Ali Issam Alahmer
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https://loop.frontiersin.org/people/1126016/overview

EDUCATION

Aug 2009- Dec 2011	**Ph.D., Mechanical Engineering** **Clemson University**, Clemson, SC, USA GPA: 3.82/ 4.00, Thesis: Effect of relative humidity and temperature control on in-cabin thermal comfort state Advisor: Mohammad Omar, Ph.D.
Sep 2004-May 2007	**Master of Science in Mechanical Engineering** **University of Jordan**, Amman, Jordan GPA: 3.81 / 4.00, Thesis: The effect of using diesel fuel emulsion on the performance and pollutants emitted from four stroke water cooled diesel engine Advisor: Mohammad Hamdan, Ph.D.
Sep 1999-Mar 2004	**Bachelor of Science in Mechanical Engineering** **Mu'tah University**, Alkarak, Jordan GPA: 80.6 / 100, Recognition: 1st student class ranking

PROFESSIONAL AND RESEARCH EXPERIENCE

January 2024-Present — Associate Prof. Mechanical Engineering
Tuskegee University
Tuskegee, AL, USA

- Teaching Thermal sciences courses
- Publishing work in science and engineering journals
- Participating in the department committees
- Applying for research grants

Feb 2022 – January 2024 — **Visiting Scholar**
Department of Industrial and Systems Engineering
Auburn University, Auburn, AL, USA

- Collaboration with Dr. Sa'd Hamasha to enhance his research program in electronics manufacturing and lead- free solder assurance
- Conduct weekly research meetings
- Mentor graduate students
- Participate in developing journal and conference articles
- Write research reports for grant sponsors
- Present research outcomes at local and national meetings
- Assisted with program management, documentation of research activities, and preparation of reports

Jan 2022 – Now — **Prof. Mechanical Engineering**

Tafila Technical University (TTU)
Tafila, Jordan

Jan 2018 – Feb 2022 **Associate Prof. Mechanical Engineering**
Tafila Technical University (TTU)
Tafila, Jordan

- Teaching Thermal sciences courses
- Publishing work in science and engineering journals
- Participating in the department committees
- Applying for research grants
- Leading research projects which focused on renewable energy, alternative fuel, and thermal systems
- Courses Taught: Thermodynamic (I & II), Heat Transfer (I&II), Fuel and Combustion

Sep. 2020 – August 2021 **Chairman of Mechanical Engineering Department**
Tafila Technical University (TTU)
Tafila, Jordan

- Guiding the department strategies through executing the established regulations and rules
- Reviewing the course curricula in accordance to the ministry of higher education regulations
- Monitoring the teaching and research quality in the department
- Forming committees for department management affairs
- Preparing the course schedules for each term
- Preparing the annual and/or semi-annual performance forms of the department
- Communicating with students to facilitate registration and ensuring learning outcomes
- Collaborating with other chairmen and deans of the college

Sep 2019 – Sep 2020 **Associate Prof. Alternative Energy Technology Department**
Al-Zaytoonah University of Jordan (ZU)
Amman, Jordan

- Teaching renewable and thermal sciences courses
- Publishing work in science and engineering journals
- Participating in the department committees
- Applying for research grants
- Leading research projects which focused on renewable energy, alternative fuel, and thermal systems
- Courses Taught: Special Topic in Alternative Energy: Battery System Design, Bioenergy and Waste Management, Thermodynamic

Jan 2012 – Jan 2018 A**ssistant Prof. Mechanical Engineering**
Tafila Technical University (TTU)
Tafila, Jordan

- Teaching renewable and thermal sciences courses
- Publishing work in science and engineering journals
- Participating in the department committees
- Applying for research grants
- Leading research projects which focused on renewable energy, alternative fuel, and thermal systems
- Courses Taught: Air Conditioning System, Fluid Mechanics, Thermodynamic (I & II), Heat Transfer (I&II), Gas Dynamic, Internal Combustion Engine, Fuel and Combustion, Static, Dynamic, Theory of Automobile, and Car Maintenance

Sep 2009 – Dec 2011 **Research Assistant- International Center for Automotive Research**
Clemson University
Greenville, SC, USA

- Conducted project funded by BMW manufacturing Co. Greer, SC

Sep 2008-Aug 2009 **Lecturer- Faculty of Engineering**
Tafila Technical University (TTU)
Tafila, Jordan

- Courses Taught: Fluid Mechanics, Thermodynamic (I & II), Dynamic

TEACHING EXPERIENCE

I taught several courses during my academic experiences and in several universities.

Thermodynamic I	(12 Semesters)
Thermodynamic II	(7 Semesters)
Heat transfer I	(8 Semesters)
Heat transfer II	(2 Semesters)
Fluid Mechanics and Hydraulic Machines	(4 Semesters)
HVAC	(2 Semesters)
Gas Dynamic	(3 Semesters)
Internal Combustion Engine	(4 Semesters)
Fuel and Combustion	(8 Semesters)
Static	(3 Semesters)
Dynamic	(6 Semesters)
Special Topic in Alternative Energy	(1 Semester)
Bioenergy and Waste Management	(1 Semester)
Graduation Projects (I)	(8 Semesters)
Graduation Projects (II)	(7 Semesters)

RESEARCH INTERESTS

- Modeling, Simulation, Design, and Optimization of Thermal Systems:
- Machine Learning and Optimization Methods for Renewable Energy Systems
- Solar Cooling Systems
- Integration of Renewable Energy-Powered Cooling Systems into Existing Buildings
- Energy Storage Systems Integration
- Nanotechnology in Renewable Energy and Alternative Fuel
- Materials and Technologies for Enhanced Renewable Energy Systems:
- Human Comfort and Environmental Sustainability
- Refrigeration Systems
- Alternative Fuels (Biodiesel, Biofuels, Biohydrogen, ..etc)
- Waste Management and Energy Recovery

