Northern Technical University
Engineering Technical College, Mosul
Department of Power Mechanics Techniques Engineering
Published Research for the Academic Years 2020-2025

S	Name of the Journal	Year of publication	links
١	EXTENDING TWO STEPS ANAEROBIC DIGESTION MODELS TO INCORPORATE SURFACE AREA EFFECT	2023	https://www.iotpe.com/IJTPE/IJTPE-2023/IJTPE-2023.html
٢	EXPERIMENTAL COMPARISON OF THERMAL PERFORMANCE BETWEEN V-CORRUGATED AND FLAT PLATE SOLAR COLLECTORS	2023	https://www.iotpe.com/IJTPE/IJTPE-2023/IJTPE-2023.html
٣	CFD ANALYSIS FOR ANAEROBIC DIGESTION INSIDE A BATCH DIGESTER AUGMENTED WITH EXTENDED SURFACES	2023	https://doi.org/10.5098/hmt.20.3
٤	Solar air heater energy and exergy enhancement using a v-corrugated wire mesh absorber: An experimental comparison	2024	https://doi.org/10.1016/j.energy.2024.133136
٥	Experimental Investigation on the Effect of Sawdust Particles Size on Its Thermal Conductivity	2023	https://doi.org/10.18280/ijht.410224
٦	Performance Augmentation of Household Batch Digester using a Circular Horizontal Extended Surface	2024	https://doi.org/10.25130/tjes.31.4.1
٧	SIMULATION AND INVESTIGATION OF NANO-REFRIGERANT FLUID CHARACTERISTICS WITH THE TWO-PHASE FLOW IN MICROCHANNEL	2021	DOI:10.5098/hmt.17.21
٨	Effect of suction or blowing on velocity and temperature distribution of flow over a flat plate	2021	https://doi.org/10.1016/j.matpr.2020.12.735
٩	Numerical Analysis of Standard - Unstandard Gears for an External Gear Pumps	2021	DOI:10.5293/IJFMS.2021.14.1.025
١٠	NUMERICAL INVESTIGATION OF NUSSELT NUMBER FOR NANOFLUIDS FLOW IN AN INCLINED CYLINDER	2021	https://doi.org/10.5098/hmt.16.20
١١	Performance of Thermal Insulation of Different Composite Walls and Roofs Materials Used for Energy Efficient Building Construction in Iraq	2024	https://doi.org/10.32604/fhmt.2024.053770
١٢	Performance of compound parabolic concentrator solar air flat plate collector using phase change material	2024	https://doi.org/10.1016/j.applthermaleng.2023.122224

١٣	SIMULATION AND INVESTIGATION OF NANO-REFRIGERANT FLUID CHARACTERISTICS WITH THE TWO-PHASE FLOW IN MICROCHANNEL	2021	https://doi.org/10.5098/hmt.17.21
١٤	THERMAL PERFORMANCE ENHANCEMENT OF HEAT PIPE HEAT EXCHANGER IN THE AIR-CONDITIONING SYSTEM BY USING NANOFLUID	2022	https://doi.org/10.5098/hmt.18.10
١٥	Numerical and experimental investigation on mixed convection heat transfer inside cavity heated from below with reciprocating moving upper surface	2024	https://doi.org/10.1016/j.icheatmasstransfer.2024.108242
١٦	Obstacle arrangements effect on the mixed convection in an enclosure with movable top surface	2024	https://doi.org/10.22201/icat.24486736e.2024.22.6.2576
١٧	A numerical investigation on the effect of nano metal oxide coating fins on the thermal performance of heat pipe heat exchanger	2024	https://doi.org/10.1063/5.0212235
١٨	Mixed convective of hybrid nanofluids flow in a backward-facing step	2021	https://doi.org/10.1016/j.csite.2021.100868
١٩	FREE CONVECTIVE HEAT TRANSFER CREATED FROM HEATED CYLINDER IMMERSED INSIDE DUCT COOLED FROM SIDE	2023	https://doi.org/10.5098/hmt.20.20
٢٠	A thermal nonequilibrium model to natural convection inside non-Darcy porous layer surrounded by horizontal heated plates with periodic boundary temperatures	2021	doi.org/10.1002/htj.22162
٢١	THE IMPACT OF ALUMINA NANOPARTICLES SUSPENDED IN ETHYLENE GLYCOL ON THE PERFORMANCE EFFICIENCY OF A DOUBLE PIPE HEAT EXCHANGER	2020	https://www.techscience.com/fhmt/v15n1/52914
٢٢	Experimental study of compound parabolic concentrator with flat plate receiver	2020	https://doi.org/10.1016/j.applthermaleng.2019.114678
٢٣	EXPERIMENTAL COMPARISON OF THERMAL PERFORMANCE BETWEEN V-CORRUGATED AND FLAT PLATE SOLAR COLLECTORS	2023	https://www.iotpe.com/IJTPE/IJTPE-2023/IJTPE-2023.html
٢٤	Friction Factor and Heat Transfer Enhancement of Hybrid Nanofluids in a Heated Circular Tube	2023	https://www.iieta.org/journals/ijht/paper/10.18280/ijht.410530
٢٥	Performance analysis of Pelton turbine under different operating conditions: An experimental study	2022	https://doi.org/10.1016/j.asej.2021.101684

