Vivek K Patel

List of Publications by Year in Descending Order

110 papers	3,152 citations	31 h-index	54 g-index
119 ext. papers	3,923 ext. citations	3.5 avg, IF	6.4 L-index

#	Paper	IF	Citations
110	Optimization of Process Parameters Using Response Surface Methodology to Improve Surface Finish in Face Gear Grinding. *Lecture Notes in Intelligent Transportation and Infrastructure*, **2022**, 255-261	0.3	
109	Multi-Response Optimization of AlO Nanopowder-Mixed Wire Electrical Discharge Machining Process Parameters of Nitinol Shape Memory Alloy.. *Materials*, **2022**, 15,	3.5	3
108	High-speed friction stir welding in light weight battery trays for the EV industry. *Science and Technology of Welding and Joining*, **2022**, 27, 250-255	3.7	9
107	Opportunistic Sensing-Based Route Demand Assessment and Feeder Bus Scheduling. *Studies in Infrastructure and Control*, **2022**, 167-179		
106	Machining parameter optimization and experimental investigations of nano-graphene mixed electrical discharge machining of nitinol shape memory alloy. *Journal of Materials Research and Technology*, **2022**, 19, 653-668	5.5	1
105	Optimization of Bead Morphology for GMAW-Based Wire-Arc Additive Manufacturing of 2.25 Cr-1.0 Mo Steel Using Metal-Cored Wires. *Applied Sciences (Switzerland)*, **2022**, 12, 5060	2.6	1
104	Elucidating the Effect of Step Cooling Heat Treatment on the Properties of 2.25 Cr-1.0 Mo Steel Welded with a Combination of GMAW Techniques Incorporating Metal-Cored Wires. *Materials*, **2021**, 14,	3.5	1
103	Investigation on a small-scale vertical tube evaporator multieffect desalination system: Modeling, analysis, and optimization. *Heat Transfer*, **2021**, 50, 5332-5355	3.1	2
102	Hybrid spotted hyena Nelder-Mead optimization algorithm for selection of optimal machining parameters in grinding operations. *Materialpruefung/Materials Testing*, **2021**, 63, 293-298	1.9	1
101	Conceptual comparison of the ecogeography-based algorithm, equilibrium algorithm, marine predators algorithm and slime mold algorithm for optimal product design. *Materialpruefung/Materials Testing*, **2021**, 63, 336-340	1.9	29
100	Water desalination and wastewater reuse using integrated reverse osmosis and forward osmosis system. *IOP Conference Series: Materials Science and Engineering*, **2021**, 1146, 012029	0.4	3
99	Brackish ground water and dairy wastewater treatment using electrodialysis system. *IOP Conference Series: Materials Science and Engineering*, **2021**, 1146, 012006	0.4	1
98	Energy, economy, and ecological (3E)-based performance evaluation of a steam cycle power plant through optimization investigation. *Heat Transfer*, **2021**, 50, 6491	3.1	0
97	Parametric Optimization and Effect of Nano-Graphene Mixed Dielectric Fluid on Performance of Wire Electrical Discharge Machining Process of NiTi Shape Memory Alloy. *Materials*, **2021**, 14,	3.5	14
96	Optimization of Activated Tungsten Inert Gas Welding Process Parameters Using Heat Transfer Search Algorithm: With Experimental Validation Using Case Studies. *Metals*, **2021**, 11, 981	2.3	13
95	Performance assessment of flat-plate solar collector with internal fins and porous media through an integrated approach of CFD and experimentation. *International Journal of Thermal Sciences*, **2021**, 165, 106932	4.1	14
94	Comparative Performance of Recent Advanced Optimization Algorithms for Minimum Energy Requirement Solutions in Water Pump Switching Network. *Archives of Computational Methods in Engineering*, **2021**, 28, 1545-1559	7.8	3

