Prabal Talukdar

List of Publications by Year
in descending order

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81 papers	1,952 citations	201674 27 h-index	289244 40 g-index
81 all docs	81 docs citations	81 times ranked	1128 citing authors

#	Article	IF	Citations
1	Three dimensional numerical modeling of simultaneous heat and moisture transfer in a moist object subjected to convective drying. International Journal of Heat and Mass Transfer, 2010, 53, 4638-4650.	4.8	120
2	An experimental data set for benchmarking 1-D, transient heat and moisture transfer models of hygroscopic building materials. Part I: Experimental facility and material property data. International Journal of Heat and Mass Transfer, 2007, 50, 4527-4539.	4.8	88
3	Heat and mass transfer through thermal protective clothing â€“ A review. International Journal of Thermal Sciences, 2016, 106, 32-56.	4.9	79
4	Computational efficiency improvements of the radiative transfer problems with or without conductionâ€“â€“a comparison of the collapsed dimension method and the discrete transfer method. International Journal of Heat and Mass Transfer, 2003, 46, 3083-3095.	4.8	76
5	Performance analysis and feasibility study of ant colony optimization, particle swarm optimization and cuckoo search algorithms for inverse heat transfer problems. International Journal of Heat and Mass Transfer, 2015, 89, 359-378.	4.8	74
6	An experimental data set for benchmarking 1-D, transient heat and moisture transfer models of hygroscopic building materials. Part II: Experimental, numerical and analytical data. International Journal of Heat and Mass Transfer, 2007, 50, 4915-4926.	4.8	61
7	Combined heat and mass transfer for laminar flow of moist air in a 3D rectangular duct: CFD simulation and validation with experimental data. International Journal of Heat and Mass Transfer, 2008, 51, 3091-3102.	4.8	55
8	Numerical modeling of heat transfer and fluid motion in air gap between clothing and human body: Effect of air gap orientation and body movement. International Journal of Heat and Mass Transfer, 2017, 108, 271-291.	4.8	53
9	Numerical and experimental data set for benchmarking hygroscopic buffering models. International Journal of Heat and Mass Transfer, 2010, 53, 3638-3654.	4.8	51
10	Numerical modeling of convective drying of food with spatially dependent transfer coefficient in a turbulent flow field. International Journal of Thermal Sciences, 2014, 78, 145-157.	4.9	51
11	Detailed and simplified models for evaluation of effective thermal conductivity of open-cell porous foams at high temperatures in presence of thermal radiation. International Journal of Heat and Mass Transfer, 2014, 68, 612-624.	4.8	48
12	Comparisons of different heat transfer models of a walking beam type reheat furnace. International Communications in Heat and Mass Transfer, 2013, 47, 20-26.	5.6	46
13	Reliability of material data measurements for hygroscopic buffering. International Journal of Heat and Mass Transfer, 2010, 53, 5355-5363.	4.8	45
14	Effect of initial conditions, boundary conditions and thickness on the moisture buffering capacity of spruce plywood. Energy and Buildings, 2006, 38, 1283-1292.	6.7	44
15	Coupled CFD and radiation simulation of air gaps in bench top protective fabric tests. International Journal of Heat and Mass Transfer, 2010, 53, 526-539.	4.8	43
16	Assessment of uniform temperature assumption in zoning on the numerical simulation of a walking beam reheating furnace. Applied Thermal Engineering, 2015, 76, 496-508.	6.0	43
17	Energy savings in a building using regenerative evaporative cooling. Energy and Buildings, 2011, 43, 581-591.	6.7	41
18	Estimation of surface heat flux in continuous casting mould with limited measurement of temperature. International Journal of Thermal Sciences, 2017, 118, 435-447.	4.9	40

