Nirmal Manna

List of Publications by Year in Descending Order

79 papers	801 citations	16 h-index	25 g-index
95 ext. papers	1,285 ext. citations	2.5 avg, IF	5.42 L-index

#	Paper	IF	Citations
79	Effect of axially varying heat flux on thermo-hydraulic characteristics and circulation ratio of riser tubes of natural circulation boiler. *Energy*, **2022**, 244, 123158	7.9	1
78	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	5.5	5
77	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	5.5	3
76	Hydrothermal performance of hybrid nanofluid in a complex wavy porous cavity imposing a magnetic field. *Materials Today: Proceedings*, **2022**, 52, 419-426	1.4	
75	Fluid Mechanics in Arterial Diseases. *Advances in Mechatronics and Mechanical Engineering*, **2022**, 153-178	0.5	
74	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, 033608	4.4	5
73	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	5.8	1
72	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,	1.9	2
71	A novel multi-banding application of magnetic field to convective transport system filled with porous medium and hybrid nanofluid. *Physica Scripta*, **2021**, 96, 065001	2.6	15
70	Effect of multibanded magnetic field on convective heat transport in linearly heated porous systems filled with hybrid nanofluid. *Physics of Fluids*, **2021**, 33, 053604	4.4	18
69	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	4.1	2
68	Magneto-hydrodynamic thermal convection of Cu–Al2O3/water hybrid nanofluid saturated with porous media subjected to half-sinusoidal nonuniform heating. *Journal of Thermal Analysis and Calorimetry*, **2021**, 143, 1727-1753	4.1	45
67	Effects of half-sinusoidal nonuniform heating during MHD thermal convection in Cu–Al2O3/water hybrid nanofluid saturated with porous media. *Journal of Thermal Analysis and Calorimetry*, **2021**, 143, 1665-1688	4.1	37
66	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	4.5	11
65	Magneto-Convective Heat Transfer in a Cavity Under Partial Magnetic Fields. *Lecture Notes in Mechanical Engineering*, **2021**, 117-130	0.4	
64	MHD Thermal Convection of Nanofluid Saturated Porous Cavity Heated Linearly. *Lecture Notes in Mechanical Engineering*, **2021**, 33-46	0.4	
63	MHD Convection in Cavity Under Partially Applied Magnetic Fields. *Lecture Notes in Mechanical Engineering*, **2021**, 131-145	0.4	

62	Magnetohydrodynamic bioconvection of oxytactic microorganisms in porous media saturated with Cu□water nanofluid. *International Journal of Numerical Methods for Heat and Fluid Flow*, **2021**, ahead-of-print,	4.5	5
61	Thermal convection in an inclined cavity under the influence of partial magnetic field. *IOP Conference Series: Materials Science and Engineering*, **2021**, 1080, 012029	0.4	1
60	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	0.4	0
59	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	4.4	5
58	Effect of partial magnetic field on thermo gravitational convection in an inclined cavity. *IOP Conference Series: Materials Science and Engineering*, **2021**, 1080, 012030	0.4	1
57	Unsteady development of Marangoni convection in a sidewall moving open cavity. *IOP Conference Series: Materials Science and Engineering*, **2021**, 1080, 012024	0.4	
56	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**, ahead-of-print,	4.5	4
55	Effect of surface waviness on MHD thermo-gravitational convection of Cu□Al2O3□water hybrid nanofluid in a porous oblique enclosure. *Physica Scripta*, **2021**, 96, 105002	2.6	16
54	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*, **2021**, ahead-of-print,	4.5	6
53	Forced convection and entropy generation past a series of porous bodies with internal heat generation. *Physica Scripta*, **2021**, 96, 125009	2.6	0
52	Thermo-magnetic convection of nanofluid in a triangular cavity with a heated inverted triangular object. *Materials Today: Proceedings*, **2021**,	1.4	2
51	Magnetic force vectors as a new visualization tool for magnetohydrodynamic convection. *International Journal of Thermal Sciences*, **2021**, 167, 107004	4.1	16
50	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	5.5	21
49	Electro-thermal Convection in a Rectangular Enclosure. *Lecture Notes in Mechanical Engineering*, **2021**, 103-113	0.4	
48	Buoyancy driven flow in a parallelogrammic enclosure with an obstructive block and magnetic field. *Materials Today: Proceedings*, **2021**, 44, 3164-3171	1.4	3
47	Role of aspiration to enhance MHD convection in protruded heater cavity. *Progress in Computational Fluid Dynamics*, **2020**, 20, 363	0.7	5
46	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	4.9	6
45	Energy-saving method of heat transfer enhancement during magneto-thermal convection in typical thermal cavities adopting aspiration. *SN Applied Sciences*, **2020**, 2, 1	1.8	6