93	Experimental investigation of the thermal performance of closed loop flat plate oscillating heat pipe. *Experimental Heat Transfer*, **2021**, 34, 85-103	2.4	10
92	A performance evaluation of the ejector refrigeration system based on thermo-economic criteria through multi-objective approach. *Clean Technologies and Environmental Policy*, **2021**, 23, 1087-1103	4.3	2
91	Qualitative and Quantitative Performance Comparison of Recent Optimization Algorithms for Economic Optimization of the Heat Exchangers. *Archives of Computational Methods in Engineering*, **2021**, 28, 2881-2896	7.8	4
90	Pareto optimization of WEDM process parameters for machining a NiTi shape memory alloy using a combined approach of RSM and heat transfer search algorithm. *Advances in Manufacturing*, **2021**, 9, 64-80	2.7	23
89	Performance improvement of the sanitary centrifugal pump through an integrated approach based on response surface methodology, multi-objective optimization and CFD. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, **2021**, 43, 1	2	9
88	Performance of Recent Optimization Algorithms and Its Comparison to State-of-the-Art Differential Evolution and Its Variants for the Economic Optimization of Cooling Tower. *Archives of Computational Methods in Engineering*, **2021**, 28, 4523	7.8	1
87	Experimental Investigations and Pareto Optimization of Fiber Laser Cutting Process of Ti6Al4V. *Metals*, **2021**, 11, 1461	2.3	11
86	Experimental investigations and optimization of MWCNTs-mixed WEDM process parameters of nitinol shape memory alloy. *Journal of Materials Research and Technology*, **2021**, 15, 2152-2169	5.5	17
85	Experimental investigation on welding of 2.25 Cr-1.0 Mo steel with regulated metal deposition and GMAW technique incorporating metal-cored wires. *Journal of Materials Research and Technology*, **2021**, 15, 1007-1016	5.5	3
84	Multi-Response Optimization of Abrasive Waterjet Machining of Ti6Al4V Using Integrated Approach of Utilized Heat Transfer Search Algorithm and RSM.. *Materials*, **2021**, 14,	3.5	7
83	Analysis and assessment of a nanoparticle seeded small scale absorption refrigeration system driven by a low-grade waste heat source. *Heat Transfer*, **2020**, 49, 3409-3432	3.1	2
82	Topology optimization of an offshore jacket structure considering aerodynamic, hydrodynamic and structural forces. *Engineering With Computers*, **2020**, 37, 2911	4.5	3
81	Surface Analysis of Wire-Electrical-Discharge-Machining-Processed Shape-Memory Alloys. *Materials*, **2020**, 13,	3.5	40
80	Experimental assessment of a small scale hybrid liquid desiccant dehumidification incorporated vapor compression refrigeration system: An energy saving approach. *Applied Thermal Engineering*, **2020**, 174, 115288	5.8	9
79	Exploring the Effect of Passing Vehicle Search (PVS) for the Wind Farm Layout Optimization Problem. *Lecture Notes in Mechanical Engineering*, **2020**, 411-418	0.4	0
78	Effect of Combining Teaching Learning-Based Optimization (TLBO) with Different Search Techniques. *Lecture Notes in Mechanical Engineering*, **2020**, 361-372	0.4	
77	The Henry gas solubility optimization algorithm for optimum structural design of automobile brake components. *Materialpruefung/Materials Testing*, **2020**, 62, 261-264	1.9	55
76	Air Engine Efficiency Improvement Using Control System. *Lecture Notes in Mechanical Engineering*, **2020**, 381-388	0.4	

