

Nirmalendu Biswas

List of Publications by Year in descending order

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76
papers

1,618
citations

236925

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h-index

330143

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77
all docs

77
docs citations

77
times ranked

360
citing authors

#	ARTICLE	IF	CITATIONS
1	Analysis of heat transfer and pumping power for bottom-heated porous cavity saturated with Cu-water nanofluid. Powder Technology, 2018, 326, 356-369.	4.2	90
2	Magneto-hydrodynamic thermal convection of Cu-Al ₂ O ₃ /water hybrid nanofluid saturated with porous media subjected to half-sinusoidal nonuniform heating. Journal of Thermal Analysis and Calorimetry, 2021, 143, 1727-1753.	3.6	88
3	Role of surface undulation during mixed bioconvective nanofluid flow in porous media in presence of oxytactic bacteria and magnetic fields. International Journal of Mechanical Sciences, 2021, 211, 106778.	6.7	85
4	Effects of half-sinusoidal nonuniform heating during MHD thermal convection in Cu-Al ₂ O ₃ /water hybrid nanofluid saturated with porous media. Journal of Thermal Analysis and Calorimetry, 2021, 143, 1665-1688.	3.6	75
5	Enhanced convective heat transfer in lid-driven porous cavity with aspiration. International Journal of Heat and Mass Transfer, 2017, 114, 430-452.	4.8	62
6	Thermo-fluidic transport process in a novel M-shaped cavity packed with non-Darcian porous medium and hybrid nanofluid: Application of artificial neural network (ANN). Physics of Fluids, 2022, 34, .	4.0	61
7	Effects of fins on magnetohydrodynamic conjugate natural convection in a nanofluid-saturated porous inclined enclosure. International Communications in Heat and Mass Transfer, 2021, 126, 105413.	5.6	57
8	Enhanced thermal energy transport using adiabatic block inside lid-driven cavity. International Journal of Heat and Mass Transfer, 2016, 100, 407-427.	4.8	55
9	Magneto-hydrodynamic Marangoni flow in bottom-heated lid-driven cavity. Journal of Molecular Liquids, 2018, 251, 249-266.	4.9	54
10	A narrative loom of hybrid nanofluid-filled wavy walled tilted porous enclosure imposing a partially active magnetic field. International Journal of Mechanical Sciences, 2022, 217, 107028.	6.7	51
11	Effect of surface waviness on MHD thermo-gravitational convection of Cu-Al ₂ O ₃ -water hybrid nanofluid in a porous oblique enclosure. Physica Scripta, 2021, 96, 105002.	2.5	50
12	Influence of Heater Aspect Ratio on Natural Convection in a Rectangular Enclosure. Heat Transfer Engineering, 2016, 37, 125-139.	1.9	49
13	Effect of multibanded magnetic field on convective heat transport in linearly heated porous systems filled with hybrid nanofluid. Physics of Fluids, 2021, 33, .	4.0	49
14	Multiplicity of solution for natural convective heat transfer and entropy generation in a semi-elliptical enclosure. Physics of Fluids, 2021, 33, .	4.0	46
15	Merit of non-uniform over uniform heating in a porous cavity. International Communications in Heat and Mass Transfer, 2016, 78, 135-144.	5.6	37
16	Buoyancy-driven fluid and energy flow in protruded heater enclosure. Meccanica, 2016, 51, 2159-2184.	2.0	36
17	Thermo-bioconvection of oxytactic microorganisms in porous media in the presence of magnetic field. International Journal of Numerical Methods for Heat and Fluid Flow, 2021, 31, 1638-1661.	2.8	36
18	Magnetohydrodynamic thermal characteristics of water-based hybrid nanofluid-filled non-Darcian porous wavy enclosure: effect of undulation. International Journal of Numerical Methods for Heat and Fluid Flow, 2022, 32, 1742-1777.	2.8	36