COMPETENCIE

- Ability to help students improve their knowledge
- Advised undergraduate/ graduate students in their research projects
- Good communication skills
- Excellent research skills
- Mastering several engineering software

AWARDS AND ASSISTANTSHIP

2020, 2021, 2022, and 2023	According to the report published by Stanford University which depicts the 100,000 top-scientists in the world, I categorized as the 2% influential scholars.
2022	Best Paper Presentation (Modeling, Polynomial Regression, and Artificial Bee Colony Optimization of SI Engine Performance Improvement Powered by Acetone–Gasoline Fuel Blends, 2022 3rd International Conference on Power, Energy and Electrical Engineering (PEEE 2022) November 18-20, 2022, Barcelona, Spain).
2021	Best Paper Presentation (Energy Analysis and Refrigerant Replacement in Pre-Cooling Concrete System in Massive Concrete Structures, 11th International Conference on Engineering, Project, and Production Management EPPM2021, 19-21 September 2021, Poland).
Nov 14,2021 - Nov 11,202	Staff mobility/ Erasmus+ Sapienza Università di Roma/ Italy.
Nov 20, 2018- to Nov 28, 2018	Nester School/ The Cyprus Institute, Workshop on Concentrated Solar Thermal Energy, Cyprus.
2018	Formula Student Class II competition/ Formula Student UK, 2nd place design award, IMECH, Silverstone circuit, UK.
Jun 1, 2017 – Aug 31, 2017	Deutsche Forschungsgemeinschaft (DFG) scholarship/ University of Applied Science, Höxter, Germany
Aug 15, 2015 - Jan 31, 2016	Australian Endeavour scholarships and fellowships/ University of Tasmania - The School of Engineering and ICT, Austalia
2015	Graduation projects award for Jordan Universities, 3rd place, Jordan EngineersAssociation, Amman
Feb, 2010- Dec, 2012	Graduate Research Assistantship/ Clemson University (USA)
2004	The Ministry of Higher Education Scholarship/ Achieved the first rank of undergraduate education in B.Sc. Degree, Mu'tah University, 2004

GRANT AND FUNDING

1. Vocational Training Diploma on Electrical and Hybrid Vehicles (ECO-CAR)
Description: ECO-CAR project particularly aims to build the practical skills students in the field of Electrical and Hybrid Cars through developing a Vocational Training Diploma on Servicing and Maintaining of Electrical and Hybrid vehicles.
Category: Capacity Building in the field of higher education 2020- Joint Project
Funding: Erasmus Plus
Administered by: University of Jordan
Funding: 1,103,200 USD
Project team: different Jordanian and European universities.
Period: 2020-2023

2. Formula Student Project (Class II)
Description: Design and manufacturing of a racing car for Formula Student Project (Class I), Mechanical Engineering Department, Tafila Technical University,
Funding: Ministry of Higher Education & Scientific Research (Jordan)
Administered by: Tafila Technical University
Research Team: Dr. Ali Alahmer, Dr. Wail Adalieh, Dr. Ahmad Mustafa; 12 Students.
Fund Amount: 85,700 USD
Period: 2019 – 2021

3. Formula Student Project (Class II)
Description: Design and Manufacturing of a racing car to participate in Formula Student Class II-2018) Competition, 11-14 July, UK.
Funding: Ministry of Higher Education & Scientific Research (Jordan)
Administered by: Tafila Technical University
Research Team: Dr. Ali Alahmer, Dr. Wail Adalieh, Dr. Ahmad Mustafa; 12 Students.
Fund Amount: 35,700 USD
Period: 2017 – 2018

4. Student Graduate Project
Description: Design and Manufacturing of a Rotating C-Shape Magnetic Refrigeration
Funding: Tafila Technical University
Research Team: Dr. Ali Alahmer, 3 Students.
Fund Amount: 700 USD
Period: 2015

Editorial Board

1. **Guest Editor for Special Issue**
   Topic: Advancements in Sustainable Energy Systems: From Innovation to Implementation
   Journal: Discover Sustainability; IF: 2.4.
   https://link.springer.com/collections/dibieiigaa?utm_medium=email&utm_source=generic&utm_content=null&utm_term=null&utm_campaign=CONR__CON1_GL_PHSS_03HEM_dibieiigaa

2. **Guest Editor for Special Issue**
   Topic: Advancements and Future Directions in Process Design for Sustainable Energy Systems
   Journal: Frontiers in Energy Research; IF: 3.4; CiteScore: 2.9.
   https://www.frontiersin.org/research-topics/57296/advancements-and-future-directions-in-process-design-for-sustainable-energy-systems

3. **Guest Editor for Special Issue**
   Topic: Traffic Related Emission and Control
   Journal: Atmosphere Journal; IF: 2.5; CiteScore: 4.6.
   https://www.mdpi.com/journal/atmosphere/special_issues/0XJ8M9WCNG

4. **Guest Editor for Special Issue**
   Topic: Solar Cooling Innovations: Barriers, Opportunities, Capabilities, and Advancements
   Journal: Sustainability Journal; IF: 3.3; CiteScore: 6.8.
   https://www.mdpi.com/journal/sustainability/special_issues/DN3S310616