٢٧	Comparative Analysis of Fuzzy Logic, PID, and FOPID Controllers in DC Microgrid Voltage Regulation for Power Plants: Integrating Renewable Energy Sources	2025	https://doi.org/10.37934/aram.128.1.5061
٢٨	Effect of sugar palm fibers on the properties of blended wheat starch/polyvinyl alcohol (PVA) -based biocomposite films	2023	https://doi.org/10.1016/j.jmrt.2023.02.027
٢٩	Novel spiking neural network model for gear fault diagnosis	2022	10.1109/eSmarTA56775.2022.9935414
٣٠	Effect of the Cross-Sectional Shape on the Dynamic Response of a Cantilever Steel Beam Using Three Modal Analysis Methods	2023	https://doi.org/10.18280/mmep.110310
٣١	Diagnosis model for bearing faults in rotating machinery by using vibration signals and binary logistic regression	2020	https://doi.org/10.1063/5.0017221
٣٢	Fault Detection of Bearing using Support Vector Machine-SVM	2020	10.1109/ICIMU49871.2020.9243507
٣٣	A review in particle image velocimetry techniques (developments and applications)	2020	https://semarakilmu.com.my/journals/index.php/fluid_mechanics_thermal_sciences/article/view/3708
٣٤	Analysis of the generated output energy by different types of wind turbines	2020	https://doi.org/10.18280/ijht.410224
٣٥	Experimental Investigation on the Effect of Sawdust Particles Size on Its Thermal Conductivity	2023	https://doi.org/10.1051/e3sconf/202128801069
٣٦	Practical study on heat pump enhancement by the solar energy	2021	https://doi.org/10.1051/e3sconf/202128801069
٣٧	An Experimental Study on Performance Analysis of Solar Water Distiller System Using Extended Fins under Iraq Climatic Conditions	2023	https://doi.org/10.1063/5.0171639
٣٨	Performance analysis of single-pass solar air heater thermal collector with adding porous media and finned plate	2023	https://doi.org/10.1002/est2.447
٣٩	Efficiency enhancement of solar air heater collector by modifying jet impingement with v-corrugated absorber plate	2022	https://doi.org/10.1016/j.est.2022.105535
٤٠	Performance analysis of Pelton turbine under different operating conditions: An experimental study	2022	https://doi.org/10.1016/j.asej.2021.101684
٤١	Improving the performance of solar air heater using a new model of V-corrugated absorber plate having perforations jets	2022	https://doi.org/10.1002/er.7715

