

Afzal Husain

List of Publications by Year in descending order

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73
papers

1,131
citations

394421

19
h-index

414414

32
g-index

73
all docs

73
docs citations

73
times ranked

830
citing authors

#	ARTICLE	IF	CITATIONS
1	Shape Optimization of Micro-Channel Heat Sink for Micro-Electronic Cooling. IEEE Transactions on Components and Packaging Technologies, 2008, 31, 322-330.	1.3	94
2	Enhanced multi-objective optimization of a microchannel heat sink through evolutionary algorithm coupled with multiple surrogate models. Applied Thermal Engineering, 2010, 30, 1683-1691.	6.0	94
3	Analysis and optimization of a micromixer with a modified Tesla structure. Chemical Engineering Journal, 2010, 158, 305-314.	12.7	93
4	Optimization of a microchannel heat sink with temperature dependent fluid properties. Applied Thermal Engineering, 2008, 28, 1101-1107.	6.0	92
5	Thermal performance analysis of a hybrid micro-channel, -pillar and -jet impingement heat sink. Applied Thermal Engineering, 2016, 102, 989-1000.	6.0	56
6	Multi-objective optimization of a centrifugal compressor impeller through evolutionary algorithms. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2010, 224, 711-721.	1.4	53
7	Shape optimization of a micromixer with staggered-herringbone grooves patterned on opposite walls. Chemical Engineering Journal, 2010, 162, 730-737.	12.7	41
8	Performance analysis and design optimization of micro-jet impingement heat sink. Heat and Mass Transfer, 2013, 49, 1613-1624.	2.1	35
9	Microchannel Heat Sink with Designed Roughness: Analysis and Optimization. Journal of Thermophysics and Heat Transfer, 2008, 22, 342-351.	1.6	34
10	Multiobjective Optimization of a Grooved Micro-Channel Heat Sink. IEEE Transactions on Components and Packaging Technologies, 2010, 33, 767-776.	1.3	34
11	Performance enhancement of axial fan blade through multi-objective optimization techniques. Journal of Mechanical Science and Technology, 2010, 24, 2059-2066.	1.5	32
12	Performance enhancement of Wells turbine: Combined radiused edge blade tip, static extended trailing edge, and variable thickness modifications. Ocean Engineering, 2019, 185, 47-58.	4.3	32
13	Tailoring the pressure drop and fluid distribution of a capacitive deionization device. Desalination, 2019, 449, 111-117.	8.2	28
14	Thermal Optimization of a Microchannel Heat Sink With Trapezoidal Cross Section. Journal of Electronic Packaging, Transactions of the ASME, 2009, 131, .	1.8	27
15	Multiobjective Optimization of Circumferential Casing Grooves for a Transonic Axial Compressor. Journal of Propulsion and Power, 2011, 27, 730-733.	2.2	26
16	Optimization of Micromixer with Staggered Herringbone Grooves on Top and Bottom Walls. Engineering Applications of Computational Fluid Mechanics, 2011, 5, 506-516.	3.1	24
17	Optimization and Comparative Study on Oblique- and Rectangular-Fin Microchannel Heat Sinks. Journal of Thermophysics and Heat Transfer, 2010, 24, 849-852.	1.6	23
18	Multi-objective Optimization of a Laidback Fan Shaped Film-Cooling Hole Using Evolutionary Algorithm. International Journal of Fluid Machinery and Systems, 2010, 3, 150-159.	0.2	22