75	An Industrial Heat Exchanger Optimization from Economic View Point. *Lecture Notes in Mechanical Engineering*, **2020**, 399-410	0.4	
74	Biogeography Based Optimization for Water Pump Switching Problem. *Modeling and Optimization in Science and Technologies*, **2020**, 183-202	0.6	1
73	Opportunistic sensing based detection of crowdedness in public transport buses. *Pervasive and Mobile Computing*, **2020**, 68, 101246	3.5	5
72	Effect of WEDM Process Parameters on Surface Morphology of Nitinol Shape Memory Alloy. *Materials*, **2020**, 13,	3.5	24
71	Assessment of liquid desiccant dehumidification aided vapor-compression refrigeration system based on thermo-economic approach. *Applied Thermal Engineering*, **2020**, 164, 114542	5.8	20
70	Thermo-economic optimization of a nanofluid based organic Rankine cycle: A multi-objective study and analysis. *Thermal Science and Engineering Progress*, **2020**, 17, 100381	3.6	16
69	Optimal Sizing and Placement of Multiple Distributed Generators using Teaching Learning Based Optimization Algorithm in Radial Distributed Network **2019**,		2
68	Layout optimization of a wind farm using geometric pattern-based approach. *Energy Procedia*, **2019** , 158, 940-946	2.3	5
67	Formability of an AA5083 aluminum alloy T-joint using SSFSW on both corners. *Materials and Manufacturing Processes*, **2019**, 34, 1737-1744	4.1	16
66	Temperature Distribution During Friction Stir Welding of AA2014 Aluminum Alloy: Experimental and Statistical Analysis. *Transactions of the Indian Institute of Metals*, **2019**, 72, 969-981	1.2	12
65	A comparative performance evaluation of the reversed Brayton cycle operated heat pump based on thermo-ecological criteria through many and multi objective approaches. *Energy Conversion and Management*, **2019**, 183, 252-265	10.6	23
64	Surface analysis of stationary shoulder friction stir processed AZ31B magnesium alloy. *Materials Science and Technology*, **2019**, 35, 628-631	1.5	16
63	A multiobjective thermodynamic optimization of a nanoscale Stirling engine operated with Maxwell-Boltzmann gas. *Heat Transfer - Asian Research*, **2019**, 48, 1913-1932	2.8	6
62	Multi-Response Optimization of WEDM Process Parameters for Machining of Superelastic Nitinol Shape-Memory Alloy Using a Heat-Transfer Search Algorithm. *Materials*, **2019**, 12,	3.5	43
61	An efficient optimization and comparative analysis of cascade refrigeration system using NH3/CO2 and C3H8/CO2 refrigerant pairs. *International Journal of Refrigeration*, **2019**, 102, 62-76	3.8	17
60	Fabrication of Hybrid Surface Composites AA6061/(B4C + MoS2) via Friction Stir Processing. *Journal of Tribology*, **2019**, 141,	1.8	42
59	Topology optimization of truss subjected to static and dynamic constraints by integrating simulated annealing into passing vehicle search algorithms. *Engineering With Computers*, **2019**, 35, 499-517	4.5	32
58	Through-thickness microstructure and mechanical properties in stationary shoulder friction stir processed AA7075. *Materials Science and Technology*, **2019**, 35, 1762-1769	1.5	27

57	Comparative analysis of nanofluid-based Organic Rankine Cycle through thermoeconomic optimization. *Heat Transfer - Asian Research*, **2019**, 48, 3013-3038	2.8	10
56	Recent Development in Friction Stir Processing as a Solid-State Grain Refinement Technique: Microstructural Evolution and Property Enhancement. *Critical Reviews in Solid State and Materials Sciences*, **2019**, 44, 378-426	10.1	106
55	Feasibility and parametric study of a thermal- energy driven Reverse Osmosis system for Water Treatment in India. *Journal of Physics: Conference Series*, **2019**, 1276, 012016	0.3	1
54	Performance Evaluation of Latent Heat Thermal Storage Unit by integrating it with Flat Plate type Solar Air Heater. *Journal of Physics: Conference Series*, **2019**, 1276, 012076	0.3	1
53	Multi-objective optimization of CuO based organic Rankine cycle operated using R245ca. *E3S Web of Conferences*, **2019**, 116, 00062	0.5	1
52	Thermal Design and Optimization of Heat Exchangers **2019**, 33-98		1
51	Metaheuristic Methods **2019**, 7-32		
50	Thermal Design and Optimization of Refrigeration Systems **2019**, 199-286		
49	Thermal System Optimization **2019**,		7
48	Thermal Design and Optimization of Heat Engines and Heat Pumps **2019**, 99-198		
47	Thermal Design and Optimization of Power Cycles **2019**, 287-344		
46	Thermal Design and Optimization of Few Miscellaneous Systems **2019**, 345-413		
45	Stationary shoulder tool in friction stir processing: a novel low heat input tooling system for magnesium alloy. *Materials and Manufacturing Processes*, **2019**, 34, 177-182	4.1	61
44	An improved heat transfer search algorithm for unconstrained optimization problems. *Journal of Computational Design and Engineering*, **2019**, 6, 13-32	4.6	18
43	Efficiency, thrust, and fuel consumption optimization of a subsonic/sonic turbojet engine. *Energy*, **2018**, 144, 992-1002	7.9	24
42	An efficient optimization and comparative analysis of ammonia and methanol heat pipe for satellite application. *Energy Conversion and Management*, **2018**, 165, 382-395	10.6	37
41	An Unrestricted Placement of Wind Turbines Toward Maximizing the Energy Output Using Teacher-Artificial Bee Colony Algorithm. *Lecture Notes in Electrical Engineering*, **2018**, 613-622	0.2	1
40	Size, shape, and topology optimization of planar and space trusses using mutation-based improved metaheuristics. *Journal of Computational Design and Engineering*, **2018**, 5, 198-214	4.6	42