٤٢	Impacts of adding porous media on performance of double-pass solar air heater under natural and forced air circulation processes	2021	https://doi.org/10.1016/j.ijmecsci.2021.106738
٤٣	Performance analysis of triple-pass solar air heater system: Effects of adding a net of tubes below absorber surface	2020	https://doi.org/10.1016/j.solener.2020.07.041
٤٤	Experimental study of compound parabolic concentrator with flat plate receiver	2020	https://doi.org/10.1016/j.applthermaleng.2019.114678
٤٥	Performance analysis of single-pass solar air heater thermal collector with adding porous media and finned plate	2023	https://doi.org/10.1002/est2.447
٤٦	Efficiency enhancement of solar air heater collector by modifying jet impingement with v-corrugated absorber plate	2022	https://doi.org/10.1016/j.est.2022.105535
٤٧	Impacts of geometric configurations on performance of discharge coefficient and wall pressure of Venturi meter under high Reynolds number	2022	doi.org/10.1080/14733315.2024.2344992
٤٨	Performance analysis of Pelton turbine under different operating conditions: An experimental study	2022	https://doi.org/10.1016/j.asej.2021.101684
٤٩	Improving the performance of solar air heater using a new model of V-corrugated absorber plate having perforations jets	2022	https://doi.org/10.1002/er.7715
٥٠	A thermal nonequilibrium model to natural convection inside non-Darcy porous layer surrounded by horizontal heated plates with periodic boundary temperature	2021	https://doi.org/10.1002/htj.22162
٥١	Enhancement of Double-Pipe Heat Exchanger Effectiveness by Using Porous Media and TiO2 Water	2023	https://doi.org/10.37934/cfdl.15.4.3142
٥٢	Enhancement of double-pipe heat exchanger effectiveness by using water-CuO	2022	https://doi.org/10.56286/ntujet.v1i2.59
٥٣	ENERGY CONVERSION OF V-CORRUGATED ABSORBER PLATE SOLAR AIR HEATER WITH PHASE CHANGE MATERIAL	2023	https://www.iotpe.com/IJTPE/IJTPE-2023/IJTPE-Issue56-Vol15-No3-Sep2023/17-IJTPE-Issue56-Vol15-No3-Sep2023-pp135-142.pdf
٥٤	CFD-based numerical performance assessment of a solar air heater duct roughened by transverse-trapezoidal sectioned ribs	2023	https://www.iieta.org/journals/ijht/paper/10.18280/ijht.410517
٥٦	Numerical Analysis of Standard -Unstandard Gears for an External Gear Pumps	2021	10.5293/IJFMS.2021.14.1.025

٥٧	Optimizing of heat transfer and flow characteristics within a roughened solar air heater duct with compound turbulators	2024	https://doi.org/10.1002/apj.3126
٥٨	Performance of Thermal Insulation of Different Composite Walls and Roofs Materials Used for Energy Efficient Building Construction in Iraq	2024	10.32604/fhmt.2024.053770
٥٩	Impact of using single heated obstacle on natural convection inside porous cavity under non-Darcy flow and thermal non-equilibrium model: A comparison between horizontal and vertical heated obstacle arrangements	2022	https://doi.org/10.1016/j.icheatmasstransfer.2022.105925
٦٠	Effect of suction or blowing on velocity and temperature distribution of flow over a flat plate	2021	https://doi.org/10.1016/j.matpr.2020.12.735
٦١	Conjugate local thermal nonequilibrium and non-Darcy flow inside porous enclosure: Analysis of localized heating and cooling arrangements	2023	https://doi.org/10.1002/htj.22923
٦٢	Impact of using single heated obstacle on natural convection inside porous cavity under non-Darcy flow and thermal non-equilibrium model: A comparison between horizontal and vertical heated obstacle arrangements	2022	https://doi.org/10.1016/j.icheatmasstransfer.2022.105925
٦٣	Natural convection heat transfer from a bank of orthogonal heated plates embedded in a porous medium using LTNE model: A comparison between in-line and staggered arrangements	2021	https://doi.org/10.1016/j.ijthermalsci.2020.106692
٦٤	Analysis of effects of Thermal Non-Equilibrium and Non-Darcy Flow on Natural Convection in a Square Porous Enclosure Provided with a Heated L Shape Plate	2020	https://doi.org/10.1016/j.ijmecsci.2020.105704
٦٥	Conjugate local thermal nonequilibrium and non-Darcy flow inside porous enclosure: Analysis of localized heating and cooling arrangements	2023	https://doi.org/10.1002/htj.22923
٦٦	Impact of using single heated obstacle on natural convection inside porous cavity under non-Darcy flow and thermal non-equilibrium model: A comparison between horizontal and vertical heated obstacle arrangements	2022	https://doi.org/10.1016/j.icheatmasstransfer.2022.105925
٦٧	Effect of suction or blowing on velocity and temperature distribution of flow over a flat plate	2021	https://doi.org/10.1016/j.matpr.2020.12.735
٦٨	Natural convection heat transfer from a bank of orthogonal heated plates embedded in a porous medium using LTNE	2021	https://doi.org/10.1016/j.ijthermalsci.2020.106692

