

Hassan Peerhossaini

List of Publications by Year in descending order

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131
papers

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117453

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134
times ranked

1845
citing authors

#	ARTICLE	IF	CITATIONS
1	Static mixers: Mechanisms, applications, and characterization methods – A review. <i>Chemical Engineering Research and Design</i> , 2014, 92, 205-228.	2.7	262
2	Rheology, flow behaviour and heat transfer of ice slurries. <i>International Journal of Refrigeration</i> , 2003, 26, 95-107.	1.8	123
3	Intensification of heat-transfer and mixing in multifunctional heat exchangers by artificially generated streamwise vorticity. <i>Applied Thermal Engineering</i> , 2006, 26, 1820-1829.	3.0	121
4	The effects of chaotic advection on heat transfer. <i>International Journal of Heat and Mass Transfer</i> , 1997, 40, 3089-3104.	2.5	115
5	Partitioned solver for strongly coupled fluid–structure interaction. <i>Computers and Fluids</i> , 2013, 71, 306-319.	1.3	104
6	Droplets formation in turbulent mixing of two immiscible fluids in a new type of static mixer. <i>International Journal of Multiphase Flow</i> , 2003, 29, 813-840.	1.6	100
7	Fluid flow and convective heat transfer in flat microchannels. <i>International Journal of Heat and Mass Transfer</i> , 2009, 52, 1337-1352.	2.5	84
8	A chaotic heat-exchanger for PEMFC cooling applications. <i>Journal of Power Sources</i> , 2006, 156, 114-118.	4.0	83
9	Enhancing heat transfer in vortex generator-type multifunctional heat exchangers. <i>Applied Thermal Engineering</i> , 2012, 38, 14-25.	3.0	82
10	Residence time distribution in twisted pipe flows: helically coiled system and chaotic system. <i>Experiments in Fluids</i> , 1997, 22, 359-368.	1.1	74
11	On the inner structure of streamwise Görtler rolls. <i>International Journal of Heat and Fluid Flow</i> , 1988, 9, 12-18.	1.1	71
12	Heat exchanger design based on chaotic advection. <i>Experimental Thermal and Fluid Science</i> , 1993, 7, 333-344.	1.5	71
13	Chaotic heat transfer for heat exchanger design and comparison with a regular regime for a large range of Reynolds numbers. <i>Applied Thermal Engineering</i> , 2000, 20, 1615-1648.	3.0	64
14	Experimental study of chaotic advection regime in a twisted duct flow. <i>European Journal of Mechanics, B/Fluids</i> , 2001, 20, 205-232.	1.2	63
15	A thermal model for prediction of the Nusselt number in a pipe with chaotic flow. <i>Applied Thermal Engineering</i> , 2002, 22, 1717-1730.	3.0	59
16	Micromixing enhancement by turbulence: Application to multifunctional heat exchangers. <i>Chemical Engineering and Processing: Process Intensification</i> , 2006, 45, 633-640.	1.8	59
17	Turbulent mixing and residence time distribution in novel multifunctional heat exchangers – reactors. <i>Chemical Engineering and Processing: Process Intensification</i> , 2010, 49, 1066-1075.	1.8	59
18	Flow structure and heat transfer induced by embedded vorticity. <i>International Journal of Heat and Mass Transfer</i> , 2010, 53, 3575-3584.	2.5	51