39	Truss optimization with natural frequency bounds using improved symbiotic organisms search. *Knowledge-Based Systems*, **2018**, 143, 162-178	7.3	77
38	Topology and Size Optimization of Trusses with Static and Dynamic Bounds by Modified Symbiotic Organisms Search. *Journal of Computing in Civil Engineering*, **2018**, 32, 04017085	5	33
37	Thermal-hydraulic optimization of plate heat exchanger: A multi-objective approach. *International Journal of Thermal Sciences*, **2018**, 124, 522-535	4.1	51
36	Multiobjective thermo-economic and thermodynamics optimization of a plate fin heat exchanger. *Heat Transfer - Asian Research*, **2018**, 47, 253-270	2.8	13
35	Effective search technique in teaching and learning phase of TLBO algorithm for numerical function optimisation. *International Journal of Swarm Intelligence*, **2018**, 3, 332	0.3	
34	Many-objective thermodynamic optimization of Stirling heat engine. *Energy*, **2017**, 125, 629-642	7.9	26
33	Many-objective optimization of cross-flow plate-fin heat exchanger. *International Journal of Thermal Sciences*, **2017**, 118, 320-339	4.1	33
32	Many-objective optimization of shell and tube heat exchanger. *Thermal Science and Engineering Progress*, **2017**, 2, 87-101	3.6	35
31	A novel geometric pattern-based approach to maximize power output of a wind farm. *Clean Technologies and Environmental Policy*, **2017**, 19, 1725-1743	4.3	
30	Layout optimization of a wind farm to maximize the power output using enhanced teaching learning based optimization technique. *Journal of Cleaner Production*, **2017**, 158, 81-94	10.3	35
29	Modified Sub-Population Based Heat Transfer Search Algorithm for Structural Optimization. *International Journal of Applied Metaheuristic Computing*, **2017**, 8, 1-23	0.8	10
28	Thermal design and optimization of fin-and-tube heat exchanger using heat transfer search algorithm. *Thermal Science and Engineering Progress*, **2017**, 4, 45-57	3.6	27
27	Modified meta-heuristics using random mutation for truss topology optimization with static and dynamic constraints. *Journal of Computational Design and Engineering*, **2017**, 4, 106-130	4.6	21
26	Pareto Optimization of a Half Car Passive Suspension Model Using a Novel Multiobjective Heat Transfer Search Algorithm. *Modelling and Simulation in Engineering*, **2017**, 2017, 1-17	1.3	6
25	Multi-objective optimization of a rotary regenerator using tutorial training and self-learning inspired teaching-learning based optimization algorithm (TS-TLBO). *Applied Thermal Engineering*, **2016**, 93, 456-467	5.8	27
24	A multi-objective improved teaching–learning based optimization algorithm (MO-ITLBO). *Information Sciences*, **2016**, 357, 182-200	7.7	67
23	Optimization of EDM Drilling Parameters for Aluminum 2024 Alloy Using Response Surface Methodology and Genetic Algorithm. *Key Engineering Materials*, **2016**, 706, 3-8	0.4	4
22	Multi-objective optimization of a Stirling heat engine using TS-TLBO (tutorial training and self learning inspired teaching-learning based optimization) algorithm. *Energy*, **2016**, 95, 528-541	7.9	35