	model: A comparison between in-line and staggered arrangements		
٦٩	Analysis of effects of Thermal Non-Equilibrium and Non-Darcy Flow on Natural Convection in a Square Porous Enclosure Provided with a Heated L Shape Plate	2020	https://doi.org/10.1016/j.ijmecsci.2020.105704
٧٠	Impact of using triple adiabatic obstacles on natural convection inside porous cavity under non-darcy flow and local thermal non-equilibrium model	2022	https://doi.org/10.1016/j.icheatmasstransfer.2021.105760
٧١	Impact of using triple adiabatic obstacles on natural convection inside porous cavity under non-darcy flow and local thermal non-equilibrium model	2022	https://doi.org/10.1016/j.icheatmasstransfer.2021.105760
٧٢	Enhancement performance of vapor compression system using nano copper oxide lubricant inside compressor and a fluidized bed for condenser cooling	2023	https://doi.org/10.1016/j.csite.2023.102819
٧٣	Experimental investigation for vapor compression system performance enhancement through condenser cooling by using shallow fuidized bed	2023	https://link.springer.com/article/10.1007/s10973-023-12495-5
٧٤	Experimental Investigation on the Effect of Sawdust Particles Size on Its Thermal Conductivity	2023	DOI: https://doi.org/10.18280/ijht.410224
٧٥	Impacts of adding porous media on performance of double-pass solar air heater under natural and forced air circulation processes	2021	https://doi.org/10.1016/j.ijmecsci.2021.106738
٧٦	Impacts of geometric configurations on performance of discharge coefficient and wall pressure of Venturi meter under high Reynolds number	2024	• https://doi.org/10.1080/14733315.2024.2344992
٧٧	Mixed convective of hybrid nanofluids flow in a backward-facing step	2021	https://doi.org/10.1016/j.csite.2021.100868
٧٨	Performance analysis of triple-pass solar air heater system: Effects of adding a net of tubes below absorber surface	2020	https://doi.org/10.1016/j.solener.2020.07.04
٧٩	Optimizing of heat transfer and flow characteristics within a roughened solar air heater duct with compound turbulators	2024	https://onlinelibrary.wiley.com/doi/10.1002/apj.3126
٨٠	Numerical Analysis of Standard - Unstandard Gears for an External Gear Pumps	2021	10.5293/IJFMS.2021.14.1.025
٨١	CFD Analysis of Improving Air Conditioning System	2025	https://doi.org/10.37934/cfdl.17.2.136147

	Performance by Adding SiO2 Nanoparticles to the Compressor Oil		
٨٢	CFD Analysis of Improving Air Conditioning System Performance by Adding SiO2 Nanoparticles to the Compressor Oil	2025	https://doi.org/10.37934/cfdl.17.2.136147
٨٣	Impact of CuO+H2O nanofluid on the cooling towers performance with varying packing densities	2025	https://doi.org/10.1016/j.rineng.2025.104664
٨٤	Experimental investigation for utilization of U-shaped heat pipe heat exchanger in the air-conditioning system	2025	https://doi.org/10.1016/j.icheatmasstransfer.2025.108730
٨٥	Enhancement the Performance of the Heat Sink by Using Metal Foam Partially Immersed in Phase Change Materials for Different Porosities	2025	https://doi.org/10.1002/ente.202500774
٨٦	Impact of CuO+H2O nanofluid on the cooling towers performance with varying packing densities	2025	https://doi.org/10.1016/j.rineng.2025.104664
٨٧	Mechanical properties and suitability of PLA for 3D-printed dental implants: Experimental and simulation analysis	2025	10.1016/j.rinma.2025.100713
٨٨	Impact of CuO+H2O nanofluid on the cooling towers performance with varying packing densities	2025	https://doi.org/10.1016/j.rineng.2025.104664