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19	Pulsatile viscous flow in a curved pipe: Effects of pulsation on the development of secondary flow. International Journal of Heat and Fluid Flow, 2010, 31, 879-896.	1.1	51
20	Liquid/liquid dispersion in a chaotic advection flow. International Journal of Multiphase Flow, 2009, 35, 485-497.	1.6	48
21	Thermal and Hydrodynamic Performances of Chaotic Mini-Channel: Application to the Fuel Cell Cooling. Heat Transfer Engineering, 2007, 28, 795-803.	1.2	45
22	Heat transfer enhancement by Görtler instability. International Journal of Heat and Fluid Flow, 2002, 23, 194-204.	1.1	43
23	Alternating mixing tabs in multifunctional heat exchanger-reactor. Chemical Engineering and Processing: Process Intensification, 2010, 49, 653-661.	1.8	42
24	Secondary flow patterns and mixing in laminar pulsating flow through a curved pipe. Experiments in Fluids, 2011, 50, 1539-1558.	1.1	42
25	Experimental and numerical characterisation of mixing in a steady spatially chaotic flow by means of residence time distribution measurements. International Journal of Heat and Mass Transfer, 2000, 43, 3687-3700.	2.5	41
26	Entropy production and field synergy principle in turbulent vortical flows. International Journal of Thermal Sciences, 2011, 50, 2365-2376.	2.6	41
27	Underhood thermal management: Temperature and heat flux measurements and physical analysis. Applied Thermal Engineering, 2010, 30, 590-598.	3.0	39
28	Spatial optimization of an underhood cooling module "Towards an innovative control approach. Applied Energy, 2011, 88, 3841-3849.	5.1	39
29	Order breaking in Dean flow. Physics of Fluids A, Fluid Dynamics, 1991, 3, 1029-1032.	1.6	38
30	On the spectral distribution of the modes in nonlinear Görtler instability. Experimental Thermal and Fluid Science, 1998, 16, 195-208.	1.5	38
31	The Dean instability in power-law and Bingham fluids in a curved rectangular duct. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 163-173.	1.0	38
32	Open loop thermal control of exothermal chemical reactions in multifunctional heat exchangers. International Journal of Heat and Mass Transfer, 2006, 49, 2479-2490.	2.5	37
33	Energy efficiency in process industry "High-efficiency vortex (HEV) multifunctional heat exchanger. Renewable Energy, 2013, 56, 96-104.	4.3	37
34	Turbulent direct-contact heat transfer between two immiscible fluids. International Journal of Thermal Sciences, 2010, 49, 1886-1898.	2.6	35
35	Review of underhood aerothermal management: Towards vehicle simplified models. Applied Thermal Engineering, 2014, 73, 842-858.	3.0	35
36	Turbulent Mixing of Two Immiscible Fluids. Journal of Fluids Engineering, Transactions of the ASME, 2005, 127, 1132-1139.	0.8	33

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37	Analytical and empirical determination of thermal performance of louvered heat exchanger – Effects of air flow statistics. <i>International Journal of Heat and Mass Transfer</i> , 2011, 54, 356-365.	2.5	32
38	Towards the control of car underhood thermal conditions. <i>Applied Thermal Engineering</i> , 2011, 31, 902-910.	3.0	32
39	Vorticity and convective heat transfer downstream of a vortex generator. <i>International Journal of Thermal Sciences</i> , 2018, 125, 342-349.	2.6	32
40	Oscillatory modes in the flow between two horizontal corotating cylinders with a partially filled gap. <i>Physical Review A</i> , 1989, 39, 763-771.	1.0	30
41	Effects of embedded streamwise vorticity on turbulent mixing. <i>Chemical Engineering and Processing: Process Intensification</i> , 2009, 48, 1459-1476.	1.8	30
42	Crystallisation of undercooled aqueous solutions: Experimental study of free dendritic growth in cylindrical geometry. <i>International Journal of Heat and Mass Transfer</i> , 2006, 49, 1876-1884.	2.5	29
43	Experimental study of the influence of the rows of vortex generators on turbulence structure in a tube. <i>Chemical Engineering and Processing: Process Intensification</i> , 2009, 48, 659-671.	1.8	29
44	Mixing performance in Split-And-Recombine Milli-Static Mixers – A numerical analysis. <i>Chemical Engineering Research and Design</i> , 2019, 142, 298-306.	2.7	29
45	Experimental study of the thermal performance of chaotic geometries for their use in PEM fuel cells. <i>International Journal of Thermal Sciences</i> , 2016, 101, 181-192.	2.6	28
46	A new adaptive procedure for using chemical probes to characterize mixing. <i>Chemical Engineering Science</i> , 2011, 66, 3540-3550.	1.9	27
47	Comparative efficiency of shear, elongation and turbulent droplet breakup mechanisms: Review and application. <i>Chemical Engineering Research and Design</i> , 2013, 91, 2587-2600.	2.7	27
48	Some unexpected effects of wavelength and perturbation strength on heat transfer enhancement by Görtler instability. <i>International Journal of Heat and Mass Transfer</i> , 2004, 47, 3783-3795.	2.5	25
49	Some innovative concepts for car drag reduction: A parametric analysis of aerodynamic forces on a simplified body. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 2012, 107-108, 36-47.	1.7	25
50	Fan air flow analysis and heat transfer enhancement of vehicle underhood cooling system – Towards a new control approach for fuel consumption reduction. <i>Applied Energy</i> , 2012, 91, 439-450.	5.1	25
51	Turbulence behavior of artificially generated vorticity. <i>Journal of Turbulence</i> , 2010, 11, N36.	0.5	24
52	Temperature and Heat Flux Behavior of Complex Flows in Car Underhood Compartment. <i>Heat Transfer Engineering</i> , 2010, 31, 1057-1067.	1.2	22
53	Effects of vortex organization on heat transfer enhancement by Görtler instability. <i>International Journal of Thermal Sciences</i> , 2004, 43, 753-760.	2.6	21
54	Ice slurry crystallization based on kinetic phase-change modeling. <i>International Journal of Refrigeration</i> , 2010, 33, 1559-1568.	1.8	21

