# Vikrant C Aute

## List of Publications by Year
## in descending order

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|---|---|---|---|
| 46 papers | 1,031 citations | 430874<br>18 h-index | 434195<br>31 g-index |
| 47 all docs | 47 docs citations | 47 times ranked | 694 citing authors |

| # | Article | IF | Citations |
|---|---------|----|-----------|
| 1 | Multi-Scale and Multi-Physics Analysis, Design Optimization, and Experimental Validation of Heat Exchangers utilizing High Performance, Non-Round Tubes. Applied Thermal Engineering, 2022, , 118965. | 6.0 | 1 |
| 2 | A tripartite graph based methodology for steady-state solution of generalized multi-mode vapor compression systems. Applied Thermal Engineering, 2021, 185, 116385. | 6.0 | 3 |
| 3 | Transport properties of real moist air, dry air, steam, and water. Science and Technology for the Built Environment, 2021, 27, 393-401. | 1.7 | 4 |
| 4 | Automated Parameterized CFD Simulations of Phase-Change Material Embedded Heat Exchangers. , 2021, , . | | 1 |
| 5 | Investigation of the variability in the measurement of cyclic degradation coefficient of air conditioning systems. International Journal of Refrigeration, 2021, 128, 1-11. | 3.4 | 1 |
| 6 | Airside Heat Transfer and Friction Characteristics of a 0.8‰mm Diameter Bare Tube Heat Exchanger. Heat Transfer Engineering, 2020, 41, 1720-1730. | 1.9 | 6 |
| 7 | Pillow plate heat exchanger weld shape optimization using approximation and parallel parameterized CFD and non-uniform rational B-splines. International Journal of Refrigeration, 2020, 110, 121-131. | 3.4 | 15 |
| 8 | Airside thermal and hydraulic characteristics of compact bare tube heat exchanger under dry and wet conditions. International Journal of Refrigeration, 2020, 110, 295-307. | 3.4 | 5 |
| 9 | Comparison of approximation-assisted heat exchanger models for steady-state simulation of vapor compression system. Applied Thermal Engineering, 2020, 166, 114691. | 6.0 | 6 |
| 10 | Evaluating Recharge Options for Phase-Change Material Storage of a Personal Conditioning System. Science and Technology for the Built Environment, 2019, 25, 1337-1351. | 1.7 | 0 |
| 11 | Thermal storage subcooling for CO2 booster refrigeration systems. Science and Technology for the Built Environment, 2019, 25, 570-587. | 1.7 | 3 |
| 12 | Performance of heat pumps using pure and mixed refrigerants with maldistribution effects in plate heat exchanger evaporators. International Journal of Refrigeration, 2019, 104, 390-403. | 3.4 | 9 |
| 13 | Tube-fin heat exchanger circuitry optimization using integer permutation based Genetic Algorithm. International Journal of Refrigeration, 2019, 103, 135-144. | 3.4 | 21 |
| 14 | Improving system performance of a personal conditioning system integrated with thermal storage. Applied Thermal Engineering, 2019, 147, 40-51. | 6.0 | 16 |
| 15 | Optimization of Heat Exchanger Flow Paths Using a Novel Integer Permutation Based Genetic Algorithm. , 2019, , 212-223. | | 1 |
| 16 | Transient simulation of carbon dioxide booster refrigeration system with mechanical subcooler in demand response operation. Science and Technology for the Built Environment, 2018, 24, 687-699. | 1.7 | 5 |
| 17 | A CFD assisted segmented control volume based heat exchanger model for simulation of air-to-refrigerant heat exchanger with air flow mal-distribution. Applied Thermal Engineering, 2018, 131, 230-243. | 6.0 | 13 |
| 18 | A Validated Framework for Innovation and Design Optimization of Air-to-Refrigerant Heat Exchangers. Advances in Heat Transfer, 2018, 50, 301-332. | 0.9 | 1 |

