


Curriculum Vitae				
Name	Louay Abd Al Azez Mahdi			
Education	Degree	Discipline	Institution	Year
	Ph.D.	Thermal engineering	U.O.T-Iraq	2012
	MSc.	Refrigeration & Air conditioning	U.O.T-Iraq	1989
	BS	Mechanical Engineering	U.O.T-Iraq	1984
ACADEMIC EXPERIENCE				
Institution		Rank	When	Full time or Part time
Mechanical Engineering Dept.		Asst. Prof.	1991-2021	FT
Energy and Renewable Energies Technology Center		Asst. Prof.	2021-2024	FT
Certifications or professional registrations				
Iraqi Engineering Association				
Current membership in professional organizations				
Institute of Refrigeration (IIR)				
ASME				
ASHRAE				
Honors and awards				
Service activities (within and outside of the institution)				
Manager of labs.2012-2014				
Section rapporteur 2006-2007				
Refrigeration and air conditioning rapporteur 2014-2015				
Chief of wind and water section 2023-2024				
Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation				

Articles

1. Mahdi, Louay A. Al-Azez, Hasanain A. Abdul Wahhab, and Miqdam T. Chaichan. **"Using Froude and weber numbers to represent the changes in the flow pattern from stratified to stratified-wavy or plug for wire-on-tube condenser."** *Results in Engineering* 24 (2024): 103001.
2. Mahdi, Louay Abd Al-Azez, Hasanain A. Abdul Wahhab, and Miqdam Tariq Chaichan. **"Entropy generation analysis for vertical flat and corrugated surface by natural convection and radiation at constant heat flux."** *Case Studies in Thermal Engineering* 61 (2024): 104979.
3. Mahdi, Louay Abd Al-Azez, Mohammed A. Fayad, and Miqdam T. Chaichan. **"Flow Patterns in Wire-on-Tube Heat Exchangers Based on Various Low Refrigerant Mass Flow Rates."** (2024): 872-886.
4. Mahdi, Louay Abd Al-Azez, Hasanain Adnan Abdul Wahhab, and Miqdam Tariq Chaichan. **"The Change of Flow Pattern from Stratified to Stratified-Wavy for Condensation in Wire on Tube Heat Exchangers."** *Journal of Advanced Research in Fluid Mechanics and Thermal Sciences* 117, no. 2 (2024): 105-115.
5. Wahhab, Hasanain A. Abdul, Mohammed A. Fayad, Louay A. Mahdi, Miqdam T. Chaichan, Hussein A. Kazem, and Ali HA Al-Waeli. **"Experimental and numerical analyses of water droplet condensation on photovoltaic surfaces under clean and dusty conditions."** *Case Studies in Thermal Engineering* 60 (2024): 104608.
6. Al-Sumaily, Gazy F., Salman Hussien Omran, Amerah A. Radhi, Hussain Ali Hussain, Azher M. Abed, Mohammed A. Fayad, Miqdam Tariq Chaichan, Hasanain A. Abdul Wahhab, and Louay Abd Al-Azez Mahdi. **"Enhancing heat transfer: unraveling the dynamics of mixed convection in a vertical porous cavity."** *Journal of Advanced Research in Fluid Mechanics and Thermal Sciences* 113, no. 1 (2024): 1-12.
7. Hamzah, Ameer Hasan, Hasanain A. Abdul Wahhab, Abdulrazzak Akroot, Wissam H. Alawee, and Louay Abd Al-Azez Mahdi. **"Analytical Study of Intake Air Temperature Effect on SI Engine Performance and Emissions."** In *International Conference on Mechanical, Manufacturing and process Plant Engineering*, pp. 74-88. Singapore: Springer Nature Singapore, 2023.
8. Mahdi, Louay A., Miqdam T. Chaichan, Khaleel I. Abass, Mohammed A. Fayad, Hassanain A. Abdul-Wahab, and Hussein A. Kazem. **"Characterization of the Thermophysical Properties of Paraffin-Based Nanocomposite Containing Alumina and Iron Oxide Nanoparticles."** In *International Conference on Mechanical, Manufacturing and process Plant Engineering*, pp. 89-100. Singapore: Springer Nature Singapore, 2023.
9. Al-Azez Mahdi, Louay Abd, Samir Akram Mahmood, Muna KJ Al-naamee, Mohammed A. Fayad, Miqdam T. Chaichan, and Hasanain A. Abdul Wahhab. **"Thermal Analysis of Wire on Tube Condenser by Exergy and Penalty Factor Methods."** In *International Conference on Mechanical, Manufacturing and process Plant Engineering*, pp. 127-141. Singapore: Springer Nature Singapore, 2023.
10. Mahdi, Louay Abd Al-Azez, Mohammed A. Fayad, Muna Kheder Jassim Al-Naamee, Miqdam Tariq Chaichan, Hasanain A. Abdul Wahhab, and Hayder Mohsin Ali. **"Study the Behaviour of Chest Freezer Working with R134a and R600a Under Pull Down and Loading States."** In *International Conference on Mechanical, Manufacturing and process Plant Engineering*, pp. 104-112. Singapore: Springer Nature Singapore, 2022.
11. Shallal, Basam A., Engin Gedik, Hasanain A. Abdul Wahhab, Louay Abd Al-Azez Mahdi, and Miqdam T. Chaichan. **"Enhancement of PV/T Solar Collector Efficiency Using Alumina Nanoparticles Additives."** *Journal homepage: <http://ieta.org/journals/ijcmem>* 11, no. 3 (2023): 181-186.