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19	Magnetic force vectors as a new visualization tool for magnetohydrodynamic convection. <i>International Journal of Thermal Sciences</i> , 2021, 167, 107004.	4.9	36
20	A novel multi-banding application of magnetic field to convective transport system filled with porous medium and hybrid nanofluid. <i>Physica Scripta</i> , 2021, 96, 065001.	2.5	35
21	Mixed Convection Heat Transfer in a Grooved Channel with Injection. <i>Numerical Heat Transfer; Part A: Applications</i> , 2015, 68, 663-685.	2.1	33
22	Magnetohydrodynamic mixed bioconvection of oxytactic microorganisms in a nanofluid-saturated porous cavity heated with a bell-shaped curved bottom. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2021, 31, 3722-3751.	2.8	32
23	Thermal management of heating element in a ventilated enclosure. <i>International Communications in Heat and Mass Transfer</i> , 2015, 66, 84-92.	5.6	31
24	Convective heat transfer enhancement: effect of multi-frequency heating. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2019, 29, 3822-3856.	2.8	31
25	Magneto-hydrothermal performance of hybrid nanofluid flow through a non-Darcian porous complex wavy enclosure. <i>European Physical Journal: Special Topics</i> , 2022, 231, 2695-2712.	2.6	29
26	Role of aspiration to enhance MHD convection in protruded heater cavity. <i>Progress in Computational Fluid Dynamics</i> , 2020, 20, 363.	0.2	23
27	Analysis of geometrical shape impact on thermal management of practical fluids using square and circular cavities. <i>European Physical Journal: Special Topics</i> , 2022, 231, 2509-2537.	2.6	23
28	MHD convection in a partially driven cavity with corner heating. <i>SN Applied Sciences</i> , 2019, 1, 1.	2.9	22
29	Identifying improved microchannel configuration with triangular cavities and different rib structures through evaluation of thermal performance and entropy generation number. <i>Physics of Fluids</i> , 2020, 32, .	4.0	21
30	Magnetohydrodynamic bioconvection of oxytactic microorganisms in porous media saturated with Cu ²⁺ water nanofluid. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2021, 31, 3461-3489.	2.8	21
31	Numerical investigation of double-diffusive natural convection in a staggered cavity with two triangular obstacles. <i>European Physical Journal Plus</i> , 2021, 136, 1.	2.6	21
32	Implementation of partial magnetic fields to magneto-thermal convective systems operated using hybrid-nanofluid and porous media. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2022, 236, 5687-5704.	2.1	20
33	Energy-saving method of heat transfer enhancement during magneto-thermal convection in typical thermal cavities adopting aspiration. <i>SN Applied Sciences</i> , 2020, 2, 1.	2.9	19
34	Positional impacts of partial wall translations on hybrid nanofluid flow in porous media: Real Coded Genetic Algorithm (RCGA). <i>International Journal of Mechanical Sciences</i> , 2022, 217, 107030.	6.7	19
35	Impact of side injection on heat removal from truncated conical heat-generating porous bed: thermal non-equilibrium approach. <i>Journal of Thermal Analysis and Calorimetry</i> , 2021, 143, 3741-3760.	3.6	18
36	Designing of microsink to maximize the thermal performance and minimize the Entropy generation with the role of flow structures. <i>International Journal of Heat and Mass Transfer</i> , 2021, 176, 121421.	4.8	18

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37	Enhanced magnetohydrodynamic thermal convection in a partially driven cavity packed with a nanofluid saturated porous medium. <i>Mathematical Methods in the Applied Sciences</i> , 0, , .	2.3	16
38	Transport phenomena in a sidewall-moving bottom-heated cavity using heatlines. <i>Sadhana - Academy Proceedings in Engineering Sciences</i> , 2017, 42, 193-211.	1.3	15
39	Assessment of thermal performance of hybrid nanofluid flow in a tilted porous enclosure by imposing partial magnetic fields. <i>Waves in Random and Complex Media</i> , 0, , 1-34.	2.7	13
40	Numerical Simulation of Laminar Confined Radial Flow Between Parallel Circular Discs. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2012, 134, .	1.5	11
41	Nanofluidic thermal-fluid transport in a split-driven porous system working under a magnetic environment. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2022, 32, 2543-2569.	2.8	10
42	The Role of Flow Structures on the Thermal Performance of Microchannels With Wall Features. <i>Journal of Thermal Science and Engineering Applications</i> , 2021, 13, .	1.5	9
43	Experimental investigation of a solar chimney power plant and its numerical verification of thermo-physical flow parameters for performance enhancement. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 50, 101786.	2.7	9
44	Buoyancy driven flow in a parallelogrammic enclosure with an obstructive block and magnetic field. <i>Materials Today: Proceedings</i> , 2021, 44, 3164-3171.	1.8	8
45	Thermo-magnetic convection of nanofluid in a triangular cavity with a heated inverted triangular object. <i>Materials Today: Proceedings</i> , 2022, 52, 427-433.	1.8	7
46	Effect of partial magnetic field on thermo gravitational convection in an inclined cavity. <i>IOP Conference Series: Materials Science and Engineering</i> , 2021, 1080, 012030.	0.6	6
47	Experimental studies of flow through radial channels using PIV technique. <i>Journal of Visualization</i> , 2014, 17, 221-233.	1.8	4
48	Exact and limiting solutions of fluid flow for axially oscillating cylindrical pipe and annulus. <i>SN Applied Sciences</i> , 2021, 3, 1.	2.9	4
49	Thermal Management of Nanofluid Filled Porous Cavity Utilized for Solar Heating System. <i>Journal of the Institution of Engineers (India): Series C</i> , 2022, 103, 207-221.	1.2	4
50	Analysis of Particle Image Velocimetry Measurements of Natural Convection in an Enclosure Using Proper Orthogonal Decomposition. <i>Journal of Heat Transfer</i> , 2015, 137, .	2.1	3
51	Designing Interrupted Microchannel Heat Sink with Ribbed Microchambers by Single and Bi-objective Optimizations of Numerical Results. <i>Journal of Thermal Analysis and Calorimetry</i> , 2021, 146, 2681-2697.	3.6	3
52	Thermo-fluidic transport process in a double-driven cavity with triangular adiabatic obstacles. <i>Materials Today: Proceedings</i> , 2022, 52, 524-531.	1.8	3
53	Effect of sinusoidal heating and Hartmann number on nanofluid based heat flow evolution in a cavity. <i>Materials Today: Proceedings</i> , 2022, 63, 157-163.	1.8	3
54	Experimental investigation of the effect of jet inclination on bifurcation of laminar jets. <i>International Journal of Heat and Fluid Flow</i> , 2014, 50, 160-168.	2.4	2