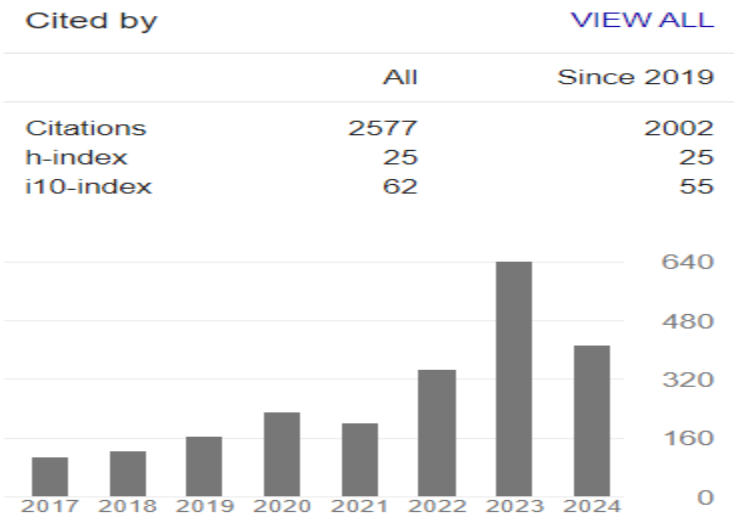
5. **Journal Ecological Engineering & Environmental Technology. ISSN 2719-7050**
   web page: http://www.ecoeet.com/

6. **Journal of Mechanical and Manufacturing Process**
   web page: https://www.journalofmechanical.com/journal/editorial_board_member/Ali-Alahmer/Tafila-technical-university/343

PUBLICATIONS/ METRIC OVERVIEW

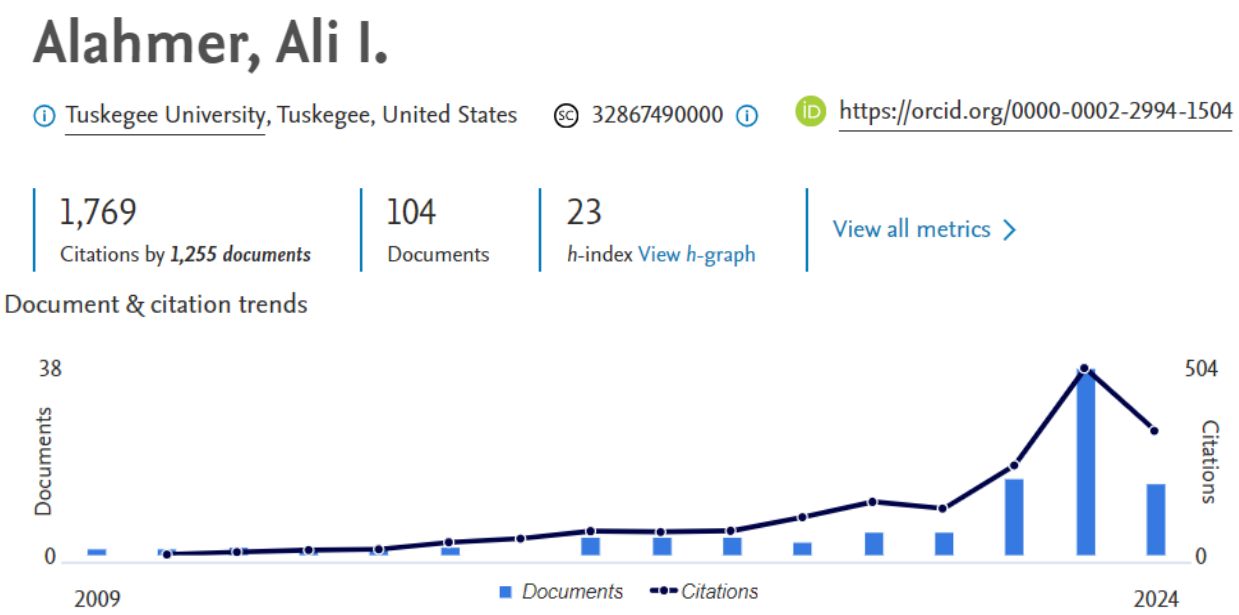
- **Google Scholar Metrics, July 2024**

Google Scholar Citation 2577, h-index 25, i10-index 62
Link: https://scholar.google.com/citations?user=uEIM-58AAAAJ&hl=en&oi=ao