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55	Mass transfer and mixing by pulsatile three-dimensional chaotic flow in alternating curved pipes. International Journal of Heat and Mass Transfer, 2011, 54, 3933-3950.	2.5	21
56	Effect of air temperature non-uniformity on water-air heat exchanger thermal performance – Toward innovative control approach for energy consumption reduction. Applied Energy, 2016, 173, 481-493.	5.1	20
57	Genetic algorithm based correlations for heat transfer calculation on concave surfaces. Applied Thermal Engineering, 2009, 29, 3476-3481.	3.0	17
58	An air table designed to study two-dimensional disc packings: preliminary tests and first results. Journal Physics D: Applied Physics, 1990, 23, 1396-1404.	1.3	16
59	Heat transfer at the grinding interface between glass plate and sintered diamond wheel. International Journal of Thermal Sciences, 2016, 107, 89-95.	2.6	16
60	Turbulent spectrum model for drop-breakup mechanisms in an inhomogeneous turbulent flow. Chemical Engineering Science, 2017, 158, 41-49.	1.9	16
61	Mixing enhancement by pulsating chaotic advection. Chemical Engineering and Processing: Process Intensification, 2013, 74, 1-13.	1.8	15
62	Using undercooling to measure the freezing points of aqueous solutions. International Journal of Thermal Sciences, 2005, 44, 11-20.	2.6	14
63	Mixing assessment by chemical probe. Journal of Industrial and Engineering Chemistry, 2014, 20, 1411-1420.	2.9	14
64	Parametric Analysis of Heat Exchanger Thermal Performance in Complex Geometries – Effect of Air Velocity and Water Flow Distributions. Heat Transfer Engineering, 2016, 37, 1027-1037.	1.2	14
65	Numerical and experimental investigation of direct electric conduction in a channel flow. International Journal of Heat and Mass Transfer, 1996, 39, 975-993.	2.5	13
66	Thermal analysis of chemical reactions in microchannels using highly sensitive thin-film heat-flux microsensor. Chemical Engineering Science, 2013, 94, 150-155.	1.9	13
67	Mass transfer and emulsification by chaotic advection. International Journal of Heat and Mass Transfer, 2014, 71, 228-235.	2.5	13
68	Ohmic heating of complex fluids. International Journal of Heat and Mass Transfer, 1993, 36, 3143-3152.	2.5	12
69	Heat and mass fluxes across density interfaces in a grid-generated turbulence. International Journal of Heat and Mass Transfer, 2005, 48, 3722-3735.	2.5	12
70	Influence of Viscosity Ratio on Droplets Formation in a Chaotic Advection Flow. International Journal of Chemical Reactor Engineering, 2009, 7, .	0.6	12
71	A novel thin-film temperature and heat-flux microsensor for heat transfer measurements in microchannels. Lab on A Chip, 2012, 12, 652-658.	3.1	12
72	Effects of ground vehicle inclination on underhood compartment cooling. International Journal of Automotive Technology, 2012, 13, 895-904.	0.7	11

