

# Muhammad Sohail

## List of Publications by Year in descending order

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79  
papers

2,278  
citations

257450

24  
h-index

276875

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g-index

79  
all docs

79  
docs citations

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times ranked

768  
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhancement in Thermal Energy and Solute Particles Using Hybrid Nanoparticles by Engaging Activation Energy and Chemical Reaction over a Parabolic Surface via Finite Element Approach. <i>Fractal and Fractional</i> , 2021, 5, 119.	3.3	437
2	On the onset of entropy generation for a nanofluid with thermal radiation and gyrotactic microorganisms through 3D flows. <i>Physica Scripta</i> , 2020, 95, 045206.	2.5	108
3	Modified heat and mass transmission models in the magnetohydrodynamic flow of Sutterby nanofluid in stretching cylinder. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020, 549, 124088.	2.6	98
4	Entropy generation in MHD Casson fluid flow with variable heat conductance and thermal conductivity over non-linear bi-directional stretching surface. <i>Scientific Reports</i> , 2020, 10, 12530.	3.3	68
5	Application of non-Fourier double diffusions theories to the boundary-layer flow of a yield stress exhibiting fluid model. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020, 537, 122753.	2.6	65
6	Numerical approach of variable thermophysical features of dissipated viscous nanofluid comprising gyrotactic micro-organisms. <i>Pramana - Journal of Physics</i> , 2020, 94, 1.	1.8	60
7	Entropy generation optimization in MHD pseudoplastic fluid comprising motile microorganisms with stratification effect. <i>AEJ - Alexandria Engineering Journal</i> , 2020, 59, 485-496.	6.4	58
8	Exploration of temperature dependent thermophysical characteristics of yield exhibiting non-Newtonian fluid flow under gyrotactic microorganisms. <i>AIP Advances</i> , 2019, 9, .	1.3	56
9	Significant Production of Thermal Energy in Partially Ionized Hyperbolic Tangent Material Based on Ternary Hybrid Nanomaterials. <i>Energies</i> , 2021, 14, 6911.	3.1	55
10	Computational exploration for radiative flow of Sutterby nanofluid with variable temperature-dependent thermal conductivity and diffusion coefficient. <i>Open Physics</i> , 2020, 18, 1073-1083.	1.7	54
11	Theoretical exploration of thermal transportation with chemical reactions for sutterby fluid model obeying peristaltic mechanism. <i>Journal of Materials Research and Technology</i> , 2020, 9, 7449-7459.	5.8	52
12	Finite element simulations of hybrid nano-Carreau Yasuda fluid with hall and ion slip forces over rotating heated porous cone. <i>Scientific Reports</i> , 2021, 11, 19604.	3.3	44
13	A Galerkin strategy for tri-hybridized mixture in ethylene glycol comprising variable diffusion and thermal conductivity using non-Fourier's theory. <i>Nanotechnology Reviews</i> , 2022, 11, 834-845.	5.8	44
14	Dynamics of Tri-Hybrid Nanoparticles in the Rheology of Pseudo-Plastic Liquid with Dufour and Soret Effects. <i>Micromachines</i> , 2022, 13, 201.	2.9	42
15	Contribution of joule heating and viscous dissipation on three dimensional flow of Casson model comprising temperature dependent conductance utilizing shooting method. <i>Physica Scripta</i> , 2021, 96, 085208.	2.5	41
16	Investigation of entropy generation in stratified MHD Carreau nanofluid with gyrotactic microorganisms under Von Neumann similarity transformations. <i>European Physical Journal Plus</i> , 2020, 135, 1.	2.6	40
17	Fractional order stagnation point flow of the hybrid nanofluid towards a stretching sheet. <i>Scientific Reports</i> , 2021, 11, 20429.	3.3	40
18	Upshot of ohmically dissipated Darcy-Forchheimer slip flow of magnetohydrodynamic Sutterby fluid over radiating linearly stretched surface in view of Cash and Carp method. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2019, 40, 861-876.	3.6	38

