Nirmal Manna

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7618847/publications.pdf

Version: 2024-02-01

94 papers	1,752 citations	236833 25 h-index	330025 37 g-index
95 all docs	95 docs citations	95 times ranked	457 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.	2.1	90
2	Magneto-hydrodynamic thermal convection of Cuâ€“Al2O3/water hybrid nanofluid saturated with porous media subjected to half-sinusoidal nonuniform heating. Journal of Thermal Analysis and Calorimetry, 2021, 143, 1727-1753.	2.0	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.	3.6	85
4	Effects of half-sinusoidal nonuniform heating during MHD thermal convection in Cuâ€“Al2O3/water hybrid nanofluid saturated with porous media. Journal of Thermal Analysis and Calorimetry, 2021, 143, 1665-1688.	2.0	75
5	Heat Transfer Enhancement and Entropy Generation in a Square Enclosure in the Presence of Adiabatic and Isothermal Blocks. Numerical Heat Transfer; Part A: Applications, 2013, 64, 577-596.	1.2	69
6	Enhanced convective heat transfer in lid-driven porous cavity with aspiration. International Journal of Heat and Mass Transfer, 2017, 114, 430-452.	2.5	62
7	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, .	1.6	61
8	Enhanced thermal energy transport using adiabatic block inside lid-driven cavity. International Journal of Heat and Mass Transfer, 2016, 100, 407-427.	2.5	55
9	Magneto-hydrodynamic Marangoni flow in bottom-heated lid-driven cavity. Journal of Molecular Liquids, 2018, 251, 249-266.	2.3	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.	3.6	51
11	Effect of surface waviness on MHD thermo-gravitational convection of Cuâ^'Al₂O₃â^'water hybrid nanofluid in a porous oblique enclosure. Physica Scripta, 2021, 96, 105002.	1.2	50
12	Influence of Heater Aspect Ratio on Natural Convection in a Rectangular Enclosure. Heat Transfer Engineering, 2016, 37, 125-139.	1.2	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, .	1.6	49
14	Heat Transfer and Entropy Generation in a Porous Square Enclosure in Presence of an Adiabatic Block. Transport in Porous Media, 2016, 111, 305-329.	1.2	42
15	Merit of non-uniform over uniform heating in a porous cavity. International Communications in Heat and Mass Transfer, 2016, 78, 135-144.	2.9	37
16	Buoyancy-driven fluid and energy flow in protruded heater enclosure. Meccanica, 2016, 51, 2159-2184.	1.2	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.	1.6	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.	1.6	36

#	Article	IF	Citations
19	Magnetic force vectors as a new visualization tool for magnetohydrodynamic convection. International Journal of Thermal Sciences, 2021, 167, 107004.	2.6	36
20	A novel multi-banding application of magnetic field to convective transport system filled with porous medium and hybrid nanofluid. Physica Scripta, 2021, 96, 065001.	1.2	35
21	Mixed Convection Heat Transfer in a Grooved Channel with Injection. Numerical Heat Transfer; Part A: Applications, 2015, 68, 663-685.	1.2	33
22	Magnetohydrodynamic mixed bioconvection of oxytactic microorganisms in a nanofluid-saturated porous cavity heated with a bell-shaped curved bottom. International Journal of Numerical Methods for Heat and Fluid Flow, 2021, 31, 3722-3751.	1.6	32
23	Thermal management of heating element in a ventilated enclosure. International Communications in Heat and Mass Transfer, 2015, 66, 84-92.	2.9	31
24	Convective heat transfer enhancement: effect of multi-frequency heating. International Journal of Numerical Methods for Heat and Fluid Flow, 2019, 29, 3822-3856.	1.6	31
25	Magneto-hydrothermal performance of hybrid nanofluid flow through a non-Darcian porous complex wavy enclosure. European Physical Journal: Special Topics, 2022, 231, 2695-2712.	1.2	29
26	Heat transfer assessment of an alternately active bi-heater undergoing transient natural convection. International Journal of Heat and Mass Transfer, 2015, 83, 450-464.	2.5	24
27	Heatlines and other visualization techniques for confined heat transfer systems. International Journal of Heat and Mass Transfer, 2018, 118, 1069-1079.	2.5	24
28	Role of aspiration to enhance MHD convection in protruded heater cavity. Progress in Computational Fluid Dynamics, 2020, 20, 363.	0.1	23
29	Analysis of geometrical shape impact on thermal management of practical fluids using square and circular cavities. European Physical Journal: Special Topics, 2022, 231, 2509-2537.	1.2	23
30	MHD convection in a partially driven cavity with corner heating. SN Applied Sciences, 2019, 1, 1.	1.5	22
31	Magnetohydrodynamic bioconvection of oxytactic microorganisms in porous media saturated with Cuâ€“water nanofluid. International Journal of Numerical Methods for Heat and Fluid Flow, 2021, 31, 3461-3489.	1.6	21
32	Effect of active wall location in a partially heated enclosure. International Communications in Heat and Mass Transfer, 2015, 61, 69-77.	2.9	20
33	Implementation of partial magnetic fields to magneto-thermal convective systems operated using hybrid-nanoliquid and porous media. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2022, 236, 5687-5704.	1.1	20
34	Energy-saving method of heat transfer enhancement during magneto-thermal convection in typical thermal cavities adopting aspiration. SN Applied Sciences, 2020, 2, 1.	1.5	19
35	Positional impacts of partial wall translations on hybrid nanofluid flow in porous media: Real Coded Genetic Algorithm (RCGA). International Journal of Mechanical Sciences, 2022, 217, 107030.	3.6	19
36	Mixed Convection Heat Transfer in a Grooved Channel in the Presence of a Baffle. Numerical Heat Transfer; Part A: Applications, 2015, 67, 1097-1118.	1.2	18