12. Mahdi, Louay A., Muna KJ AL-Naamee, Ahmed Q. Salam, Salman H. Omran, Hind A. AL-Salihi, Marwa K. Abood, and Hasanain A. Abdul Wahhab. **"Theoretical Entropy Generation Analysis for Forced Convection Flow Around a Horizontal Cylinder."** Journal homepage: <http://iieta.org/journals/ijcmem> 11, no. 3 (2023): 163-168.
13. Ali, Hayder M., and Louay A. Mahdi. **"Exergy analysis of chest freezer working with R-134a and R-600a at steady state conditions."** International Journal of Energy Production and Management. 2023. Vol. 8. Iss. 2 8, no. 2 (2023): 63-70.
14. Mahdi, Louay Abd Al-Azez, Mohammed A. Fayad, and Miqdam T. Chaichan. **"In Tube Condensation: Changing the Pressure Drop into a Temperature Difference for a Wire-on-Tube Heat Exchanger."** Fluid Dynamics & Materials Processing 19, no. 9 (2023).
15. AJEL, MOHAMMED G., ENGIN GEDIK, HASANAIN AA WAHHAB, LOUAY AA MAHDI, and MIQDAM T. CHAICHAN. **"Experimental investigation of pv/t solar collector efficiency with spherical-shaped protrusions on the absorber surface."** J. Eng. Sci. Technol. 18 (2023): 55-64.
16. Mahdi, Louay Abd Al-Azez, Mohammed A. Fayad, and Miqdam T. Chaichan. **"Analysis of Entropy Generation for Horizontal Heated Cylinder by Natural Convection and Radiation."** (2023): 888-896.
17. Fayad, Mohammed A., Moafaq KS Al-Ghezi, Sanaa A. Hafad, Slafa I. Ibrahim, Marwa K. Abood, Hind A. Al-Salihi, Louay A. Mahdi, Miqdam T. Chaichan, and Hayder A. Dhahad. **"Emissions Characteristics and Engine Performance from the Interaction Effect of EGR and Diesel-Ethanol Blends in Diesel Engine."** International Journal of Renewable Energy Development 11, no. 4 (2022).
18. Abd Al-Azez Mahdi, Loauy, and Hasanen M. Hussen. **"Study the Thermal Efficiencies for Household Compressors."** In ICPER 2020: Proceedings of the 7th International Conference on Production, Energy and Reliability, pp. 205-215. Singapore: Springer Nature Singapore, 2022.
19. Kamil, M., M. S. Kassim, R. A. Mahmood, and L. Mahdi. **"Modelling of heat transfer and steam condensation inside a horizontal flattened tube."** Fluid Dynamics & Materials Processing 18, no. 4 (2022): 1-14.
20. Mahdi, Loauy Abd Al-Azez, and Ahmed Yusef Lateif. **"Prediction of heat transfer coefficient and pressure drop in wire heat exchanger working with R-134a and R-600a."** Journal of Engineering 25, no. 11 (2019): 1-20.

Books:

Equipment Technology for refrigeration and Air conditioning: The components

by Louay Abd Al-Azez Mahdi (Author), Hasanen M. Hussen (Author), Laith Jaafer Habeeb (Author) November 27, 2020

<https://www.amazon.com/Equipment-Technology-Refrigeration-Air-Conditioning/dp/6138944364>

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Web site h index

Scopus: h-index: 4

<https://www.scopus.com/authid/detail.uri?authorId=57659280600>

Google scholar: h-index: 5

i10-index: 2

https://scholar.google.com/citations?hl=en&user=KatkFQYAAAAJ&view_op=list_works&sortby=pubdate

ResearchGet: h-index: 4 https://www.researchgate.net/profile/Louay-Mahdi				
ORCID https://orcid.org/my-orcid?orcid=0000-0002-0577-8714				
Web of Science: h-index: 2 https://www.webofscience.com/wos/author/author-search				
ACADEMIA https://itswtech.academia.edu/DrLouayAbdAlAzezMahdi				
Kudos https://www.growkudos.com/hub/112474/publications				
Briefly list the most recent professional development activities				
1- Design more than ten air conditioning systems for hospitals. 2- Design many air conditioning systems for official government buildings. 3- Check and test more than twenty air conditioning systems. 4- Write the specifications standard for refrigeration and Air conditioning systems for Iraq government. 5- Third part inspection for more than fifteen equipment systems.				
Non-academic experience				
Company or entity	Title	Brief description of position	When	Full time or Part time
Private sector		Installation- operation- maintenance-VCRS	1985-2000	PT