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19	Analysis of conductionâ€“radiation problem in absorbing, emitting and anisotropically scattering media using the collapsed dimension method. International Journal of Heat and Mass Transfer, 2002, 45, 2159-2168.	4.8	37
20	Heat transfer characteristics of a porous radiant burner under the influence of a 2-D radiation field. Journal of Quantitative Spectroscopy and Radiative Transfer, 2004, 84, 527-537.	2.3	37
21	Heat transfer analysis and second degree burn prediction in human skin exposed to flame and radiant heat using dual phase lag phenomenon. International Journal of Heat and Mass Transfer, 2014, 78, 1068-1079.	4.8	37
22	Combined radiation and convection heat transfer in a porous channel bounded by isothermal parallel plates. International Journal of Heat and Mass Transfer, 2004, 47, 1001-1013.	4.8	35
23	Modelling of conductionâ€“radiation in a porous medium with blocked-off region approach. International Journal of Thermal Sciences, 2013, 72, 102-114.	4.9	35
24	Experimental validation of simplified conductionâ€“radiation models for evaluation of Effective Thermal Conductivity of open-cell metal foams at high temperatures. International Journal of Heat and Mass Transfer, 2014, 78, 112-120.	4.8	35
25	Discrete transfer method with the concept of blocked-off region for irregular geometries. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 98, 238-248.	2.3	33
26	Measurement and simplified numerical prediction of effective thermal conductivity of open-cell ceramic foams at high temperature. International Journal of Heat and Mass Transfer, 2016, 102, 396-406.	4.8	33
27	Design of an experimental set up for convective drying: experimental studies at different drying temperature. Heat and Mass Transfer, 2013, 49, 31-40.	2.1	30
28	Numerical investigation of the effect of air gap orientations and heterogeneous air gap in thermal protective clothing on skin burn. International Journal of Thermal Sciences, 2017, 121, 313-321.	4.9	28
29	Analysis of Laminar Mixed Convective Heat Transfer in Horizontal Triangular Ducts. Numerical Heat Transfer; Part A: Applications, 2008, 54, 1148-1168.	2.1	27
30	Testing and modelling of a novel ceiling panel for maintaining space relative humidity by moisture transfer. International Journal of Heat and Mass Transfer, 2010, 53, 3961-3968.	4.8	25
31	Experimental Studies for Convective Drying of Potato. Heat Transfer Engineering, 2014, 35, 1288-1297.	1.9	25
32	Conductionâ€“radiation interaction in 3D irregular enclosures using the finite volume method. Heat and Mass Transfer, 2008, 44, 695-704.	2.1	24
33	Simultaneous estimation of thermal conductivity and specific heat of thermal protective fabrics using experimental data of high heat flux exposure. Applied Thermal Engineering, 2016, 107, 785-796.	6.0	23
34	Performance Evaluation of Two Heat Transfer Models of a Walking Beam Type Reheat Furnace. Heat Transfer Engineering, 2015, 36, 91-101.	1.9	22
35	Estimation of boundary heat flux using experimental temperature data in turbulent forced convection flow. Heat and Mass Transfer, 2015, 51, 411-421.	2.1	22
36	Determination of optimal taper in continuous casting billet mould using thermo-mechanical models of mould and billet. Journal of Materials Processing Technology, 2019, 270, 132-141.	6.3	20

