Mobile Computing</i> , 2018, 2018, 1-6.	1.2	30
17	Wavelet investigation of Soret and Dufour effects on stagnation point fluid flow in two dimensions with variable thermal conductivity and diffusivity. <i>Physica Scripta</i> , 2019, 94, 115219.	2.5	28
18	Exploration of uniform heat flux on the flow and heat transportation of ferrofluids along a smooth plate: Comparative investigation. <i>International Journal of Biomathematics</i> , 2018, 11, 1850048.	2.9	27

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19	A study of heat transfer analysis for squeezing flow of a Casson fluid via differential transform method. <i>Neural Computing and Applications</i> , 2018, 30, 3253-3264.	5.6	26
20	Fourth-Order Difference Approximation for Time-Fractional Modified Sub-Diffusion Equation. <i>Symmetry</i> , 2020, 12, 691.	2.2	24
21	A stable computational approach to analyze semi-relativistic behavior of fractional evolutionary problems. <i>Numerical Methods for Partial Differential Equations</i> , 2022, 38, 122-136.	3.6	22
22	A robust scheme based on novel operational matrices for some classes of time-fractional nonlinear problems arising in mechanics and mathematical physics. <i>Numerical Methods for Partial Differential Equations</i> , 2020, 36, 1566-1600.	3.6	22
23	A spectral approach to analyze the nonlinear oscillatory fractional-order differential equations. <i>Chaos, Solitons and Fractals</i> , 2021, 146, 110921.	5.1	22
24	Rotating flow of nanofluid due to exponentially stretching surface: An optimal study. <i>Journal of Algorithms and Computational Technology</i> , 2019, 13, 174830261988136.	0.7	21
25	Operational-matrix-based algorithm for differential equations of fractional order with Dirichlet boundary conditions. <i>European Physical Journal Plus</i> , 2019, 134, 1.	2.6	20
26	Comparison of Lagrange multipliers for telegraph equations. <i>Ain Shams Engineering Journal</i> , 2018, 9, 2323-2328.	6.1	19
27	Unsteady flow and heat transfer of tangent-hyperbolic fluid: Legendre wavelet-based analysis. <i>Heat Transfer</i> , 2021, 50, 3079-3093.	3.0	19
28	Linearized stable spectral method to analyze two-dimensional nonlinear evolutionary and reaction-diffusion models. <i>Numerical Methods for Partial Differential Equations</i> , 2020, , .	3.6	16
29	Finite element analysis of water-based Ferrofluid flow in a partially heated triangular cavity. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2021, 31, 3132-3147.	2.8	16
30	Computational analysis of radiative Williamson hybrid nanofluid comprising variable thermal conductivity. <i>Japanese Journal of Applied Physics</i> , 2021, 60, 087004.	1.5	15
31	Numerical analysis of MHD flow and nanoparticle migration within a permeable space containing Non-equilibrium model. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020, 537, 122459.	2.6	14
32	Natural convection of CuO-water nanofluid filled in a partially heated corrugated cavity: KKL model approach. <i>Communications in Theoretical Physics</i> , 2020, 72, 085003.	2.5	14
33	Hybrid fully spectral linearized scheme for time-fractional evolutionary equations. <i>Mathematical Methods in the Applied Sciences</i> , 2021, 44, 3890-3912.	2.3	14
34	Novel operational matrices-based finite difference/spectral algorithm for a class of time-fractional Burger equation in multidimensions. <i>Chaos, Solitons and Fractals</i> , 2021, 144, 110701.	5.1	13
35	Thermal treatment inside a partially heated triangular cavity filled with casson fluid with an inner cylindrical obstacle via FEM approach. <i>European Physical Journal: Special Topics</i> , 2022, 231, 2683-2694.	2.6	12
36	Fractional analysis of Jeffrey fluid over a vertical plate with time-dependent conductivity and diffusivity: A low-cost spectral approach. <i>Journal of Computational Science</i> , 2022, 63, 101769.	2.9	10