#	Article	IF	Citations
37	Impact of side injection on heat removal from truncated conical heat-generating porous bed: thermal non-equilibrium approach. Journal of Thermal Analysis and Calorimetry, 2021, 143, 3741-3760.	2.0	18
38	Enhanced magnetohydrodynamic thermal convection in a partially driven cavity packed with a nanofluidâ€saturated porous medium. Mathematical Methods in the Applied Sciences, 0, , .	1.2	16
39	Proper orthogonal decomposition of thermally-induced flow structure in an enclosure with alternately active localized heat sources. International Journal of Heat and Mass Transfer, 2016, 94, 373-379.	2.5	15
40	Transport phenomena in a sidewall-moving bottom-heated cavity using heatlines. Sadhana - Academy Proceedings in Engineering Sciences, 2017, 42, 193-211.	0.8	15
41	Assessment of thermal performance of hybrid nanofluid flow in a tilted porous enclosure by imposing partial magnetic fields. Waves in Random and Complex Media, 0, , 1-34.	1.6	13
42	Numerical study of blood flow through different double bellâ€shaped stenosed coronary artery during the progression of the disease, atherosclerosis. International Journal of Numerical Methods for Heat and Fluid Flow, 2010, 20, 670-698.	1.6	12
43	Influence of different bell-shaped stenoses on the progression of the disease, atherosclerosis. Journal of Mechanical Science and Technology, 2011, 25, 1933-1947.	0.7	11
44	Numerical Simulation of Laminar Confined Radial Flow Between Parallel Circular Discs. Journal of Fluids Engineering, Transactions of the ASME, 2012, 134, .	0.8	11
45	Study of leakage flow through a spool valve under blocked-actuator port conditionâ€”Simulation and experiment. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2014, 228, 1405-1417.	1.1	10
46	Nanofluidic thermal-fluid transport in a split-driven porous system working under a magnetic environment. International Journal of Numerical Methods for Heat and Fluid Flow, 2022, 32, 2543-2569.	1.6	10
47	Mixed convection in a baffled grooved channel. Sadhana - Academy Proceedings in Engineering Sciences, 2015, 40, 835-849.	0.8	9
48	A NUMERICAL STUDY ON THE PERFORMANCE OF A SUDDEN EXPANSION WITH MULTISTEPS AS A DIFFUSER. International Journal of Applied Mechanics, 2011, 03, 779-802.	1.3	8
49	Buoyancy driven flow in a parallelogrammic enclosure with an obstructive block and magnetic field. Materials Today: Proceedings, 2021, 44, 3164-3171.	0.9	8
50	Hydrodynamic and thermal interactions of a cluster of solid particles in a pool of liquid of different Prandtl numbers using two-fluid model. Heat and Mass Transfer, 2013, 49, 1659-1679.	1.2	7
51	Study on the effect of steady, simple pulsatile and physiological pulsatile flows through a stenosed artery. Heat and Mass Transfer, 2014, 50, 1343-1352.	1.2	7
52	Thermal instability-driven multiple solutions in a grooved channel. Numerical Heat Transfer; Part A: Applications, 2016, 70, 776-790.	1.2	7
53	A multiphase model for determination of minimum circulation ratio of natural circulation boiler for a wide range of pressure. International Journal of Heat and Mass Transfer, 2020, 150, 119293.	2.5	7
54	Thermo-magnetic convection of nanofluid in a triangular cavity with a heated inverted triangular object. Materials Today: Proceedings, 2022, 52, 427-433.	0.9	7

