Kirkuk Technical Engineering College | **Northern Technical University** | **Department of Power Mechanical Techniques Engineering**

Curriculum Vitae

Personal Information

Name	Hussein Hayder Mohammed Ali	**Employee ID**	TECK 592
Degree	Ph. D.	**Academic title**	Assistant Professor
Workplace	Northern Technical University	**Faculty**	Technical Engineering College, Kirkuk
Department	Power Mechanical Techniques Engineering	**Position**	Heat of Department
General specialization	Mechanical Engineering	**Specific Specialization**	Thermal, Solar energy
Country	Iraq	**Province**	Kirkuk
Academic email	hussein_kahia@ntu.edu.iq	**phone number**	+964-770-511-1071

Academic Qualifications

Degree	University Name	Date of granting the Degree	Specialization	Granting Country
Bachelors	Northern Technical University	2005	Refrigeration and Air Conditioning Technical Engineering	Iraq
Masters	University of Technology	2012	Machine and Equipment Engineering	Iraq
Ph.D	University of Technology	2019	Mechanical Engineering/Thermal	Iraq

Research Activity

Published Papers	**23**	
Conferences and seminars	**3**	
H-Index in Scopus	**4**	

Academic Profiles on Research Platforms		
Clarivate, Web of Science	**Publons Profile**	
Scopus	**Scopus**	
Resurgence Gate	**Researcgate Profile**	
Orchid	**ORCID iD**	
Google Scholar	**Google Scholar Profile**	

Awards and Innovations

Granting Body	Title of Awards or Innovation
Central Agency for Standardization and Quality Control	Patent (Cooling of solar cells using copper oxide nanofluid).

Scientific and Teaching Experiences

Undergraduate Studies	Yes
Postgraduate Studies	Yes

Supervision of Master's or Doctoral Dissertation:

Thesis or Dissertation Title	Program	Year
Extraction of water from atmosphere for Iraq Regions - the city of Kirkuk as a model	**Master**	**2022**
Simulation design Implementation and Testing of a Solar Thermal System for a Swimming Pool using Solar Collectors	**Master**	**2022**
Evaluation of the performance of a double tube heat exchanger using a nanofluid through an inner twisted tube	**Master**	**2023**
Testing a flat panel solar pool using solar collectors	**Master**	**2023**
Effect of Rotating Cylinder Surface and Water depth on Performance of the Solar Still Under Kirkuk City Environment Condition	**Master**	**2024**
Experimental Study to Improve the Heat Transfer in counter flow double pipe heat exchanger by airfoil helical coil insertion into inner pipe	**Master**	**2024**

Research Interests

Solar energy, heat transfer, heat exchangers, cooling systems, their applications and power plants.

Published Papers

Title	Year
The Effect of Atomizer Position in a Curved Duct on the Humidification Process of Steadily Flowing Air	**2013**
Physical and Chemical Characteristics Comparison of the Drinking Water and Water Produced from the Conventional and Modification Solar Water Distillery	**2019**
EXPERIMENTAL INVESTIGATION OF NEW DESIGN OF SOLAR WATER DISTILLATION COUPLED WITH FLAT PLATE SOLAR WATER COLLECTOR	**2020**
theoretical study of the conventional and modified solar still	**2020**
Experimental Study the Effect of Some Parameters to Improve Performance of Solar Cell	**2021**
Evaluation of Shell and Tube Heat Exchanger Performance by Using ZnO/Water Nanofluids	**2023**
Comparison Between Numerical Study and Experimental Work on Heat Transfer from Heat Sink Under Transient Conditions	**2021**
Theoretical study to evaluate the performance of a double-tube heat exchanger using an inner convoluted tube and nanofluid (CuO)	**2023**
AN EFFECT OF BINARY FLUID ON THE THERMAL PERFORMANCE OF PULSATION HEAT PIPE	**2022**
Design, Simulation, Construction of Swimming Pools: A Comprehensive Review	**2022**
Exploring the Performance, Simulation, Design, and Construction of a Closed Solar Swimming Pool in Kirkuk City	**2023**
Exploring the enhancement of solar still performance through the utilization of solar water collectors, rotating hollow cylinders	**2023**
Heating outdoor swimming pools using flat panel solar collectors and evaluating the economic feasibility	**2023**
Evaluation of the thermal efficiency of nanofluid flows in flat plate solar collector	**2024**
ASSESSING THE EFFICACY OF FLAT-PLATE SOLAR COLLECTORS USING NANOFLUIDS IN THE CLIMATIC CONTEXT OF KIRKUK CITY, IRAQ	**2024**
Assessing the Economic Viability of Solar Distillation Employing a Rotating Hollow Cylinder	**2024**
Enhancement of turbulent heat transfer by using CuO nano-particle and twisted tape	**2024**
Numerical study on entropy minimization in pipes with helical airfoil and CuO nanoparticle integration	**2024**
Effect of darrieus vertical axis wind turbine type h-straight and blades number on the turbine performance at low wind speed	**2024**
Enhancing heat exchanger performance with the use of nano fluids, twisted tubes and tape	**2024**
Thermal Performance of a Laminar Flow Double Pipe Heat Exchanger with Spiral Airfoil Inserts	**2024**
Efficiency Enhancement of Parabolic through Solar Collector using ZnO/Water Nanofluid	**2024**
Enhancing the Efficiency of the Double-Tube Heat Exchanger by using a Twisted Inner Tube	**2024**