#	ARTICLE	IF	CITATIONS
19	Multiobjective Optimization of a Microchannel Heat Sink Using Evolutionary Algorithm. Journal of Heat Transfer, 2008, 130, .	2.1	21
20	Enhanced multi-objective optimization of a dimpled channel through evolutionary algorithms and multiple surrogate methods. International Journal for Numerical Methods in Fluids, 2011, 66, 742-759.	1.6	20
21	Multi-objective optimization of a rotating cooling channel with staggered pin-fins for heat transfer augmentation. International Journal for Numerical Methods in Fluids, 2012, 68, 922-938.	1.6	20
22	Design Optimization of Manifold Microchannel Heat Sink Through Evolutionary Algorithm Coupled With Surrogate Model. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2013, 3, 617-624.	2.5	19
23	Effectiveness of meta-models for multi-objective optimization of centrifugal impeller. Journal of Mechanical Science and Technology, 2014, 28, 4947-4957.	1.5	19
24	Thermal Performance Analysis and Optimization of Microjet Cooling of High-Power Light-Emitting Diodes. Journal of Thermophysics and Heat Transfer, 2013, 27, 235-245.	1.6	17
25	Analysis and optimization of electrokinetic microchannel heat sink. International Journal of Heat and Mass Transfer, 2009, 52, 5271-5275.	4.8	15
26	Design and Performance Comparison of Two Patterns of Wind-catcher for a Semi-enclosed Courtyard. International Journal of Mechanical Engineering and Robotics Research, 2017, , 396-400.	1.0	15
27	Thermal transport and performance analysis of pressure- and electroosmotically-driven liquid flow microchannel heat sink with wavy wall. Heat and Mass Transfer, 2011, 47, 93-105.	2.1	14
28	Electroosmotically enhanced microchannel heat sinks. Journal of Mechanical Science and Technology, 2009, 23, 814-822.	1.5	12
29	Comparative Performance Analysis of Microjet Impingement Cooling Models with Different Spent-Flow Schemes. Journal of Thermophysics and Heat Transfer, 2016, 30, 466-472.	1.6	12
30	Mixing performance of split-and-recombine micromixer with offset inlets. Microsystem Technologies, 2018, 24, 1511-1523.	2.0	11
31	Performance Characterization of Laminar Flow in Multiple Microjet Impingement Heat Sinks. Journal of Thermophysics and Heat Transfer, 2014, 28, 133-141.	1.6	9
32	Effect of stenosis on hemodynamics in left coronary artery based on patient-specific CT scan. Bio-Medical Materials and Engineering, 2019, 30, 463-473.	0.6	8
33	Computational Analysis of Liquid Jet Impingement Micro-channel Cooling. Materials Today: Proceedings, 2018, 5, 27877-27883.	1.8	7
34	Design Optimization of Micro-Channel for Micro Electronic Cooling. , 2007, , 201.		6
35	Performance analysis of cold plate heat sink with parallel channel and pin-fin. Materials Today: Proceedings, 2021, 44, 3144-3149.	1.8	6
36	Energy Efficient Design of a Jet Pump by Ensemble of Surrogates and Evolutionary Approach. International Journal of Fluid Machinery and Systems, 2016, 9, 265-276.	0.2	6

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37	Investigation of coherent structures in rotating Rayleigh-Benard convection. <i>Physics of Fluids</i> , 2006, 18, 125105.	4.0	5
38	Combined effects of viscosity and surface roughness on electric submersible pump performance. <i>Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy</i> , 2017, 231, 303-316.	1.4	5
39	Numerical analysis of inclined jet impingement heat transfer in microchannel. <i>Materials Today: Proceedings</i> , 2021, 43, 557-563.	1.8	5
40	Design Optimization of a Centrifugal Compressor Impeller by Multi-Objective Genetic Algorithm. , 2009, , .		4
41	Optimisation of porous slab parameters for jet-impingement microchannel heat sink performance enhancement. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2022, 32, 2659-2681.	2.8	4
42	Turbulent Rotating Rayleigh-Benard Convection: Spatiotemporal and Statistical Study. <i>Journal of Heat Transfer</i> , 2009, 131, .	2.1	3
43	Microchannel Heat Sinking: Analysis and Optimization. , 2009, , 185-190.		3
44	Thermal Performance Analysis of Jet Impingement with Effusion Scheme. <i>Procedia Engineering</i> , 2015, 127, 110-117.	1.2	3
45	Comparative study of flow characteristics in uniformly varying microchannel for DI water and nanofluid. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	3
46	Numerical Simulation of Heat Transfer in Gradually Varying Microchannel Heat Sink. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 691, 012069.	0.6	2
47	Newtonian and Non-Newtonian Pulsatile Flows through an Artery with Stenosis. <i>Journal of Engineering Research</i> , 2018, 14, 191.	0.2	2
48	Thermal Performance of Jet Impingement with Spent Flow Management. <i>International Journal of Engineering, Transactions A: Basics</i> , 2017, 30, .	0.4	2
49	Performance analysis of hybrid microchannel heat sink for varying nozzle geometry and layout on the basis of first- and second-law of thermodynamics. <i>Journal of Mechanical Science and Technology</i> , 2021, 35, 5753-5764.	1.5	2
50	Artificial neural network and numerical analysis for performance enhancement of hybrid microchannel-pillar-jet impingement heat sink using Al ₂ O ₃ -water and CuO-water nanofluids. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2022, 236, 9814-9827.	2.1	2
51	Optimization of Ribbed Microchannel Heat Sink Using Surrogate Analysis. , 2009, , 529-534.		1
52	Shape Optimization of a Rotating Rectangular Channel With Pin-Fins by Kriging Method. , 2010, , .		1
53	Optimization of an Indirect Micro-Jet Impingement Cooling System. , 2012, , .		1
54	Thermal Performance Analysis of Hybrid Jet Impingement/Microchannel Cooling for Concentrated Photovoltaic (CPV) Cells. , 2016, , .		1