#	Article	IF	Citations
55	Forced convection past a semi-circular cylinder at incidence with a downstream circular cylinder: Thermofluidic transport and stability analysis. Physics of Fluids, 2021, 33, 023603.	1.6	6
56	Effect of partial magnetic field on thermo gravitational convection in an inclined cavity. IOP Conference Series: Materials Science and Engineering, 2021, 1080, 012030.	0.3	6
57	Two-phase thermo-hydraulic model of a 210ÂMW thermal power plant boiler for designing the riser-downcomer circuit. Thermal Science and Engineering Progress, 2020, 18, 100537.	1.3	5
58	Analysis of Entropy Generation during the Convective Quenching of a Cluster of Balls. Numerical Heat Transfer; Part A: Applications, 2014, 66, 689-711.	1.2	4
59	Experimental studies of flow through radial channels using PIV technique. Journal of Visualization, 2014, 17, 221-233.	1.1	4
60	Molten Drop to Coolant Heat Transfer During Premixing of Fuel Coolant Interaction. Energy, Environment, and Sustainability, 2018, , 201-235.	0.6	4
61	Thermal Management of Nanofluid Filled Porous Cavity Utilized for Solar Heating System. Journal of the Institution of Engineers (India): Series C, 2022, 103, 207-221.	0.7	4
62	A Two-Phase Flow Model for Thermal Design of the Riser-Downcomer System Pertaining to a 600 MW Subcritical Boiler. Journal of Thermal Science and Engineering Applications, 2021, 13, .	0.8	4
63	Integrated thermal modeling, analysis, and sequential design of heat exchanger surfaces of a natural circulation RDF boiler including evaporator tubes. Applied Thermal Engineering, 2022, 211, 118455.	3.0	4
64	Thermo-fluidic transport process in a double-driven cavity with triangular adiabatic obstacles. Materials Today: Proceedings, 2022, 52, 524-531.	0.9	3
65	Effect of axially varying heat flux on thermo-hydraulic characteristics and circulation ratio of riser tubes of natural circulation boiler. Energy, 2022, 244, 123158.	4.5	3
66	Effect of sinusoidal heating and Hartmann number on nanofluid based heat flow evolution in a cavity. Materials Today: Proceedings, 2022, 63, 157-163.	0.9	3
67	Wall Shear Stress Characteristics for the Progression of the Disease, Atherosclerosis. Journal of the Institution of Engineers (India): Series C, 2015, 96, 311-323.	0.7	2
68	Heat transfer partitioning model of film boiling of particle cluster in a liquid pool: implementation in a CFD code. Heat and Mass Transfer, 2015, 51, 1149-1166.	1.2	2
69	Mixed Convection in a Ventilated Enclosure with Different Heater Position. Lecture Notes in Mechanical Engineering, 2017, , 363-374.	0.3	2
70	Thermofluidic transport phenomena of hybrid nanofluid in a porous wavy enclosure imposing magnetic fields. Materials Today: Proceedings, 2022, 52, 505-512.	0.9	2
71	MHD nanofluid heat transport in a corner-heated triangular enclosure at different inclinations. Materials Today: Proceedings, 2022, 63, 141-148.	0.9	2
72	Magnetohydrodynamic thermal behavior of nanofluid flow in a trapezoidal cavity subjected to non-uniform heating. Materials Today: Proceedings, 2022, 63, 320-327.	0.9	2