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73	A Quantitative Method for Assessment of Car Inclination Effects on Thermal Management of the Underhood Compartment. <i>Journal of Thermal Science and Engineering Applications</i> , 2009, 1, .	0.8	10
74	A semi-analytical approach to the study of an elastic circular cylinder confined in a cylindrical fluid domain subjected to small-amplitude transient motions. <i>Journal of Fluids and Structures</i> , 2009, 25, 134-154.	1.5	10
75	Mixing performances of swirl flow and corrugated channel reactors. <i>Chemical Engineering Research and Design</i> , 2014, 92, 2213-2222.	2.7	10
76	Flow Pulsation and Geometry Effects on Mixing of Two Miscible Fluids in Microchannels. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2014, 136, .	0.8	10
77	Some observations on the spatiotemporal orbits structure and heat transfer enhancement in pulsating flow. <i>International Journal of Thermal Sciences</i> , 2018, 125, 428-439.	2.6	9
78	Active control of natural convection in a fluid layer with volume heat dissipation. <i>International Journal of Heat and Mass Transfer</i> , 2002, 45, 667-678.	2.5	8
79	Measurement and model on thermal properties of sintered diamond composites. <i>Journal of Alloys and Compounds</i> , 2013, 551, 636-642.	2.8	8
80	Mixing by Time-Dependent Orbits in Spatiotemporal Chaotic Advection. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2015, 137, .	0.8	8
81	A semi-analytical approach for temperature distribution in Dean flow. <i>Heat and Mass Transfer</i> , 2014, 50, 23-30.	1.2	7
82	Experimental study of the flow induced by a vehicle fan and the effect of engine blockage in a simplified model. <i>International Journal of Automotive Technology</i> , 2016, 17, 617-627.	0.7	7
83	Numerical and experimental hydrodynamic study of a coolant distributor for grinding applications. <i>Engineering Applications of Computational Fluid Mechanics</i> , 2016, 10, 86-99.	1.5	7
84	Experimental study of the turbulent field behind a perforated vortex generator. <i>Journal of Applied Mechanics and Technical Physics</i> , 2015, 56, 569-579.	0.1	6
85	Heat Transfer in Circular Pipe Fitted with Perforated Trapezoidal Vortex Generators. <i>Heat Transfer Engineering</i> , 2022, 43, 1179-1192.	1.2	6
86	On the Correlation Between Vorticity Strength and Convective Heat Transfer. , 2010, , .		5
87	Energy Management in Car Underhood Compartmentâ€™Temperature and Heat Flux Analysis of Car Inclination Effects. <i>Heat Transfer Engineering</i> , 2015, 36, 68-80.	1.2	5
88	Effects of Car Inclination on Air Flow and Aerothermal Behavior in the Underhood Compartment. , 2008, , .		4
89	Turbulence statistics downstream of a vorticity generator at low Reynolds numbers. <i>Physics of Fluids</i> , 2016, 28, 105106.	1.6	4
90	Leakage effects in car underhood aerothermal management: temperature and heat flux analysis. <i>Heat and Mass Transfer</i> , 2014, 50, 1455-1464.	1.2	3

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91	Analysis and modeling of the thermal soak phase of a vehicle " Temperature and heat flux measurements. International Journal of Automotive Technology, 2015, 16, 221-229.	0.7	3
92	Effects of Shear Stress on the Growth Rate of Micro-Organisms in Agitated Reactors. , 2016, , .		3
93	Active Control of Air Flow in Vehicle Underhood Compartment: Temperature and Heat Flux Analysis. , 2010, , .		2
94	Aerodynamic Forces on a Simplified Car Body: Towards Innovative Designs for Car Drag Reduction. , 2010, , .		2
95	Vortically Enhanced Heat Transfer and Mixing: State of the Art and Recent Results. , 2012, , .		2
96	Optimized Chaotic Heat Exchanger Configurations for Process Industry: A Numerical Study. , 2013, , .		2
97	Transport Phenomena in Passively Manipulated Chaotic Flows: Split-and-Recombine Reactors. , 2013, , .		2
98	Temperature measurement of flat glass edge during grinding and effect of wheel and workpiece speeds. Measurement Science and Technology, 2017, 28, 065008.	1.4	2
99	Fluid Forces on a Circular Cylinder Subjected to a Transient Motion at Low Amplitude: Infinite Medium and Cylindrical Confinement. , 2006, , .		2
100	Fluid Forces on a Moving Body at Low Amplitude in Fluid at Rest: Part 2 " Analytical and Numerical Study for an Accelerated Circular Cylinder. , 2006, , .		2
101	A Review of Fluid Forces Induced by a Circular Cylinder Oscillating at Low Amplitude and High Frequency in Cylindrical Confinement. , 2006, , .		2
102	Fluid Forces on a Moving Body at Low Amplitude in Fluid at Rest: Part 1 " A Review of Literature. , 2006, , .		2
103	Fluid Forces on a Circular Cylinder Moving Transversely in Cylindrical Confinement: Extension of the Fritz Model to Larger Amplitude Motions. , 2006, , .		2
104	VELOCITY AND TEMPERATURE FIELDS IN A PLANE POISEUILLE FLOW WITH VOLUME HEATING: MEASUREMENTS UNDER ELECTRIC FIELD. Experimental Heat Transfer, 2002, 15, 137-159.	2.3	1
105	Secondary Flow Velocity Field in Laminar Pulsating Flow Through Curved Pipes: PIV Measurements. , 2009, , .		1
106	Assessment of Mixing by Chemical Probe in Swirl Flow HEX Reactors. , 2012, , .		1
107	Numerical Simulation of the Interaction Between Fluid Flow and Elastic Flaps Oscillations. , 2013, , .		1
108	Mixing Enhancement in a Chaotic Micromixer Using Pulsating Flow. , 2014, , .		1