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55	Mixed Convection in a Ventilated Enclosure with Different Heater Position. Lecture Notes in Mechanical Engineering, 2017, , 363-374.	0.4	2
56	Thermofluidic transport phenomena of hybrid nanofluid in a porous wavy enclosure imposing magnetic fields. Materials Today: Proceedings, 2022, 52, 505-512.	1.8	2
57	MHD nanofluid heat transport in a corner-heated triangular enclosure at different inclinations. Materials Today: Proceedings, 2022, 63, 141-148.	1.8	2
58	Magnetohydrodynamic thermal behavior of nanofluid flow in a trapezoidal cavity subjected to non-uniform heating. Materials Today: Proceedings, 2022, 63, 320-327.	1.8	2
59	Low Reynolds number MHD mixed convection of nanofluid in a corner heated grooved cavity. Materials Today: Proceedings, 2022, 63, 170-175.	1.8	2
60	Thermal analysis of buoyancy-driven flow in a square enclosure filled with porous medium. Materials Today: Proceedings, 2022, 63, 185-191.	1.8	2
61	PIV Measurements and POD Analysis during Natural Convection with Protruded Heater in a Rectangular Enclosure. Applied Mechanics and Materials, 0, 592-594, 1733-1737.	0.2	1
62	Thermal magneto-hydrodynamics in a ventilated porous enclosure. Sadhana - Academy Proceedings in Engineering Sciences, 2020, 45, 1.	1.3	1
63	Thermal convection in an inclined cavity under the influence of partial magnetic field. IOP Conference Series: Materials Science and Engineering, 2021, 1080, 012029.	0.6	1
64	Effect of partial wall motion on MHD mixed convection heat transfer undergoing in a porous cavity filled with Cu-water nanofluid with a centrally mounted heat source. IOP Conference Series: Materials Science and Engineering, 2021, 1080, 012025.	0.6	1
65	Assessment of thermal behavior of nanofluid flow in a wavy walled cavity in presence of sliding motion and magnetic field. Materials Today: Proceedings, 2021, , .	1.8	1
66	Effect of non-uniform heating on thermal performance of an enclosure filled with nanofluid. Materials Today: Proceedings, 2022, 56, 179-185.	1.8	1
67	Hydrothermal performance of hybrid nanofluid in a complex wavy porous cavity imposing a magnetic field. Materials Today: Proceedings, 2022, 52, 419-426.	1.8	1
68	Hydrodynamic Aspects of Laminar Submerged Buoyant Jets: Effect of Jet Inclination. International Journal of Fluid Mechanics Research, 2015, 42, 236-259.	0.4	0
69	Magneto-thermal convection in lid-driven cavity. Sadhana - Academy Proceedings in Engineering Sciences, 2020, 45, 1.	1.3	0
70	Magneto-Convective Heat Transfer in a Cavity Under Partial Magnetic Fields. Lecture Notes in Mechanical Engineering, 2021, , 117-130.	0.4	0
71	MHD Thermal Convection of Nanofluid Saturated Porous Cavity Heated Linearly. Lecture Notes in Mechanical Engineering, 2021, , 33-46.	0.4	0
72	MHD Convection in Cavity Under Partially Applied Magnetic Fields. Lecture Notes in Mechanical Engineering, 2021, , 131-145.	0.4	0

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73	Unsteady development of Marangoni convection in a sidewall moving open cavity. IOP Conference Series: Materials Science and Engineering, 2021, 1080, 012024.	0.6	0
74	Thermal management with localized heating on enclosure's wall during thermal convection using different fluids. Materials Today: Proceedings, 2021, , .	1.8	0
75	Impact of Magnetic Field on Thermal Convection in a Linearly Heated Porous Cavity. Lecture Notes on Multidisciplinary Industrial Engineering, 2019, , 503-522.	0.6	0
76	Fluid Mechanics in Arterial Diseases. Advances in Mechatronics and Mechanical Engineering, 2022, , 153-178.	1.0	0