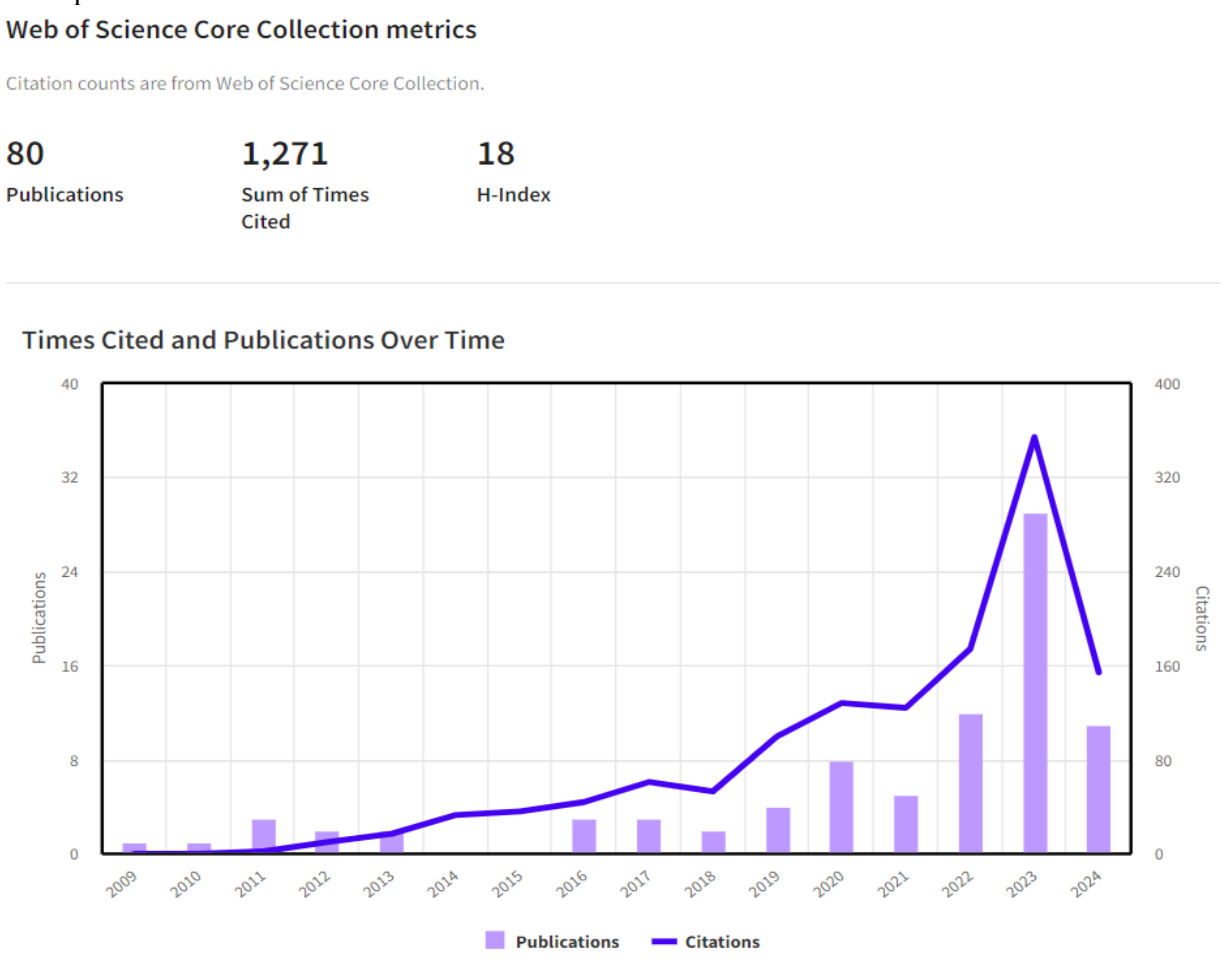
- **Scopus Metrics, July 2024**

Scopus Citation: 1769, h-index 23, 104 Documents
Link: https://www.scopus.com/authid/detail.uri?authorId=32867490000



- **Web of Science (Publon)**

Web of Science Citation as of July 2024: 1271, h-index 18, 80 Documents
Link: https://www.webofscience.com/wos/author/record/C-8901-2019



JOURNAL PUBLICATIONS

1. Malik I. Al-Amayreh, **Ali Alahmer**, Efficiency enhancement in direct thermal energy storage systems using dual phase change materials and nanoparticle additives, Case Studies in Thermal Engineering 1 (59) (2024):104577. **(IF: 6.4).**
2. Mohammad Alrbai, Sameer Al-Dahidi, Loiy Al-Ghussain, **Ali Alahmer**, Hassan Hayajneh, Minimizing grid energy consumption in wastewater treatment plants: Towards green energy solutions, water sustainability, and cleaner environment, Science of The Total Environment 926 (2024):172139. **(IF: 8.2).**
3. Sameer Al-Dahidi, Mohammad Alrbai, Loiy Al-Ghussain, **Ali Alahmer**, Maximizing Energy Efficiency in Wastewater Treatment Plants: A Data-Driven Approach for Waste Heat Recovery and an Economic Analysis Using Organic Rankine Cycle and Thermal Energy Storage, Applied Energy 362 (2024): 123008. **(IF: 10.1)**.
4. Motab Turki Almousa, Hegazy Rezk, **Ali Alahmer**, Optimized Equivalent Consumption Minimization Strategy-based Artificial Hummingbird Algorithm for Electric Vehicles, Frontiers in Energy Research 12 (2024): 1344341. **(IF: 2.6).**
5. Sameer Al-Dahidi, Mohammad Alrbai, Loiy Al-Ghussain, **Ali Alahmer**, Hasan Mohammad, Data-Driven Analysis and Prediction of Wastewater Treatment Plant Performance: Insights and Forecasting for Sustainable Operations, Bioresource Technology 391 (part A) (2024): 129937. **(IF: 9.7)**
6. Saba Y. Ahmed, Qusay Rasheed Al-Amir, Hameed K. Hamzah, Farooq H. Ali, Azher M. Abed, Ahmed Al-Manea, Raed Al-Rbaihat, Khalid Saleh, Ali Alahmer, Investigation of natural convection and entropy generation of non-Newtonian flow in molten polymer-filled odd-shaped cavities using finite difference lattice Boltzmann method. Numerical Heat Transfer, Part B: Fundamentals (2024):1-26. **(IF:1.0)**
7. Raed Al-Rbaihat, Hussein Alahmer, Ahmed Al-Manea, Yousef Altork, Mohammad Alrbai, **Ali Alahmer**, Maximizing efficiency in solar ammonia–water absorption refrigeration cycles: Exergy analysis, concentration impact, and advanced optimization with GBRT machine learning and FHO optimizer, International Journal of Refrigeration 161 (2024): 31-50. **(IF: 3.5)**.
8. Zaid Al-Dulaimi, Hakim T. Kadhim, Malik F. Jaffer, Ahmed Al-Manea, Raed Al-Rbaihat, **Ali Alahmer**, Enhanced Conjugate Natural Convection in a Corrugated Porous Enclosure with Ag-MgO Hybrid Nanofluid. International Journal of Thermofluids 24 (2024): 100574. **(CiteScore: 10.1).**
9. Basil Mahdi Al-Srayyih, Rafel H. Hameed, Qusay Rasheed Al-Amir, Hameed K. Hamzah, Farooq H. Ali, **Ali Alahmer**, Magnetic Field Effect on Mixed Convection Flow inside an Oval-Shaped Annulus Enclosure Filled by a Non-Newtonian Nanofluid. International Journal of Thermofluids. 21 (2024):100571. **(CiteScore:10.1).**
10. Mohamed El Amine Belhadi, Sa'd Hamasha, Ali Alahmer, Rong zhao, Barton C. Prorok, Soroosh Alavi, The Impact of Bi Content on the Coarsening Kinetics of IMC Particles and Creep Deformation Under Thermal Cycling, Journal of Electronic Materials (2024): 53: 380-393. **(IF: 2.2)**
11. Mohamed El Amine Belhadi, Sa'd Hamasha, Ali Alahmer, Qais Qasaimeh, Abdallah Alakayleh, Soroosh Alavi, Investigating the Evolution of Creep Properties during Thermal Cycling of Homogeneous Lead-Free Solder Joints, IEEE Transactions on Components, Packaging and Manufacturing Technology 13 (12) (2024): 1951-196. **(IF: 2.3)**
12. Palash Pranav Vyas, Ali Alahmer, Seyed Soroosh Alavi, Sa'd Hamasha, Comparative Drop Shock Reliability Study of SAC-Based Alloys in BGA Assemblies, IEEE Transactions on Components, Packaging and Manufacturing Technology 14 (3)(2024): 406 – 416. **(IF: 2.3)**
13. Mohamed Fawzy, Hani Attar, Ayman Amer, Sameh Alsaqoor, Ali Alahmer, Gabriel Borowski, Ahmed A.A. Solyman, Samer As'ad, Ramy Said Agieb, Comparison of the Performance of PID