21	Modified sub-population teaching-learning-based optimization for design of truss structures with natural frequency constraints. *Mechanics Based Design of Structures and Machines*, **2016**, 44, 495-513	1.7	31
20	Truss topology optimization with static and dynamic constraints using modified subpopulation teaching–learning-based optimization. *Engineering Optimization*, **2016**, 48, 1990-2006	2	39
19	Adaptive symbiotic organisms search (SOS) algorithm for structural design optimization. *Journal of Computational Design and Engineering*, **2016**, 3, 226-249	4.6	123
18	Multi-Objective Optimization of Vehicle Passive Suspension System Using NSGA-II, SPEA2 and PESA-II. *Procedia Technology*, **2016**, 23, 361-368		58
17	Heat transfer search (HTS): a novel optimization algorithm. *Information Sciences*, **2015**, 324, 217-246	7.7	148
16	Optimization of a plate-fin heat exchanger design through an improved multi-objective teaching-learning based optimization (MO-ITLBO) algorithm. *Chemical Engineering Research and Design*, **2014**, 92, 2371-2382	5.5	68
15	A multi-objective improved teaching-learning based optimization algorithm for unconstrained and constrained optimization problems. *International Journal of Industrial Engineering Computations*, **2014**, 1-22	1.7	15
14	Multi-objective optimization of heat exchangers using a modified teaching-learning-based optimization algorithm. *Applied Mathematical Modelling*, **2013**, 37, 1147-1162	4.5	243
13	Multi-objective optimization of two stage thermoelectric cooler using a modified teaching–learning-based optimization algorithm. *Engineering Applications of Artificial Intelligence*, **2013**, 26, 430-445	7.2	143
12	Comparative performance of an elitist teaching-learning-based optimization algorithm for solving unconstrained optimization problems. *International Journal of Industrial Engineering Computations*, **2013**, 4, 29-50	1.7	81
11	Multi-objective optimization of combined Brayton and inverse Brayton cycles using advanced optimization algorithms. *Engineering Optimization*, **2012**, 44, 965-983	2	33
10	An improved teaching-learning-based optimization algorithm for solving unconstrained optimization problems. *Scientia Iranica*, **2012**,	1.5	47
9	An elitist teaching-learning-based optimization algorithm for solving complex constrained optimization problems. *International Journal of Industrial Engineering Computations*, **2012**, 3, 535-560	1.7	333
8	Optimization of mechanical draft counter flow wet-cooling tower using artificial bee colony algorithm. *Energy Conversion and Management*, **2011**, 52, 2611-2622	10.6	51
7	Design optimization of shell and tube heat exchangers using swarm optimization algorithms. *Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy*, **2011**, 225, 619-634	1.6	14
6	Design optimization of rotary regenerator using artificial bee colony algorithm. *Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy*, **2011**, 225, 1088-1098	1.6	12
5	Design optimization of shell-and-tube heat exchanger using particle swarm optimization technique. *Applied Thermal Engineering*, **2010**, 30, 1417-1425	5.8	168
4	Thermodynamic optimization of cross flow plate-fin heat exchanger using a particle swarm optimization algorithm. *International Journal of Thermal Sciences*, **2010**, 49, 1712-1721	4.1	135

3	CFD Simulation of Dehumidification of Air in Humidification-Dehumidification based Water Desalination System. *Iranian Journal of Science and Technology - Transactions of Mechanical Engineering*,1	1.2
2	Investigation on detachable vertical tube evaporator for small scale multi effect distillation system: Design, modelling, fabrication and experimental analysis. *Heat and Mass Transfer*,1	2.2
1	Performance enhancement of camless air engine by optimizing the inlet-valve cut-off position. *International Journal of Ambient Energy*,1-31	2