#	ARTICLE	IF	CITATIONS
55	Blood Flow and Mixing Analysis in Split-and-Recombine Micromixer With Offset Fluid Inlets. , 2018, , .		1
56	Hydrodynamic Investigation on Deep Desulfurization of Liquid Fuel at the Microscale. Chemical Engineering and Technology, 2020, 43, 1951-1958.	1.5	1
57	Effect of Nozzle Inclination Angle on the Performance of Hybrid Jet Impingement Microchannel Heat Sink. Lecture Notes in Mechanical Engineering, 2022, , 887-896.	0.4	1
58	Shape Optimization of a Rotating Cooling Channel with Pin-Fins. Transactions of the Korean Society of Mechanical Engineers, B, 2010, 34, 703-714.	0.1	1
59	Mixing performance enhancement and parametric investigation of swirl-inlets split-and-recombine micromixer with pulsatile flow. Materials Today: Proceedings, 2022, 56, 609-616.	1.8	1
60	Numerical Optimization of a Electroosmotically Enhanced Microchannel Heat Sink. , 2009, , .		0
61	Enhanced Multi-Objective Optimization of a Microchannel Heat Sink Using Multiple Surrogates Modeling. , 2009, , .		0
62	Numerical Study on Mixing of Two Fluids With Modified Tesla Structure. , 2009, , .		0
63	Design Optimization of an Axial Fan Blade Through Multi-Objective Evolutionary Algorithm. , 2010, , .		0
64	Thermal Performance of a Silicon-Based Multiple Micro-Jet Impingement Heat Sink. , 2013, , .		0
65	Thermal Characterization of Multiple Micro-Jet Impingement Cooling Model. , 2014, , .		0
66	Spent Flow Effects of Multiple Micro-Jet Impingement Cooling Models. , 2015, , .		0
67	Numerical Analysis of Fluid Flow Through an Electrical Submersible Pump for Handling Viscous Liquid. , 2016, , .		0
68	Numerical Analysis of Inclined Jet Micro-channel Heat Sink Using Nanofluids. Lecture Notes in Mechanical Engineering, 2021, , 851-860.	0.4	0
69	Non-Newtonian pulsatile flow through an artery with two stenosis. Materials Today: Proceedings, 2021, 46, 10793-10798.	1.8	0
70	Numerical and Experimental Studies on Pressure Drop in Milling Parameter Optimized Aluminium Heat Sink Channel. Lecture Notes in Mechanical Engineering, 2022, , 237-244.	0.4	0
71	Shape Optimization of a Micro-Channel Using Kriging Model. Transactions of the Korean Society of Mechanical Engineers, B, 2007, 31, 733-740.	0.1	0
72	Performance Analysis of a Multiple Micro-Jet Impingements Cooling Model. Journal of Engineering Research, 2018, 15, 58.	0.2	0

#	ARTICLE	IF	CITATIONS
73	Heat Transfer Characteristics of Microjet Impingements with Flow Extraction. SSRN Electronic Journal, 0, , .	0.4	0