44	Thermal magneto-hydrodynamics in a ventilated porous enclosure. *Sadhana - Academy Proceedings in Engineering Sciences*, **2020**, 45, 1	1	0
43	Magneto-thermal convection in lid-driven cavity. *Sadhana - Academy Proceedings in Engineering Sciences*, **2020**, 45, 1	1	
42	Two-phase thermo-hydraulic model of a 210 MW thermal power plant boiler for designing the riser-downcomer circuit. *Thermal Science and Engineering Progress*, **2020**, 18, 100537	3.6	3
41	Convective heat transfer enhancement: effect of multi-frequency heating. *International Journal of Numerical Methods for Heat and Fluid Flow*, **2019**, 29, 3822-3856	4.5	11
40	Impact of Magnetic Field on Thermal Convection in a Linearly Heated Porous Cavity. *Lecture Notes on Multidisciplinary Industrial Engineering*, **2019**, 503-522	0.3	
39	MHD Convection with Heat Generation in a Porous Cavity. *Lecture Notes on Multidisciplinary Industrial Engineering*, **2019**, 547-569	0.3	
38	MHD convection in a partially driven cavity with corner heating. *SN Applied Sciences*, **2019**, 1, 1	1.8	15
37	Molten Drop to Coolant Heat Transfer During Premixing of Fuel Coolant Interaction. *Energy, Environment, and Sustainability*, **2018**, 201-235	0.8	3
36	Heatlines and other visualization techniques for confined heat transfer systems. *International Journal of Heat and Mass Transfer*, **2018**, 118, 1069-1079	4.9	14
35	Analysis of heat transfer and pumping power for bottom-heated porous cavity saturated with Cu-water nanofluid. *Powder Technology*, **2018**, 326, 356-369	5.2	55
34	Magneto-hydrodynamic Marangoni flow in bottom-heated lid-driven cavity. *Journal of Molecular Liquids*, **2018**, 251, 249-266	6	39
33	Transport phenomena in a sidewall-moving bottom-heated cavity using heatlines. *Sadhana - Academy Proceedings in Engineering Sciences*, **2017**, 42, 193-211	1	8
32	Enhanced convective heat transfer in lid-driven porous cavity with aspiration. *International Journal of Heat and Mass Transfer*, **2017**, 114, 430-452	4.9	33
31	Mixed Convection in a Ventilated Enclosure with Different Heater Position. *Lecture Notes in Mechanical Engineering*, **2017**, 363-374	0.4	2
30	Influence of Heater Aspect Ratio on Natural Convection in a Rectangular Enclosure. *Heat Transfer Engineering*, **2016**, 37, 125-139	1.7	27
29	Merit of non-uniform over uniform heating in a porous cavity. *International Communications in Heat and Mass Transfer*, **2016**, 78, 135-144	5.8	18
28	Buoyancy-driven fluid and energy flow in protruded heater enclosure. *Meccanica*, **2016**, 51, 2159-2184	2.1	14
27	Heat Transfer and Entropy Generation in a Porous Square Enclosure in Presence of an Adiabatic Block. *Transport in Porous Media*, **2016**, 111, 305-329	3.1	35