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37	Performance evaluation of hybrid differential evolution approach for estimation of the strength of a heat source in a radiatively participating medium. International Journal of Heat and Mass Transfer, 2013, 56, 552-560.	4.8	19
38	Heat transfer and discrete phase modelling of coal combustion in a pusher type reheating furnace. Applied Thermal Engineering, 2017, 116, 66-78.	6.0	19
39	Effect of structural parameters on thermal protective performance and comfort characteristic of fabrics. Journal of the Textile Institute, 2017, 108, 1430-1441.	1.9	17
40	Simultaneous estimation of strength and position of a heat source in a participating medium using DE algorithm. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 127, 130-139.	2.3	16
41	Evaluation of radiative properties of a representative foam structure using blocked-off region approach integrated with finite volume method. International Journal of Thermal Sciences, 2016, 108, 89-99.	4.9	16
42	Novel inverse heat transfer methodology for estimation of unknown interfacial heat flux of a continuous casting mould: A complete three-dimensional thermal analysis of an industrial slab mould. International Journal of Thermal Sciences, 2021, 160, 106648.	4.9	16
43	EFFECT OF ANGULAR QUADRATURE SCHEMES ON THE COMPUTATIONAL EFFICIENCY OF THE DISCRETE TRANSFER METHOD FOR SOLVING RADIATIVE TRANSPORT PROBLEMS WITH PARTICIPATING MEDIUM. Numerical Heat Transfer, Part B: Fundamentals, 2004, 46, 463-478.	0.9	15
44	A Hybrid Approach Using CGM and DE Algorithm for Estimation of Boundary Heat Flux in a Parallel Plate Channel. Numerical Heat Transfer; Part A: Applications, 2014, 65, 461-481.	2.1	15
45	Design and performance evaluation of convective drier and prediction of drying characteristics of potato under varying conditions. International Journal of Thermal Sciences, 2019, 142, 176-187.	4.9	15
46	Estimation of radiative properties of thermal protective clothing. Applied Thermal Engineering, 2016, 100, 788-797.	6.0	14
47	Effect of Axial Radiation on Heat Transfer in a Thermally and Hydrodynamically Developing Flow between Parallel Plates. Numerical Heat Transfer; Part A: Applications, 2007, 52, 911-934.	2.1	13
48	Mixed Convection and Non-Gray Radiation in a Horizontal Rectangular Duct. Numerical Heat Transfer; Part A: Applications, 2011, 59, 185-208.	2.1	13
49	A novel method for determining the three dimensional variation of non-linear thermal resistance at the mold-strand interface in billet continuous casting process. International Communications in Heat and Mass Transfer, 2020, 119, 104984.	5.6	13
50	Estimation of inlet temperature of a developing fluid flow in a parallel plate channel. International Journal of Thermal Sciences, 2012, 57, 126-134.	4.9	12
51	A mathematical model for understanding nanoparticle biodistribution after intratumoral injection in cancer tumors. Journal of Drug Delivery Science and Technology, 2022, 68, 103048.	3.0	12
52	Effect of Regeneration Section Angle on the Performance of a Rotary Desiccant Wheel. Journal of Thermal Science and Engineering Applications, 2016, 8, .	1.5	11
53	Enhancement of Heat Transfer with Porous/Solid Insert for Laminar Flow of a Participating Gas in a 3-D Square Duct. Numerical Heat Transfer; Part A: Applications, 2009, 56, 764-784.	2.1	10
54	Determination of thermal resistance at mould-strand interface due to shrinkage in billet continuous casting â€“ Development and application of a novel integrated numerical model. International Journal of Thermal Sciences, 2020, 152, 106305.	4.9	9