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|---|---|---|---|
| 19 | Experimental evaluation of transcritical $CO_2$ refrigeration with mechanical subcooling. Science and Technology for the Built Environment, 2017, 23, 1013-1025. | 1.7 | 22 |
| 20 | Portable personal conditioning systems: Transient modeling and system analysis. Applied Energy, 2017, 208, 390-401. | 10.1 | 14 |
| 21 | Design optimization and validation of high-performance heat exchangers using approximation assisted optimization and additive manufacturing. Science and Technology for the Built Environment, 2017, 23, 896-911. | 1.7 | 52 |
| 22 | Design and numerical parametric study of a compact air-cooled heat exchanger. Science and Technology for the Built Environment, 2017, 23, 970-982. | 1.7 | 4 |
| 23 | Potential emission savings from refrigeration and air conditioning systems by using low GWP refrigerants. International Journal of Life Cycle Assessment, 2017, 22, 675-682. | 4.7 | 17 |
| 24 | Airside friction and heat transfer characteristics for staggered tube bundle in crossflow configuration with diameters from 0.5 mm to 2.0 mm. International Journal of Heat and Mass Transfer, 2016, 98, 448-454. | 4.8 | 18 |
| 25 | A survey of correlations for heat transfer and pressure drop for evaporation and condensation in plate heat exchangers. International Journal of Refrigeration, 2016, 65, 12-26. | 3.4 | 89 |
| 26 | Transient simulation of heat pumps using low global warming potential refrigerants. Science and Technology for the Built Environment, 2015, 21, 658-665. | 1.7 | 2 |
| 27 | Airflow distribution and design optimization of variable geometry microchannel heat exchangers. Science and Technology for the Built Environment, 2015, 21, 693-702. | 1.7 | 7 |
| 28 | Variable geometry microchannel heat exchanger modeling under dry, wet, and partially wet surface conditions accounting for tube-to-tube heat conduction. Science and Technology for the Built Environment, 2015, 21, 703-717. | 1.7 | 5 |
| 29 | A comparison of transient heat pump cycle models using alternative flow descriptions. Science and Technology for the Built Environment, 2015, 21, 666-680. | 1.7 | 11 |
| 30 | Testing, simulation and soft-optimization of R410A low-GWP alternatives in heat pump system. International Journal of Refrigeration, 2015, 60, 106-117. | 3.4 | 59 |
| 31 | Transient modeling of a flash tank vapor injection heat pump system â€" Part I: Model development. International Journal of Refrigeration, 2015, 49, 169-182. | 3.4 | 60 |
| 32 | A computational fluid dynamics and effectiveness-NTU based co-simulation approach for flow mal-distribution analysis in microchannel heat exchanger headers. Applied Thermal Engineering, 2014, 65, 447-457. | 6.0 | 36 |
| 33 | A model for air-to-refrigerant microchannel condensers with variable tube and fin geometries. International Journal of Refrigeration, 2014, 40, 269-281. | 3.4 | 32 |
| 34 | A finite volume coaxial heat exchanger model with moving boundaries and modifications to correlations for two-phase flow in fluted annuli. International Journal of Refrigeration, 2014, 40, 11-23. | 3.4 | 12 |
| 35 | Multi-Scale Modeling and Approximation Assisted Optimization of Bare Tube Heat Exchangers. , 2014, , . | | 1 |
| 36 | Approximation assisted optimization of headers for new generation of air-cooled heat exchangers. Applied Thermal Engineering, 2013, 61, 817-824. | 6.0 | 19 |

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|---|---------|-----|-----------|
| 37 | A new model for plate heat exchangers with generalized flow configurations and phase change. International Journal of Refrigeration, 2013, 36, 622-632. | 3.4 | 39 |
| 38 | Chevron plate heat exchanger optimization using efficient approximation-assisted multi-objective optimization techniques. HVAC and R Research, 2013, 19, 788-799. | 0.6 | 8 |
| 39 | Numerical simulation and optimization of single-phase turbulent flow in chevron-type plate heat exchanger with sinusoidal corrugations. HVAC and R Research, 2011, 17, 186-197. | 0.6 | 28 |
| 40 | Simulation of air-to-refrigerant fin-and-tube heat exchanger with CFD-based air propagation. International Journal of Refrigeration, 2011, 34, 1883-1897. | 3.4 | 28 |
| 41 | An accumulative error based adaptive design of experiments for offline metamodeling. Structural and Multidisciplinary Optimization, 2010, 40, 137-155. | 3.5 | 81 |
| 42 | Approximation-Assisted Optimization for Novel Compact Heat Exchanger Designs. HVAC and R Research, 2010, 16, 707-728. | 0.6 | 24 |
| 43 | A heat exchanger model for air-to-refrigerant fin-and-tube heat exchanger with arbitrary fin sheet. International Journal of Refrigeration, 2009, 32, 1724-1735. | 3.4 | 23 |
| 44 | Comprehensive investigation of numerical methods in simulating a steady-state vapor compression system. International Journal of Refrigeration, 2008, 31, 930-942. | 3.4 | 37 |
| 45 | Numerical approach for modeling air-to-refrigerant fin-and-tube heat exchanger with tube-to-tube heat transfer. International Journal of Refrigeration, 2008, 31, 1414-1425. | 3.4 | 42 |
| 46 | CoilDesigner: a general-purpose simulation and design tool for air-to-refrigerant heat exchangers. International Journal of Refrigeration, 2006, 29, 601-610. | 3.4 | 148 |