

# Himadri Chattopadhyay

## List of Publications by Year in descending order

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93  
papers

3,020  
citations

117625

34  
h-index

182427

51  
g-index

95  
all docs

95  
docs citations

95  
times ranked

1781  
citing authors

#	ARTICLE	IF	CITATIONS
1	Performance of fluidized bed steam gasification of biomass – Modeling and experiment. Energy Conversion and Management, 2011, 52, 1583-1588.	9.2	196
2	Enhancement of heat transfer in a fin-tube heat exchanger using rectangular winglet type vortex generators. International Journal of Heat and Mass Transfer, 2016, 101, 667-681.	4.8	113
3	Assessment of drag models in simulating bubbling fluidized bed hydrodynamics. Chemical Engineering Science, 2012, 75, 400-407.	3.8	111
4	Large-eddy simulation of flow and heat transfer in an impinging slot jet. International Journal of Heat and Fluid Flow, 2001, 22, 500-508.	2.4	108
5	Three dimensional kinetic modeling of fluidized bed biomass gasification. Chemical Engineering Science, 2014, 109, 53-64.	3.8	103
6	Heat transfer in a channel with built-in wing-type vortex generators. International Journal of Heat and Mass Transfer, 1992, 35, 803-814.	4.8	102
7	Augmentation of Heat Transfer by Creation of Streamwise Longitudinal Vortices Using Vortex Generators. Heat Transfer Engineering, 2012, 33, 406-424.	1.9	101
8	Thermodynamic analysis of hydrogen rich synthetic gas generation from fluidized bed gasification of rice husk. Energy, 2011, 36, 4063-4071.	8.8	98
9	Analysis of flow structure inside a spool type pressure regulating valve. Energy Conversion and Management, 2012, 53, 196-204.	9.2	84
10	Analysis of heat transfer in simultaneously developing pulsating laminar flow in a pipe with constant wall temperature. International Communications in Heat and Mass Transfer, 2006, 33, 475-481.	5.6	82
11	Effects of different orientations of winglet arrays on the performance of plate-fin heat exchangers. International Journal of Heat and Mass Transfer, 2013, 57, 202-214.	4.8	79
12	Euler-Euler CFD modeling of fluidized bed: Influence of specular coefficient on hydrodynamic behavior. Particuology, 2013, 11, 673-680.	3.6	77
13	Turbulent flow and heat transfer from a slot jet impinging on a moving plate. International Journal of Heat and Fluid Flow, 2003, 24, 685-697.	2.4	71
14	Experimental investigation of heat transfer performance of corrugated tube with spring tape inserts. Experimental Heat Transfer, 2019, 32, 411-425.	3.2	60
15	Dynamic simulation of a pressure regulating and shut-off valve. Computers and Fluids, 2014, 101, 233-240.	2.5	56
16	Numerical investigations of simultaneously developing flow in wavy microchannels under pulsating inlet flow condition. International Communications in Heat and Mass Transfer, 2013, 47, 27-31.	5.6	55
17	Numerical investigations of heat transfer from impinging annular jet. International Journal of Heat and Mass Transfer, 2004, 47, 3197-3201.	4.8	54
18	Effect of coefficient of restitution in Euler-Euler CFD simulation of fluidized-bed hydrodynamics. Particuology, 2014, 15, 170-177.	3.6	54