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19	Investigation of thermal performance of Maxwell hybrid nanofluid boundary value problem in vertical porous surface via finite element approach. <i>Scientific Reports</i> , 2022, 12, 2335.	3.3	38
20	Theoretical and numerical investigation of entropy for the variable thermophysical characteristics of couple stress material: Applications to optimization. <i>AEJ - Alexandria Engineering Journal</i> , 2020, 59, 4365-4375.	6.4	36
21	Simultaneous effects of heterogeneous-homogeneous reactions in peristaltic flow comprising thermal radiation: Rabinowitsch fluid model. <i>Journal of Materials Research and Technology</i> , 2020, 9, 3520-3529.	5.8	36
22	Thermal analysis characterisation of solar-powered ship using Oldroyd hybrid nanofluids in parabolic trough solar collector: An optimal thermal application. <i>Nanotechnology Reviews</i> , 2022, 11, 2015-2037.	5.8	32
23	Heat transport in the convective Casson fluid flow with homogeneous&#x2013;heterogeneous reactions in Darcy&#x2013;Forchheimer medium. <i>Multidiscipline Modeling in Materials and Structures</i> , 2019, 15, 1170-1189.	1.3	31
24	Thermal and species transportation of Eyring-Powell material over a rotating disk with swimming microorganisms: applications to metallurgy. <i>Journal of Materials Research and Technology</i> , 2020, 9, 5577-5590.	5.8	28
25	Thermal Improvement in Pseudo-Plastic Material Using Ternary Hybrid Nanoparticles via Non-Fourier&#x2013;Law over Porous Heated Surface. <i>Energies</i> , 2021, 14, 8115.	3.1	28
26	A study of triple-mass diffusion species and energy transfer in Carreau&#x2013;Yasuda material influenced by activation energy and heat source. <i>Scientific Reports</i> , 2022, 12, .	3.3	27
27	Significant Involvement of Double Diffusion Theories on Viscoelastic Fluid Comprising Variable Thermophysical Properties. <i>Micromachines</i> , 2021, 12, 951.	2.9	25
28	Dynamical and optimal procedure to analyze the exhibition of physical attributes imparted by Sutterby magneto-nanofluid in Darcy medium yielded by axially stretched cylinder. <i>Canadian Journal of Physics</i> , 2020, 98, 1-10.	1.1	24
29	Fourth-Order Difference Approximation for Time-Fractional Modified Sub-Diffusion Equation. <i>Symmetry</i> , 2020, 12, 691.	2.2	24
30	Numerical exploration of thermal transport in water-based nanoparticles: A computational strategy. <i>Case Studies in Thermal Engineering</i> , 2021, 27, 101334.	5.7	23
31	Utilization of updated version of heat flux model for the radiative flow of a non-Newtonian material under Joule heating: OHAM application. <i>Open Physics</i> , 2021, 19, 100-110.	1.7	22
32	Numerical exploration of thin film flow of MHD pseudo-plastic fluid in fractional space: Utilization of fractional calculus approach. <i>Open Physics</i> , 2021, 19, 710-721.	1.7	22
33	Finite element analysis for ternary hybrid nanoparticles on thermal enhancement in pseudo-plastic liquid through porous stretching sheet. <i>Scientific Reports</i> , 2022, 12, .	3.3	22
34	An Efficient Numerical Scheme for Variable-Order Fractional Sub-Diffusion Equation. <i>Symmetry</i> , 2020, 12, 1437.	2.2	21
35	Inclusion of hybrid nanoparticles in hyperbolic tangent material to explore thermal transportation via finite element approach engaging Cattaneo-Christov heat flux. <i>PLoS ONE</i> , 2021, 16, e0256302.	2.5	21
36	Meta-analysis on homogeneous-heterogeneous reaction effects in a sinusoidal wavy curved channel. <i>Chemical Physics Letters</i> , 2021, 763, 138200.	2.6	19