and TVLQR Controllers for Nonlinear Modelling of a Freedom Flying Body, Przeglad Elektrotechniczny 2024 (4) (2024): 291-297.

14. Nabil Beithou, Nassir Abdallatif, Mohammad Bani Khalid, Sameh Alsaqoor, **Ali Alahmer**, Gabriel Borowski, Samer As'ad, Hani Attar, Artur Andruszkiewicz, Enhancing Thermal Performance of Hot Storage Tanks through Chimney-Type Electric Heating and Natural Circulation, Advances in Science and Technology. Research Journal 18 (3)(2024): 151-160. **(IF: 1.0)**
15. Rafel H. Hameed, Qusay Rasheed Al-Amir, Hameed K. Hamzah, Farooq H. Ali, **Ali Alahmer**, Enhancing Natural Convection Heat Transfer through Dome-Shaped Nanofluid Enclosures: A Two-Phase Simulation Analysis, Heat Transfer Engineering. (2024). **Accepted. (IF: 2.3).**
16. Hussein Ali Jabbar, Kareem J. Alwan, Dhafer Manea Hachim, Ahmed Al-Manea, Raed Al-Rbaihat, **Ali Alahmer**, Comparative Assessment of Thermal Oils and Water as Working Fluids in Parabolic Trough Collectors for Enhanced Solar Power Generation, Engineering Research Express. (2024). **Accepted. (IF: 1.5).**
17. Palash Pranav Vyas, **Ali Alahmer**, Sergio Bolanos, Seyed Soroosh Alavi, Sa'd Hamasha, Drop Shock Testing Analysis at Elevated Temperature: Assessing SAC305 Solder Alloy Reliability in BGA Assemblies, IEEE Transactions on Components, Packaging and Manufacturing Technology. (2024). **Accepted. (IF: 2.3).**
18. Basil Mahdi Al-Srayyih, Ahmed Al-Manea, Khalid Saleh, Azher M. Abed, Qusay Rasheed Al-Amir, Hameed K. Hamzah, Farooq H. Ali, Raed Al-Rbaihat, Ali Alahmer, Simulation Investigation of the Oscillatory Motion of Two Elliptic Obstacles Located within a Quarter-Circle Cavity Filled with Cu-Al2O3/Water Hybrid Nanofluid, Numerical Heat Transfer, Part A: Applications. (2023). **Accepted**. **(IF: 2.0)**
19. Mohammad Alrbai, Adnan Darwish Ahmad, Sameer Al-Dahidi, Ahmad M. Abubaker, Loiy Al-Ghussain, **Ali Alahmer**, Nelson K. Akafuah, Performance and sensitivity analysis of raw biogas combustion under homogenous charge compression ignition conditions, Energy 2023: 128486. **(IF: 9.0)**
20. Raed Al-Rbaihat, Hussein Alahmer, **Ali Alahmer**, Yousef Altork, Ahmed Al-Manea, K.Y.Eayal Awwad, Energy and Exergy Analysis of a Subfreezing Evaporator Environment Ammonia-Water Absorption Refrigeration Cycle: Machine Learning and Parametric Optimization, International Journal of Refrigeration 154 (2023): 182-204. **(IF: 3.5)**
21. Mohammad Alrbai, Hussein Alahmer, **Ali Alahmer**, Abdulkareem Aldalow, Raed Al-Rbaihat, Retrofitting conventional chilled-water system to a solar-assisted absorption cooling system: Modeling, polynomial regression, and grasshopper optimization, Journal of Energy Storage 65 (2023): 107276. **(IF: 8.9)**
22. Rania M. Ghoniem, Tabbi Wilberforce, Hegazy Rezk, Samer As'ad, **Ali Alahmer**, Boosting Power Density of Proton Exchange Membrane Fuel Cell using Artificial Intelligence and Optimization, Membranes (2023): 13(10):817. **(IF: 3.3)**
23. Mohammad Alrbai, Sameer Al-Dahidi, Loiy Al-Ghussain, Hassan Hayajneh, **Ali Alahmer**, A Sustainable Wind-Biogas Hybrid System for Remote Areas in Jordan: A Case Study of Mobile Hospital for AL Zaatari Syrian Refugee Camp, Sustainability 15 (20) (2023): 14935. **(IF: 3.3)**
24. Hegazy Rezk, Ali Alahmer, Rania M. Ghoniem, Samer As'ad, Boosting CO_2 Uptake from Waste Concrete Powder using Artificial Intelligence and Marine Predators Algorithm, Processes. 11 (9) (2023): 2655. 2023 **(IF: 2.8)**
25. Raed Al-Rbaihat, Khalid Saleh, Ray Malpress, David Buttsworth, Hussein Alahmer, **Ali Alahmer**, Performance Evaluation of Supersonic Flow for Variable Geometry Radial Ejector through CFD Models Based on DES-Turbulence Models, GPR Machine Learning, and MPA Optimization, International Journal of Thermofluids 20 (2023): 100487. **(CiteScore:10.1)**