#	ARTICLE	IF	CITATIONS
19	Computational investigation of heat transfer enhancement by alternating inclined ribs in tubular heat exchanger. <i>Progress in Computational Fluid Dynamics</i> , 2017, 17, 390.	0.2	54
20	Simulation of heat transfer enhancement in tube flow with twisted tape insert. <i>Progress in Computational Fluid Dynamics</i> , 2017, 17, 193.	0.2	53
21	Investigation of Inclined Turbulators for Heat Transfer Enhancement in a Solar Air Heater. <i>Heat Transfer Engineering</i> , 2019, 40, 1451-1460.	1.9	50
22	Energy generation from fluidized bed gasification of rice husk. <i>Journal of Renewable and Sustainable Energy</i> , 2013, 5, .	2.0	49
23	Heat Transfer Enhancement of Laminar Flow of Ethylene Glycol through a Square Channel Fitted with Angular Cut Wavy Strip. <i>Procedia Engineering</i> , 2016, 157, 19-28.	1.2	48
24	Simulation of transport processes in squeeze casting. <i>Journal of Materials Processing Technology</i> , 2007, 186, 174-178.	6.3	45
25	Computational analysis of turbulent forced convection in a channel with a triangular prism. <i>International Journal of Thermal Sciences</i> , 2011, 50, 1973-1983.	4.9	45
26	Three dimensional numerical analysis of hemodynamic of stenosed artery considering realistic outlet boundary conditions. <i>Computer Methods and Programs in Biomedicine</i> , 2020, 185, 105163.	4.7	43
27	Turbulent Heat Transfer Over a Moving Surface Due to Impinging Slot Jets. <i>Journal of Heat Transfer</i> , 2011, 133, .	2.1	41
28	Fabrication and heat treatment of graphene nanoplatelets reinforced aluminium nanocomposites. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 791, 139657.	5.6	41
29	Augmentation of heat transfer in a channel using a triangular prism. <i>International Journal of Thermal Sciences</i> , 2007, 46, 501-505.	4.9	40
30	Microstructural Evolution of A356 Al Alloy During Flow Along a Cooling Slope. <i>Transactions of the Indian Institute of Metals</i> , 2012, 65, 669-672.	1.5	40
31	Design of twisted tape turbulator at different entrance angle for heat transfer enhancement in a solar heater. <i>Beni-Suef University Journal of Basic and Applied Sciences</i> , 2018, 7, 118-126.	2.0	40
32	Entropy generation in the human lung due to effect of psychrometric condition and friction in the respiratory tract. <i>Computer Methods and Programs in Biomedicine</i> , 2019, 180, 105010.	4.7	40
33	Eulerian two-phase flow simulation and experimental validation of semisolid slurry generation process using cooling slope. <i>Materials Science and Technology</i> , 2013, 29, 83-92.	1.6	39
34	Numerical investigations of developing flow and heat transfer in racoon type microchannels under inlet pulsation. <i>International Communications in Heat and Mass Transfer</i> , 2014, 56, 37-41.	5.6	37
35	Simulation of Laminar Slot Jets Impinging on a Moving Surface. <i>Journal of Heat Transfer</i> , 2002, 124, 1049-1055.	2.1	33
36	Numerical Analysis of Heat Transfer from a Moving Surface Due to Impingement of Slot Jets. <i>Heat Transfer Engineering</i> , 2018, 39, 98-106.	1.9	32

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37	Optimal location of three heat sources on the wall of a square cavity using genetic algorithms integrated with artificial neural networks. <i>International Communications in Heat and Mass Transfer</i> , 2011, 38, 620-624.	5.6	31
38	Assessment of Influences of Stenoses in Right Carotid Artery on Left Carotid Artery Using Wall Stress Marker. <i>BioMed Research International</i> , 2017, 2017, 1-13.	1.9	30
39	A review on the application of lattice Boltzmann method for melting and solidification problems. <i>Computational Materials Science</i> , 2022, 206, 111288.	3.0	29
40	Numerical Study on Heat Transfer Enhancement through a Circular Duct Fitted With Centre-Trimmed Twisted Tape. <i>International Journal of Heat and Technology</i> , 2016, 34, 401-406.	0.6	27
41	Experimental and numerical analysis of forced convection in a twisted tube. <i>Thermal Science</i> , 2019, 23, 1043-1052.	1.1	26
42	NUMERICAL INVESTIGATIONS OF HEAT TRANSFER OVER A MOVING SURFACE DUE TO IMPINGING KNIFE-JETS. <i>Numerical Heat Transfer; Part A: Applications</i> , 2001, 39, 531-549.	2.1	23
43	Mathematical modeling of moving heat source shape for submerged arc welding process. <i>International Journal of Advanced Manufacturing Technology</i> , 2013, 69, 2691-2701.	3.0	23
44	A Study of Thermal Behaviour during Submerged Arc Welding. <i>Strojniski Vestnik/Journal of Mechanical Engineering</i> , 2013, 59, 333-338.	1.1	23
45	Effect of Surface Motion on Transport Processes Due to Circular Impinging Jetsâ€”A Numerical Study. <i>Drying Technology</i> , 2006, 24, 1347-1351.	3.1	20
46	Estimation of solidification time in investment casting process. <i>International Journal of Advanced Manufacturing Technology</i> , 2011, 55, 35-38.	3.0	20
47	Assessment of rheological models for prediction of transport phenomena in stenosed artery. <i>Progress in Computational Fluid Dynamics</i> , 2014, 14, 363.	0.2	20
48	Transport phenomena in a differentially heated lid-driven cavity: A study using multi-relaxation-time thermal lattice Boltzmann modeling. <i>Physics of Fluids</i> , 2020, 32, .	4.0	20
49	Thermo-physical characterization of binder and feedstock for single and multiphase flow of PIM 316L feedstock. <i>Journal of Materials Processing Technology</i> , 2011, 211, 2114-2122.	6.3	18
50	Influence of Inlet Turbulence Intensity on Transport Phenomenon of Modified Diamond Cylinder: A Numerical Study. <i>Arabian Journal for Science and Engineering</i> , 2020, 45, 1051-1058.	3.0	18
51	Analysis of heat transfer around bluff bodies with variable inlet turbulent intensity: A numerical simulation. <i>International Communications in Heat and Mass Transfer</i> , 2020, 117, 104779.	5.6	17
52	Synthesis of grapheneâ€”aluminium matrix nanocomposites: Mechanical and tribological properties. <i>Materials Science and Technology</i> , 2021, 37, 467-477.	1.6	17
53	Experimental Investigation on Heat Transfer Enhancement by Swirl Generators in a Solar Air Heater Duct. <i>International Journal of Heat and Technology</i> , 2016, 34, 191-196.	0.6	16
54	A numerical study of solidification in powder injection molding process. <i>International Journal of Heat and Mass Transfer</i> , 2008, 51, 672-682.	4.8	15