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37	On MHD flow of an incompressible viscous fluid. Journal of the Egyptian Mathematical Society, 2014, 22, 214-219.	1.2	7
38	A Study of Heat and Mass Transfer of Nanofluids Arising in Biosciences Using Buongiorno's Model. International Journal of Computational Methods, 2017, 14, 1750018.	1.3	7
39	Fluid flow and heat transfer investigation of blood with nanoparticles through porous vessels in the presence of magnetic field. Journal of Algorithms and Computational Technology, 2019, 13, 174830181878866.	0.7	7
40	A New Operational Matrices-Based Spectral Method for Multi-Order Fractional Problems. Symmetry, 2020, 12, 1471.	2.2	7
41	A novel scheme for time-fractional semi-relativistic Vlasov-Maxwell system based on laser-plasma interaction with linear polarization and Landau damping instability. Numerical Methods for Partial Differential Equations, 2023, 39, 4432-4453.	3.6	7
42	Tri-prong scheme for regularized long wave equation. Journal of the Association of Arab Universities for Basic and Applied Sciences, 2016, 20, 68-77.	1.0	6
43	Linearized novel operational matrices-based scheme for classes of nonlinear time-space fractional unsteady problems in 2D. Applied Numerical Mathematics, 2021, 162, 351-373.	2.1	5
44	Higher dimensional semi-relativistic time-fractional Vlasov-Maxwell code for numerical simulation based on linear polarization and 2D Landau damping instability. Applied Mathematics and Computation, 2021, 401, 126100.	2.2	5
45	Numerical Solutions of a Heat Transfer for Fractional Maxwell Fluid Flow with Water Based Clay Nanoparticles; A Finite Difference Approach. Fractal and Fractional, 2021, 5, 242.	3.3	5
46	Crank Nicholson scheme to examine the fractional-order unsteady nanofluid flow of free convection of viscous fluids. PLoS ONE, 2022, 17, e0261860.	2.5	5
47	Neuronal dynamics and electrophysiology fractional model: A modified wavelet approach. Physica A: Statistical Mechanics and Its Applications, 2021, 570, 125805.	2.6	4
48	Entropy generation and mixed convection of CuO water near an oblique stagnation point: modified Chebyshev wavelets approach. Waves in Random and Complex Media, 0, , 1-24.	2.7	3
49	Numerical assessment of heat and mass transportation in Al_2O_3 - H_2O nanofluids influenced by Soret and Dufour effects. Scientific Reports, 2022, 12, 3987.	4.0	3
50	Theoretical investigation of time-dependent Oldroyd-B nanofluid flow containing gyrotactic microorganisms due to stretching cylinder. Waves in Random and Complex Media, 0, , 1-19.	2.7	3
51	Atangana-Baleanu Caputo fractional-order modeling of plasma particles with circular polarization of LASER light: An extended version of Vlasov-Maxwell system. AEJ - Alexandria Engineering Journal, 2022, 61, 8641-8652.	6.4	3
52	Magnetic Field Effect on Heat and Momentum of Fractional Maxwell Nanofluid within a Channel by Power Law Kernel Using Finite Difference Method. Complexity, 2022, 2022, 1-16.	1.6	3
53	Numerical Exploration via Least Squares Estimation on Three Dimensional MHD Yield Exhibiting Nanofluid Model with Porous Stretching Boundaries. Fractal and Fractional, 2021, 5, 167.	3.3	2
54	Higher-order algorithms for stable solutions of fractional time-dependent nonlinear telegraph equations in space. Numerical Methods for Partial Differential Equations, 2022, 38, 1293-1318.	3.6	1

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55	Higher-Dimensional Fractional Order Modelling for Plasma Particles with Partial Slip Boundaries: A Numerical Study. <i>Nanomaterials</i> , 2021, 11, 2884.	4.1	1
56	Higher-order accurate and conservative hybrid numerical scheme for multi-variables time-fractional Vlasov-Maxwell system: An Atangana-Baleanu Caputo approach. <i>AEJ - Alexandria Engineering Journal</i> , 2021, 61, 5269-5269.	6.4	0
57	A semi-relativistic time-fractional Vlasov-Maxwell code for numerical simulation based on circular polarization and Landau damping instability. <i>Numerical Methods for Partial Differential Equations</i> , 0, , .	3.6	0
58	Higher-Order Accurate and Conservative Hybrid Numerical Scheme for Relativistic Time-Fractional Vlasov-Maxwell System. <i>Journal of Function Spaces</i> , 2022, 2022, 1-12.	0.9	0