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37	Thermal performance of an MHD radiative Oldroyd-B nanofluid by utilizing generalized models for heat and mass fluxes in the presence of bioconvective gyrotactic microorganisms and variable thermal conductivity. <i>Heat Transfer - Asian Research</i> , 2019, 48, 2659-2675.	2.8	17
38	Utilization of hall current and ions slip effects for the dynamic simulation of peristalsis in a compliant channel. <i>AEJ - Alexandria Engineering Journal</i> , 2020, 59, 3609-3622.	6.4	17
39	Computation of traveling wave solution for nonlinear variable-order fractional model of modified equal width equation. <i>AIMS Mathematics</i> , 2021, 6, 10055-10069.	1.6	17
40	Applications of Cattaneo-Christov fluxes on modelling the boundary value problem of Prandtl fluid comprising variable properties. <i>Scientific Reports</i> , 2021, 11, 17837.	3.3	17
41	A dynamic assessment of various non-Newtonian models for ternary hybrid nanomaterial involving partially ionized mechanism. <i>Scientific Reports</i> , 2022, 12, .	3.3	17
42	Utilization of modified Darcy's law in peristalsis with a compliant channel: applications to thermal science. <i>Journal of Materials Research and Technology</i> , 2020, 9, 5619-5629.	5.8	16
43	An inclination in Thermal Energy Using Nanoparticles with Casson Liquid Past an Expanding Porous Surface. <i>Energies</i> , 2021, 14, 7328.	3.1	16
44	Application of double diffusion theories to Maxwell nanofluid under the appliance of thermal radiation and gyrotactic microorganism. <i>Multidiscipline Modeling in Materials and Structures</i> , 2019, 16, 256-280.	1.3	15
45	Computational analysis of radiative Williamson hybrid nanofluid comprising variable thermal conductivity. <i>Japanese Journal of Applied Physics</i> , 2021, 60, 087004.	1.5	15
46	An implication of magnetic dipole in Carreau Yasuda liquid influenced by engine oil using ternary hybrid nanomaterial. <i>Nanotechnology Reviews</i> , 2022, 11, 1620-1632.	5.8	14
47	Impact of viscous dissipation and coriolis effects in heat and mass transfer analysis of the 3D non-Newtonian fluid flow. <i>Case Studies in Thermal Engineering</i> , 2022, 37, 102289.	5.7	14
48	Analysis of radiative magneto nano pseudo-plastic material over three dimensional nonlinear stretched surface with passive control of mass flux and chemically responsive species. <i>Multidiscipline Modeling in Materials and Structures</i> , 2020, 16, 1061-1083.	1.3	13
49	Influence of chemical reactions and mechanism of peristalsis for the thermal distribution obeying slip constraints: Applications to conductive transportation. <i>Journal of Materials Research and Technology</i> , 2020, 9, 6533-6543.	5.8	13
50	Numerical Solutions for Heat Transfer of An Unsteady Cavity with Viscous Heating. <i>Computers, Materials and Continua</i> , 2021, 68, 319-336.	1.9	13
51	Exploration of thermal transport for Sisko fluid model under peristaltic phenomenon. <i>Journal of Physics Communications</i> , 2020, 4, 065003.	1.2	12
52	Contribution of Dufour and Soret effects on hydromagnetized material comprising temperature-dependent thermal conductivity. <i>Heat Transfer</i> , 2021, 50, 7157-7175.	3.0	12
53	Exploration of Temperature-Dependent Thermal Conductivity and Diffusion Coefficient for Thermal and Mass Transportation in Sutterby Nanofluid Model over a Stretching Cylinder. <i>Complexity</i> , 2021, 1-14.	1.6	11
54	Numerical Computation of Dufour and Soret Effects on Radiated Material on a Porous Stretching Surface with Temperature-Dependent Thermal Conductivity. <i>Fluids</i> , 2021, 6, 196.	1.7	11