26	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	4.9	13
25	Enhanced thermal energy transport using adiabatic block inside lid-driven cavity. *International Journal of Heat and Mass Transfer*, **2016**, 100, 407-427	4.9	33
24	Thermal instability-driven multiple solutions in a grooved channel. *Numerical Heat Transfer; Part A: Applications*, **2016**, 70, 776-790	2.3	5
23	Wall Shear Stress Characteristics for the Progression of the Disease, Atherosclerosis. *Journal of the Institution of Engineers (India): Series C*, **2015**, 96, 311-323	0.9	2
22	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	2.2	2
21	Mixed Convection Heat Transfer in a Grooved Channel with Injection. *Numerical Heat Transfer; Part A: Applications*, **2015**, 68, 663-685	2.3	16
20	Mixed Convection Heat Transfer in a Grooved Channel in the Presence of a Baffle. *Numerical Heat Transfer; Part A: Applications*, **2015**, 67, 1097-1118	2.3	13
19	Mixed convection in a baffled grooved channel. *Sadhana - Academy Proceedings in Engineering Sciences*, **2015**, 40, 835-849	1	6
18	Thermal management of heating element in a ventilated enclosure. *International Communications in Heat and Mass Transfer*, **2015**, 66, 84-92	5.8	18
17	Heat transfer assessment of an alternately active bi-heater undergoing transient natural convection. *International Journal of Heat and Mass Transfer*, **2015**, 83, 450-464	4.9	23
16	Effect of active wall location in a partially heated enclosure. *International Communications in Heat and Mass Transfer*, **2015**, 61, 69-77	5.8	13
15	Analysis of Entropy Generation during the Convective Quenching of a Cluster of Balls. *Numerical Heat Transfer; Part A: Applications*, **2014**, 66, 689-711	2.3	4
14	Experimental studies of flow through radial channels using PIV technique. *Journal of Visualization*, **2014**, 17, 221-233	1.6	3
13	Study of leakage flow through a spool valve under blocked-actuator port conditions: simulation and experiment. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **2014**, 228, 1405-1417	1.3	8
12	Study on the effect of steady, simple pulsatile and physiological pulsatile flows through a stenosed artery. *Heat and Mass Transfer*, **2014**, 50, 1343-1352	2.2	6
11	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	2.3	58
10	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	2.2	5
9	Numerical Simulation of Laminar Confined Radial Flow Between Parallel Circular Discs. *Journal of Fluids Engineering, Transactions of the ASME*, **2012**, 134,	2.1	8

8	A NUMERICAL STUDY ON THE PERFORMANCE OF A SUDDEN EXPANSION WITH MULTISTEPS AS A DIFFUSER. *International Journal of Applied Mechanics*, **2011**, 03, 779-802	2.4	7
7	Influence of different bell-shaped stenoses on the progression of the disease, atherosclerosis. *Journal of Mechanical Science and Technology*, **2011**, 25, 1933-1947	1.6	9
6	Numerical study of blood flow through different double bell-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	4.5	11
5	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*,095440622110601	1.3	3
4	Enhanced magnetohydrodynamic thermal convection in a partially driven cavity packed with a nanofluid-saturated porous medium. *Mathematical Methods in the Applied Sciences*,	2.3	7
3	Thermal Management of Nanofluid Filled Porous Cavity Utilized for Solar Heating System. *Journal of the Institution of Engineers (India): Series C*,1	0.9	
2	Assessment of thermal performance of hybrid nanofluid flow in a tilted porous enclosure by imposing partial magnetic fields. *Waves in Random and Complex Media*,1-34	1.9	0
1	Analysis of geometrical shape impact on thermal management of practical fluids using square and circular cavities. *European Physical Journal: Special Topics*,1	2.3	1