#	Article	IF	Citations
73	Low Reynolds number MHD mixed convection of nanofluid in a corner heated grooved cavity. Materials Today: Proceedings, 2022, 63, 170-175.	0.9	2
74	Thermal analysis of buoyancy-driven flow in a square enclosure filled with porous medium. Materials Today: Proceedings, 2022, 63, 185-191.	0.9	2
75	Thermal magneto-hydrodynamics in a ventilated porous enclosure. Sadhana - Academy Proceedings in Engineering Sciences, 2020, 45, 1.	0.8	1
76	Thermal Hydraulic Analysis of Natural Convection in a Solar Collector Filled with Nanofluid. , 2021, , .		1
77	Thermal convection in an inclined cavity under the influence of partial magnetic field. IOP Conference Series: Materials Science and Engineering, 2021, 1080, 012029.	0.3	1
78	Effect of partial wall motion on MHD mixed convection heat transfer undergoing in a porous cavity filled with Cuâ€“water nanofluid with a centrally mounted heat source. IOP Conference Series: Materials Science and Engineering, 2021, 1080, 012025.	0.3	1
79	Forced convection and entropy generation past a series of porous bodies with internal heat generation. Physica Scripta, 2021, 96, 125009.	1.2	1
80	Analysis of Steady and Physiological Pulsatile Flow Characteristics in an Artery with Various Percentages of Restrictions. International Journal of Fluid Mechanics Research, 2015, 42, 260-280.	0.4	1
81	Numerical investigations of various aspects of plaque deposition through constricted artery. Journal of Mechanical Engineering and Sciences, 2019, 13, 5306-5322.	0.3	1
82	Assessment of thermal behavior of nanofluid flow in a wavy walled cavity in presence of sliding motion and magnetic field. Materials Today: Proceedings, 2021, , .	0.9	1
83	Effect of non-uniform heating on thermal performance of an enclosure filled with nanofluid. Materials Today: Proceedings, 2022, 56, 179-185.	0.9	1
84	Hydrothermal performance of hybrid nanofluid in a complex wavy porous cavity imposing a magnetic field. Materials Today: Proceedings, 2022, 52, 419-426.	0.9	1
85	Magneto-thermal convection in lid-driven cavity. Sadhana - Academy Proceedings in Engineering Sciences, 2020, 45, 1.	0.8	0
86	Magneto-Convective Heat Transfer in a Cavity Under Partial Magnetic Fields. Lecture Notes in Mechanical Engineering, 2021, , 117-130.	0.3	0
87	MHD Thermal Convection of Nanofluid Saturated Porous Cavity Heated Linearly. Lecture Notes in Mechanical Engineering, 2021, , 33-46.	0.3	0
88	MHD Convection in Cavity Under Partially Applied Magnetic Fields. Lecture Notes in Mechanical Engineering, 2021, , 131-145.	0.3	0
89	Unsteady development of Marangoni convection in a sidewall moving open cavity. IOP Conference Series: Materials Science and Engineering, 2021, 1080, 012024.	0.3	0
90	Thermal management with localized heating on enclosureâ€™s wall during thermal convection using different fluids. Materials Today: Proceedings, 2021, , .	0.9	0

#	Article	IF	Citations
91	ESTIMATION OF EFFECTIVE LENGTH ALONG WITH FLOW AND PRESSURE CHARACTERISTIC ANALYSES OF A SUDDEN EXPANSION DIFFUSER AND A HYBRID DIFFUSER. International Journal of Fluid Mechanics Research, 2018, 45, 399-412.	0.4	0
92	Impact of Magnetic Field on Thermal Convection in a Linearly Heated Porous Cavity. Lecture Notes on Multidisciplinary Industrial Engineering, 2019, , 503-522.	0.4	0
93	MHD Convection with Heat Generation in a Porous Cavity. Lecture Notes on Multidisciplinary Industrial Engineering, 2019, , 547-569.	0.4	0
94	Fluid Mechanics in Arterial Diseases. Advances in Mechatronics and Mechanical Engineering, 2022, , 153-178.	1.0	0