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55	Estimation of transient boundary flux for a developing flow in a parallel plate channel. International Journal of Numerical Methods for Heat and Fluid Flow, 2014, 24, 522-544.	2.8	8
56	Drying Characteristics of Elephant Foot Yam and Performance Evaluation of Convective Dryer in Kinetically and Equilibrium Controlled Regime Under Varying Conditions. Journal of Thermal Science and Engineering Applications, 2020, 12, .	1.5	8
57	Development of correlations for effective thermal conductivity of a tetrakaidecahedra structure in presence of combined conduction and radiation heat transfer. International Journal of Heat and Mass Transfer, 2018, 127, 843-856.	4.8	7
58	Determination of radiative properties of representative and real open cell foam structures using the finite volume method. International Journal of Thermal Sciences, 2018, 132, 117-128.	4.9	7
59	Interfacial Heat Flux Estimation in a Funnel-Shaped Mould and Analysis of Solidification Characteristics in Thin Slab Continuous Casting. Journal of Heat Transfer, 2021, 143, .	2.1	7
60	Mixed convection from a heat source in a channel with a porous insert: A numerical analysis based on local thermal non-equilibrium model. Thermal Science and Engineering Progress, 2021, 25, 101010.	2.7	7
61	Modelling of thermofluidic behaviour and mechanical deformation in thin slab continuous casting of steel: an overview. Canadian Metallurgical Quarterly, 2021, 60, 320-349.	1.2	7
62	Determination of shrinkage characteristics of cylindrical potato during convective drying using novel image processing technique. Heat and Mass Transfer, 2020, 56, 1223-1235.	2.1	6
63	Efficient Modeling and Optimal Design of Coal Fired Pusher Type Reheating Furnace. Heat Transfer Engineering, 2021, 42, 1949-1968.	1.9	6
64	A Numerical Study of Combined Forced Convection and Gas Radiation From a Circular Cylinder in Cross Flow. Heat Transfer Engineering, 2015, 36, 135-151.	1.9	5
65	Determination of Desorption Isotherms of Potato Using Gravimetric Method and Fast Isotherm Method. Heat Transfer Engineering, 2020, 41, 513-521.	1.9	5
66	Novel inverse heat transfer technique for estimation of properties and location-specific process parameters of roof-mounted solar PV plants. Thermal Science and Engineering Progress, 2020, 19, 100657.	2.7	5
67	Determination of Heat Transfer Coefficient and Thermal Dispersion of a Representative Porous Structure Based on Pore Level Simulations. Heat Transfer Engineering, 2020, 41, 1800-1817.	1.9	4
68	Modeling of Gray Gas Radiation With Different Shapes of Heat Source in Three-Dimensional Enclosures. Heat Transfer Engineering, 2012, 33, 651-660.	1.9	3
69	Numerical studies for performance evaluation of a permeable ceiling panel for regulation of indoor humidity. Energy and Buildings, 2013, 62, 158-165.	6.7	3
70	Development of correlations and artificial neural network models to predict second-degree burn time for thermal-protective fabrics. Journal of the Textile Institute, 0, , 1-13.	1.9	3
71	Numerical Modeling of Simultaneous Heat and Moisture Transport in Fire Protective Suits Under Flash Fire Exposure and Evaluation of Second-Degree Burn Time. Journal of Heat Transfer, 2022, 144, .	2.1	3
72	Estimation of Temperature-Dependent Effective Thermal Conductivity and Specific Heat of Thermally Bonded High Bulk Nonwoven Exposed to Sub-Zero Temperature. Journal of Thermal Science and Engineering Applications, 2022, 14, .	1.5	3

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73	Estimation of strength of source in a 2D participating media using the differential evolution algorithm. Journal of Physics: Conference Series, 2012, 369, 012016.	0.4	2
74	Deformation of Potato during Convective Drying. Applied Mechanics and Materials, 0, 592-594, 2728-2732.	0.2	2
75	Numerical investigation of the performance of interface conditions for fluid flow through a partially filled porous channel. Thermal Science and Engineering Progress, 2020, 20, 100628.	2.7	2
76	Thermo-Fluid Design Simulation of Nd3+ POCl3 Transverse Flow Liquid Laser Cavity. Journal of Thermal Science and Engineering Applications, 2021, 13, .	1.5	2
77	Pore Scale Numerical Investigation of Mixed Convection From an Isolated Heat Source in a Channel With a Porous Insert. Journal of Heat Transfer, 2021, 143, .	2.1	2
78	Effect of layering sequence and ambient temperature on thermal insulation of multilayer high bulk nonwoven under extreme cold temperatures. Journal of Industrial Textiles, 0, , 152808372210972.	2.4	2
79	Design and Development of a Test Method for Analyzing Protective Performance of Gloves Exposed to Radiant Heat Based on Computational Fluid Dynamics Analysis. Heat Transfer Engineering, 2019, 40, 95-108.	1.9	1
80	Determination of thermophysical and desorption properties of elephant foot yam using composition based and fast sorption method. Thermal Science and Engineering Progress, 2020, 18, 100508.	2.7	1
81	Selected Papers from 1st International and 18th National ISME Conference on Enabling Sustainable Development. Heat Transfer Engineering, 2020, 41, 481-483.	1.9	0