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109	Development of Turbulent Wakes Evolving from Asymmetric Shear Layers. Heat Transfer Engineering, 2018, 39, 1766-1773.	1.2	1
110	Enhancement of Turbulent Mixing by Embedded Longitudinal Vorticity: A Numerical Study and Experimental Comparison. , 2006, , .		1
111	HEAT TRANSFER MODES IN COMPLEX INTERNAL FLOWS. , 2009, , .		1
112	Aerothermal Management of Vehicle Heat Exchangers: Parametric Analysis. , 2013, , .		1
113	Take-off threshold velocity of saltating particles under heat radiation. Experiments in Fluids, 2002, 33, 288-295.	1.1	0
114	Pulsating Flow for Mixing Intensification in a Twisted Curved Pipe. , 2007, , 1455.		0
115	Stability of Concave Boundary Layers: Overview of Stability Mechanism and Recent Findings. , 2008, , .		0
116	Optimization and Active Control of the Underhood Cooling System: A Numerical Analysis. , 2010, , .		0
117	On the synergy field between velocity vector and temperature gradient in turbulent vortical flows. , 2010, , .		0
118	Mixing, Reaction and Heat Transfer in a Pulsatile Flow Microreactor: Infrared Measurements. , 2012, , .		0
119	Thin-Film Heat-Flux Microsensor for Heat-Transfer Measurement in Micro-Heat Exchangers/Microreactors. , 2012, , .		0
120	Heat-Transfer Enhancement by Artificially Generated Streamwise Vorticity. Journal of Physics: Conference Series, 2012, 395, 012051.	0.3	0
121	Chaotic Heat Transfer in a Laminar Pulsating Flow With Constant Wall Temperature. , 2014, , .		0
122	Low Frequency Acoustic Streaming in a Hele-Shaw Cell. , 2014, , .		0
123	Heat Transfer Enhancement in Split and Recombine Flow Configurations: A Numerical and Experimental Study. , 2016, , .		0
124	Motion of Active Fluids: Diffusion Dynamics of Cyanobacteria. , 2016, , .		0
125	Investigation of Flow and Forces on a Strongly Accelerated Circular Cylinder. , 2005, , .		0
126	Transient Fluid Forces on a Rigid Circular Cylinder Subjected to Small Amplitude Motions. Journal of Pressure Vessel Technology, Transactions of the ASME, 2008, 130, .	0.4	0

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127	Fluxmetric Analysis of Car Inclination Effects on the Thermal Management of Underhood Top Region. , 2010, , .		0
128	Turbulence Length Scales in a Vortical Flow. , 2011, , .		0
129	Thermal Properties of Sintered Diamond Composites Used in Grinding. , 2012, , .		0
130	Experimental and Numerical Study of the Coolants Distributor for Machining Process. , 2013, , .		0
131	Aerothermal Analysis of Vehicle Thermal Soak: Temperature and Heat-Flux Measurements. , 2013, , .		0