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55	Analytical Study on Sodium Alginate Based Hybrid Nanofluid Flow through a Shrinking/Stretching Sheet with Radiation, Heat Source and Inclined Lorentz Force Effects. <i>Fractal and Fractional</i> , 2022, 6, 68.	3.3	10
56	Outcome of slip features on the peristaltic flow of a Rabinowitsch nanofluid in an asymmetric flexible channel. <i>Multidiscipline Modeling in Materials and Structures</i> , 2020, 17, 181-197.	1.3	9
57	On Behavioral Response of 3D Squeezing Flow of Nanofluids in a Rotating Channel. <i>Complexity</i> , 2020, 2020, 1-16.	1.6	9
58	Pharmacological and engineering biomedical applications of peristaltically induced flow in a curved channel. <i>AEJ - Alexandria Engineering Journal</i> , 2021, 60, 4995-5008.	6.4	9
59	Dynamical and optimal procedure to analyze the attributes of yield exhibiting material with double diffusion theories. <i>Multidiscipline Modeling in Materials and Structures</i> , 2019, 16, 557-580.	1.3	8
60	Homotopic fractional analysis of thin film flow of Oldroyd 6-Constant fluid. <i>AEJ - Alexandria Engineering Journal</i> , 2021, 60, 5311-5322.	6.4	8
61	Computational Assessment of Thermal and Solute Mechanisms in Carreau-Yasuda Hybrid Nanoparticles Involving Soret and Dufour Effects over Porous Surface. <i>Micromachines</i> , 2021, 12, 1302.	2.9	8
62	Numerical Examination on Impact of Hall Current on Peristaltic Flow of Eyring-Powell Fluid under Ohmic-Thermal Effect with Slip Conditions. <i>Current Nanoscience</i> , 2023, 19, 49-62.	1.2	8
63	An Application of Homotopy Perturbation Method to Fractional-Order Thin Film Flow of the Johnson-Segalman Fluid Model. <i>Mathematical Problems in Engineering</i> , 2022, 2022, 1-17.	1.1	8
64	Theoretical analysis of MHD Carreau liquid over a heated rotating disk under Von-Karman transformations. <i>Multidiscipline Modeling in Materials and Structures</i> , 2019, 16, 390-408.	1.3	7
65	Numerical exploration of thermal and mass transportation by utilising non-Fourier double diffusion theories for Casson model under Hall and ion slip effects. <i>Pramana - Journal of Physics</i> , 2021, 95, 1.	1.8	7
66	A Petrov-Galerkin finite element approach for the unsteady boundary layer upper-convected rotating Maxwell fluid flow and heat transfer analysis. <i>Waves in Random and Complex Media</i> , 0, , 1-18.	2.7	7
67	Peristaltic mechanism of Ellis fluid in curved configuration with homogeneous and heterogeneous effects. <i>AEJ - Alexandria Engineering Journal</i> , 2022, 61, 10677-10688.	6.4	7
68	On Behavioral Response of Microstructural Slip on the Development of Magnetohydrodynamic Micropolar Boundary Layer Flow. <i>Complexity</i> , 2020, 2020, 1-12.	1.6	6
69	Radiative flow of MHD non-Newtonian fluid by utilizing the updated version of heat flux model under Joule heating. <i>Heat Transfer</i> , 2021, 50, 3407-3425.	3.0	6
70	Utilization of modified fluxes on thermal and mass transportation in Williamson material. <i>Advances in Mechanical Engineering</i> , 2022, 14, 168781402210758.	1.6	6
71	Numerical exploration of heat and mass transport for the flow of nanofluid subject to Hall and ion slip effects. <i>Multidiscipline Modeling in Materials and Structures</i> , 2020, 16, 951-965.	1.3	3
72	Modeling of three dimensional Prandtl hybrid nano-material over a heated rotating cone involving hall and ion slip currents via finite element procedure. <i>Scientific Reports</i> , 2022, 12, .	3.3	3

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73	Heat transfer analysis for particle-fluid suspension thermomagneto hydrodynamic peristaltic flow with Darcy-Forchheimer medium. Heat Transfer, 2021, 50, 3547-3563.	3.0	2
74	Vectorial reduced differential transform method for fractional Cauchy-Riemann system of equations. Computational and Mathematical Methods, 2021, 3, .	0.8	2
75	Computational study for temperature distribution in ArF excimer laser corneal refractive surgeries using different beam delivery techniques. Lasers in Medical Science, 2021, , 1.	2.1	2
76	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
77	Utilization of Chebyshev collocation approach for differential, differential-difference and integro-differential equations. Arab Journal of Basic and Applied Sciences, 2021, 28, 413-426.	2.1	2
78	Effect of rotational slip on the physical parameter in a micropolar fluid flow past a stretching sheet. International Journal of Modern Physics B, 2021, 35, 2150169.	2.0	0
79	Novel Schemes for Cauchy-Riemann System of Equations with Cauchy Conditions. Advances in the Theory of Nonlinear Analysis and Its Applications, 0, , .	0.7	0