26. Tamara Al-Jaraden, Osama Ayadi, **Ali Alahmer**, Towards Sustainable Shale Oil Recovery in Jordan: An Evaluation of Renewable Energy Sources for In-Situ Extraction, International Journal of Thermofluids 20 (2023): 100446. (**CiteScore:10.1**)
27. Rania M. Ghoniem, **Ali Alahmer**, Hegazy Rezk, Samer As'ad, Optimal Design and Sizing of Hybrid Photovoltaic/Fuel Cell Electrical Power System, Sustainability 15 (15) (2023), 12026. **(IF: 3.3)**
28. Aissa Benhammou, Hamza Tedjini, Mohammed Amine Hartani, Rania M. Ghoniem, **Ali Alahmer**, Accurate and Efficient Energy Management System of Fuel Cell/ Battery/Supercapacitor Hybrid Electric Vehicles, Sustainability 15 (13) (2023): 10102. **(IF: 3.3)**
29. **Ali Alahmer**, Rania M. Ghoniem, Improving Automotive Air Conditioning System Performance Using Composite Nano-lubricants and Fuzzy Modeling Optimization, Sustainability 15 (12) (2023): 9481. **(IF: 3.3)**
30. Hussein Alahmer, **Ali Alahmer**, Ahmed Al-Manea, Raed Al-Rbaihat, Malik I. Alamayreh, Mohammad Alrbai, Optimal water addition in emulsion diesel fuel using machine learning and sea-horse optimizer to minimize exhaust pollutants from diesel engine, Atmosphere 14 (3) (2023): 449. **(IF: 2.5)**
31. Sameh Alsaqoor, Piotr Piechota, **Ali Alahmer**, Nabil Beithou, Wiesław Wędrychowicz, Artur Andruszkiewicz, Patryk Kotomski, Examining Transit-Time Ultrasonic Flowmeter Inaccuracies during Changing Gas Velocity Profiles, Processes 11 (5) (2023):1367. **(IF: 2.8).**
32. Sameh Alsaqour, Ahmad Alqatamin, **Ali Alahmer**, Zhang Nan, Yaseen Al-Husban, Hussam Jouhara, The Impact of Phase Change Material on Photovoltaic Thermal (PVT) Systems: A Numerical Study, International Journal of Thermofluids 18 (2023): 100365 **(CiteScore:10.1)**
33. Malik I. Al-Amayreh, **Ali Alahmer**, Design a Solar Harvester System Capturing Light and Thermal Energy Coupled with a Novel Direct Thermal Energy Storage and Nanoparticles, International Journal of Thermofluids 18 (2023): 100328 **(CiteScore:10.1)**
34. Hegazy Rezk, Abdul Ghani Olabi, Mohammad Ali Abdelkareem, **Ali Alahmer**, Enas Taha Sayed, Maximizing Green Hydrogen Production from Water Electrocatalysis: Modeling and Optimization, Journal of Marine Science and Engineering 11 (3) (2023): 617**. (IF: 2.7).**
35. Ahmed M Nassef, Hegazy Rezk, **Ali Alahmer**, Mohammad Ali Abdelkareem, Maximization of CO_2 Capture Capacity using Recent RUNge Kutta Optimizer and Fuzzy Model, Atmosphere 14 (2) (2023): 295. **(IF: 2.5)**
36. Qusay Rasheed Al-Amir, Ammar Abdulkadhim, Hameed K. Hamzah, Farooq H. Ali, M. Hatami, Wael Al-Kouz, Ahmed Al-Manea, Raed Al-Rbaihat, **Ali Alahmer,** Investigation of Natural Convection and Entropy Generation in a Porous Titled Z-Staggered Cavity Saturated by TiO2-Water Nanofluid, International Journal of Thermofluids 19 (2023): 100395. **(CiteScore: 10.1)**
37. Omar Badran, **Ali Alahmer**, Faik A. Hamad, Yousif El-Tous, Ghazi Al-Marahle, Hamed M.A. Al-Ahmadi, Enhancement of Solar Distiller Performance by Photovoltaic Heating System, International Journal of Thermofluids 18 (2023): 100315 **(CiteScore: 10.1)**
38. Hussein Alahmer, **Ali Alahmer**, Razan Alkhazaleh, Mohammad Alrbai, Malik I. Alamayreh, Applied Intelligent Grey Wolf Optimizer (IGWO) to Improve the Performance of CI Engine Running on Emulsion Diesel Fuel Blends, fuels 4 (1) (2023):35-57. **(IF: 2.7)**
39. Hanan Saleet, Alaa Aldamsah, Mohamad Banikhaled, Ayman Abu-Baker, Rebhi A. Damseh, Ma'moun Al-Smadi, Ahmad Mostafa, Wael Adaileh, **Ali Alahmer**, Ahmed Al-Salaymeh, Sara Al Twassi, Rasha AlBeek,Kholoud Hassouneh, Importance and Barriers of Establishing Educational/Training Programs in Electric Vehicles/Hybrid-Electric Vehicles in Jordan, World Electric Vehicle Journal 14 (9) (2023): 232. (**IF: 2.6**)
40. Hussein Alahmer, **Ali Alahmer**, Razan Alkhazaleh, Modeling, Polynomial Regression, and Artificial Bee Colony Optimization of SI Engine Performance Improvement Powered by Acetone–Gasoline Fuel Blends, Energy Reports 9(3) (2023): 55-64. **(IF: 4.7)**