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55	Studies on Transport Phenomena during Continuous Casting of an Al-Alloy in Presence of Electromagnetic Stirring. Transactions of the Indian Institute of Metals, 2013, 66, 141-146.	1.5	15
56	Numerical simulation of transport phenomena due to array of round jets impinging on hot moving surface. Drying Technology, 2017, 35, 1742-1754.	3.1	15
57	Application of solid processing routes for the synthesis of graphene-aluminum composites- a review. Materials and Manufacturing Processes, 2021, 36, 1219-1235.	4.7	15
58	Numerical visualization of convective heat transfer from a sphere " with and without radial mass efflux. International Journal of Numerical Methods for Heat and Fluid Flow, 1995, 5, 705-716.	2.8	13
59	Neuro-genetic optimization of laminar slot jets impinging on a moving surface. International Communications in Heat and Mass Transfer, 2014, 59, 143-147.	5.6	13
60	Statistical assessment of wind energy potential for power generation at Imphal, Manipur (India). Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2023, 45, 7376-7388.	2.3	12
61	Numerical investigations of pulsatile flow in stenosed artery. Acta of Bioengineering and Biomechanics, 2014, 16, 33-44.	0.4	12
62	A new approach to estimate the Weibull parameters for wind energy assessment: Case studies with four cities from the Northeast and East India. International Transactions on Electrical Energy Systems, 2020, 30, e12574.	1.9	11
63	Numerical Studies on Turbulent Flow Field in a 90° Pipe Bend. Journal of Fluids Engineering, Transactions of the ASME, 2022, 144, .	1.5	11
64	Study on Rheological Behavior of Semisolid A356 Alloy During Solidification. Transactions of the Indian Institute of Metals, 2012, 65, 809-814.	1.5	9
65	Heatline Visualization During Solidification of a Eutectic Solution in a Rectangular Cavity. Transactions of the Indian Institute of Metals, 2015, 68, 1187-1192.	1.5	9
66	Convective Heat Transfer Enhancement and Entropy Generation of Laminar Flow of Water through a Wavy Channel. International Journal of Heat and Technology, 2016, 34, 727-733.	0.6	9
67	Modelling the powder binder separation in injection stage of PIM. Progress in Computational Fluid Dynamics, 2011, 11, 292.	0.2	8
68	Remelting and interface dynamics during solidification of a eutectic solution in a top-cooled rectangular cavity: A numerical study. International Journal of Heat and Mass Transfer, 2014, 77, 730-737.	4.8	8
69	Performance analysis of human cardiorespiratory system based on the second law of thermodynamics. International Journal of Exergy, 2021, 34, 29.	0.4	8
70	A COMPARATIVE STUDY ON THE ENTROPY GENERATION IN THE HUMAN RESPIRATORY TRACT BASED ON HESS'S MURRAY LAW AND WEIBEL EXPERIMENTED RESULT. Journal of Mechanics in Medicine and Biology, 2019, 19, 1950046.	0.7	7
71	Exergetic analysis of human respiratory system including effect of age and gender. International Journal of Exergy, 2020, 31, 370.	0.4	7
72	Thermohydraulic characteristics and entropy analysis of a novel clockwise and anti-clockwise twisted sinusoidal wavy micro-channel under pulsating inlet condition. EPJ Applied Physics, 2020, 92, 20903.	0.7	7