41. Hussein Alahmer, **Ali Alahmer**, Razan Alkhazaleh, Mohammad Alrbai, Exhaust emission reduction of a SI engine using acetone–gasoline fuel blends: modeling, prediction, and whale optimization algorithm, Energy Reports (9)(1) (2023): 77-86. **(IF: 4.7)**
42. Nabil Beithou, Ali Othman, A. Qandil, Mohammad Bani Khalid, Gabriel Borowski, Hussam Jouhara, Sameh Alsaqoor, **Ali Alahmer**, Effect of Liquid Saturated Porous Medium on Heat transfer from Thermoelectric Generator, International Journal of Thermofluids 17(2023): 100264. **(CiteScore: 10.1)**
43. **Ali Alahmer**, Assessment of Local and Overall Vehicular Thermal Human Comfort and Sensation States for Transient, Non- Uniform Conditions under Variant Air Velocity Levels, Australian Journal of Mechanical Engineering 21(1) (2023): 56-64. **(IF: 1.4).**
44. Xin Wei, Sa'd Hamasha, Ali Alahmer, Mohamed El Amine Belhadi, Palash Pranav Vyas, Fatigue Performance and Microstructure of Lead-Free Solder Joints in BGA Assembly at room temperature, Microelectronics Reliability 149 (2023):115217. **(IF: 1.6)**
45. Mohamed El Amine Belhadi, Sa'd Hamasha, **Ali Alahmer**, Xin Wei, Abdallah Alakayleh, Power Law Creep Behavior Model Of 3rd Generation Lead-Free Alloys Considering Isothermal Aging, Journal of Electronic Packaging 146(1) (2024): 011008. **(IF:1.6)**
46. Xin Wei, **Ali Alahmer**, Heneen Ali, Sufyan Tahat, Palash Pranav Vyas, Sa'd Hamasha, Effect of temperature on the low cycle fatigue properties of BGA solder joints, Microelectronics Reliability 146 (2023):115031. **(IF: 1.6)**
47. Mohamed El Amine Belhadi, Sa'd Hamasha, **Ali Alahmer**, Effect of Bi Content and Aging on Solder Joint Shear Properties Considering Strain Rate, Microelectronics Reliability 146 (2023): 115020. **(IF: 1.6)**
48. Minghong Jian, Sa'd Hamasha, **Ali Alahmer**, Mohammad Hamasha, Xin Wei, Mohamed El Amine Belhadi, Khozima Hamasha, Analysis and Modeling of the Aged SAC-Bi Solder Joints Subjected to Varying Stress Cycling Conditions, Materials 16 (2) (2023):750. **(IF:3.1)**
49. Xin Wei, Sa'd Hamasha, **Ali Alahmer**, Mohamed El Amine Belhadi, Assessing the SAC305 Solder Joint Fatigue in BGA Assembly Using Strain-Controlled and Stress-Controlled Approaches, Journal of Electronic Packaging 145(3) (2023): 031005. **(IF:1.6)**
50. Minghong Jian, Sa'd Hamasha, **Ali Alahmer**, Xin Wei, Mohamed El Amine Belhadi, Abdallah Alakayleh, Sufyan Taha, Shear Fatigue Analysis of SAC-Bi Solder Joint Exposed to Varying Stress Cycling Conditions, IEEE Transactions on Components, Packaging and Manufacturing Technology 13 (2) (2023): 274-283. **(IF: 2.3)**
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4. Hussein Alahmer, **Ali Alahmer**, Razan Alkhazaleh, Modeling, Polynomial Regression, and Artificial Bee Colony Optimization of SI Engine Performance Improvement Powered by Acetone–Gasoline Fuel Blends, 2022 3rd International Conference on Power, Energy and Electrical Engineering (PEEE 2022) November 18-20, 2022, Barcelona, Spain. (**Best Paper Presentation)**
5. Hussein Alahmer, **Ali Alahmer**, Razan Alkhazaleh, Exhaust Emission Reduction of a SI Engine Using Acetone–Gasoline Fuel Blends: Modeling, Prediction, and Whale Optimization Algorithm2021 8th International Conference on Power and Energy Systems Engineering (CPESE 2021) September 10-12, 2021, Fukuoka Institute of Technology, Fukuoka, Japan.
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11. **Ali Alahmer**, Sameh Alsaqoor. Energy efficient of Using Chilled Water System for Sustainable Health Care Facility Operating by Solar Photovoltaic Technology, 2018 5th International Conference on Power and Energy Systems Engineering, CPESE 2018, 19–21 September 2018, Nagoya, Japan.
12. Nader Aljabarin, Andrzej Kmieć, **Ali Alahmer**, Sameh Alsaqoor. Hydrodynamics, Heat and Mass Transfer Analysis during Coating of Rings in a Spouted Bed, The Global conference on renewables and energy efficiency for desert regions GCREEDER 2018, Amman-Jordan, 3rd - 5th April, 2018.
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BOOK AND CHAPTER PUBLICATIONS

1. Energy Conversion - Current Technologies and Future Trends, Chapter title Solar Cooling Technologies,
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2. Vehicular Cabin's Thermal Comfort: Effect of Relative Humidity and Temperature Control on in-Cabin Thermal Comfort State, LAP LAMBERT Academic Publishing (February 25, 2014).
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CONFERENCE ORGANIZATION

1. 2022 9th International Conference on Power and Energy Systems Engineering (CPESE2022) September 9-11, 2022, Kyoto, Japan. (Technical Committee).
2. 2021 8th International Conference on Power and Energy Systems Engineering (CPESE2021) September 10-12, 2021. Fukuoka Institute of Technology, Fukuoka, Japan. (Technical Committee).
3. 2020 7th International Conference on Power and Energy Systems Engineering (CPESE 2020) September 26-29, 2020, Fukuoka Institute of Technology, Fukuoka, Japan (Virtual Conference)
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6. The First International Conference on Mechanical Engineering Sciences and Applications Tafila-Jordan, Oct. 8-10, 2017 (Scientific Committee)