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73	White light emission of widebandgap silicon carbide: A review. Journal of the American Ceramic Society, 2022, 105, 3100-3115.	3.8	7
74	Performance analysis of human respiratory system based on the second law of thermodynamics. Journal of Thermal Biology, 2021, 96, 102862.	2.5	6
75	Numerical Simulation of Heat Transfer on Simultaneously Developing Flow in Microchannel under Inlet Pulsation. International Journal of Fluid Mechanics Research, 2016, 43, 218-233.	0.4	6
76	Synthesis, characterization and deformation of Al <sub>4.5</sub> Cu/SiCp composites. Materials Today: Proceedings, 2020, 26, 2833-2838.	1.8	5
77	Transport Phenomenon of Simultaneously Developing Flow and Heat Transfer in Twisted Sinusoidal Wavy Microchannel under Pulsating Inlet Flow Condition. Heat Transfer Engineering, 2022, 43, 410-422.	1.9	5
78	A numerical model to predict the powder-binder separation during micro-powder injection moulding. Journal of the American Ceramic Society, 0, , .	3.8	5
79	Heat transfer and flow field in a circular twisted channel. MATEC Web of Conferences, 2018, 240, 01005.	0.2	4
80	An investigation of the second law performance for a condenser used in 210MW thermal power station. Case Studies in Thermal Engineering, 2021, 26, 100992.	5.7	4
81	Modelling of heat transfer in submerged arc welding process. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2013, 227, 1467-1473.	2.4	3
82	Computational analysis of heat transfer due to turbulent annular jet impingement. IOP Conference Series: Materials Science and Engineering, 2021, 1080, 012031.	0.6	3
83	Heat Transfer Due to Annular Jets Impinging on a Moving Surface. Journal of Heat Transfer, 2022, 144, .	2.1	3
84	A review of augmentation methods to enhance the performance of vertical axis wind turbine. Sustainable Energy Technologies and Assessments, 2022, 53, 102469.	2.7	3
85	Behaviour of Semisolid Slurry Flows through a Channel. Solid State Phenomena, 2016, 256, 146-152.	0.3	2
86	Energetic analysis of human respiratory system including effect of age and gender. International Journal of Exergy, 2020, 31, 370.	0.4	2
87	Investigation on Tensile Behaviour of Laser Welded Al <sub>4.5</sub> Mg <sub>4.5</sub> Sc <sub>4.5</sub> Zr In Situ TiB <sub>2</sub> Reinforced Metal Matrix Composite. Transactions of the Indian Institute of Metals, 2017, 70, 2071-2077.	1.5	1
88	Transport Phenomenon of Simultaneously Developing Flow and Heat Transfer in Twisted Sinusoidal Wavy Microchannel under Pulsating Inlet Flow Condition. E3S Web of Conferences, 2019, 128, 01011.	0.5	1
89	A Brief on Biological Thermodynamics for Human Physiology. Journal of Biomechanical Engineering, 2021, 143, .	1.3	1
90	Thermodynamic effect of RNA virus infection on the human cardiovascular system. Journal of Thermal Biology, 2021, 100, 103039.	2.5	1

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91	Turbulent Heat Transfer Over a Moving Plate Due to Impinging Slot Jets. , 2010, , .		0
92	A Study on Bar Drawing Process of A356 Alloy in Semisolid State. Solid State Phenomena, 2019, 285, 318-325.	0.3	0
93	Enhanced Transport under Annular Jet by Introducing Rib. IOP Conference Series: Materials Science and Engineering, 2021, 1080, 012045.	0.6	0