JOURNAL PROCESS UNDER REVIEW

1. Sameer Al-Dahidi, Mohammad Alrbai, Loiy Al-Ghussain, Hassan S. Hayajneh, **Ali Alahmer**, A Techno-Economic Evaluation of Multiple Machine Learning Algorithms Developed for One-day Ahead Prediction of Solar Photovoltaic Power Production: Towards Energy Sustainability, submitted.
2. Omar Quran, Omar Badran, **Ali Alahmer**, Ismael Al Masalha, AbedAlrzaq Alshqirate, Enhancing Photovoltaic Panel Performance through Temperature Control Using Water Sprinkler Cooling System, submitted.

3. Malik I. Alamayreh, **Ali Alahmer**, Forces Coefficients of the Fluid Flow Dynamics Around a Yawed Partially Submerged Cylinders in Open-Channel Flow: Comparison Methods, submitted.
4. Dhafer Manea Hachim, Adel A. Eidan, Mohammed J. Alshukri, Mohamed Al-fahham, Assaad AlSahlani, Ahmed Al-Manea, **Ali Alahmer**, Raed Al-Rbaihat, Numerical and experimental investigation of an evacuated tube heat pipe solar collector incorporated with thermal energy storage material, submitted.

TRAINING: WORKSHOP ATTENDANCE

1. Battery Energy Storage Systems Design EE220, The Global Institute of Electrical Engineering | GIEE (www.giee.org), (22 July-20 September), 2019. (40hrs).
2. Photovoltaic Systems Lab. EE203, The Global Institute of Electrical Engineering | GIEE (www.giee.org), Cert#: C1906EE2030430, (3rd -6th August, 2019). (20hrs)
3. Advanced Photovoltaic Systems EE201, 2018, The Global Institute of Electrical Engineering | GIEE (www.giee.org), Cert#: C1906EE2010425, (14 Jul-01 Aug.), 2019. (30hrs)
4. Introduction to Photovoltaic Systems EE200, 2018, The Global Institute of Electrical Engineering | GIEE (www.giee.org), Cert#:C1906EE2000416, (24 Jun- 11 Jul), 2019. (20hrs)
5. Concentrated Solar Thermal Energy (CSP), Cyprus Institute, Cyprus from 20th to 28th Nov, 2018.
6. Energy Auditing and Efficiency, ETA Max Energy & Environmental Solution, At the Ninth Jordanian International Mechanical Engineering Conference (JIMEC), 17th Oct, 2018.
7. Variable Refrigeration Flow Systems, Arab Technical Group, At the Ninth Jordanian International Mechanical Engineering Conference (JIMEC), 16th Oct, 2018.
8. Concentrated Solar Power, Middle East University, At the Ninth Jordanian International Mechanical Engineering Conference (JIMEC), 15th October, 2018.
9. Photovoltaic Systems with Electrical Storage, Energy Services Center at Al-Zaytoonah University, At the Ninth Jordanian International Mechanical Engineering Conference (JIMEC), 14th October, 2018.
10. PV Mounting Structures, Jordan Energy Chapter – EDAMA, 17th members meeting for 2017, Nov. 2, 2017.
11. Jordan Green building Guide Awareness, Council on Women in Energy & Environmental Leadership (CWEEL), Feb 11, 2017.
12. Solar Water Heaters for Multi Family, Jordan Energy Chapter EDAMA Members Meeting #2/2017 on Feb 08, 2017.
13. Energy Efficiency and Energy Saving, Council on Women in Energy & Environmental Leadership (CWEEL), Feb 4, 2017.
14. Thermal Imaging Advanced 3rd Party Testing, Council on Women in Energy & Environmental Leadership (CWEEL), Jan 25, 2017.
15. Effective opening within building envelope to minimize heat transfer while optimizing daylight, Jordan Energy Chapter EDAMA Members Meeting #1/2017 on Feb 02, 2017.
16. "CAT Micro-grid Solutions "Thin Film Technology ", Jordan Energy Chapter EDAMA Members Meeting #18/2016 on Dec28, 2016.
17. Solar Log: Basic Trainer, Council on Women in Energy & Environmental Leadership (CWEEL), Dec 24, 2016.
18. HVAC Design, Al Asalah Pioneers Technology Academy, Feb 23-26, 2014.
19. CREO: Part and Assembly Modeling (Basic), International Industrial Engineering Services, March 7, 2013.
20. Comprehensive Automotive engineering Courses: I took three courses in automotive mechanics in Automotive Technology Academy:
    i. June 2006- Aug 2006: Fundamentals of Vehicle Repairs (Mechanics)- 90 hours- which includes: Engine fundamental and construction, Automotive Fuel, Cooling, Lubricating and exhaust systems,

Automotive carburetor, Automotive power train (clutch, manual transmission, differential and drive axles), Suspension, Brake and Steering system.

ii. Aug 2006- Oct 2006: Fundamentals of Vehicle Repairs (Electricity)- 60 hours- which includes: Automotive battery, the starting and charging system, Ignition system (Contact point, electronic... etc), wiring system.

iii. Oct 2010- Jan 2011: Advance Training in Modern Automotive Technology-100 hours- which includes: Fuel injection system, Sensors and actuators in modern cars, Automatic Gear Transmission, Anti-lock Brake System (ABS), Traction Control System (TCS), Electronic Stability Program (ESP), Supplemental Restraint System (SRS), Refrigerant and Air Conditioning (A/C), Electronic Control Module (ECM), scan tool.

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