

# CURRICULUM VATAE



**NAME** : MUNAWAR NAWAB KARIMI

**PARENTS NAME** : FATHER LATE SALAHUDDIN MOHAMMD KARIMI  
MOTHER LATE HUSN ARA SHABNAM

**NATIONALITY** : INDIAN

**RELIGION** : ISLAM

**BIRTH** : 13.03.1964, PATNA, BIHAR, INDIA

**MARITAL STATUS** : MARRIED TO RUMANA KARIMI WITH 3 CHILDREN.

**PRESENT ADDRESS** : G-2/23 BPTP PARKLAND VILLAS  
SECTOR 89, FARIDABAD,  
INDIA 121002

**PERMANENT ADDRESS** : As ABOVE

**RESIDENTIAL ADDRESS** : SAME AS PRESENT ADDRESS

**CONTACT ADDRESS** : [mkarimi@jmi.ac.in](mailto:mkarimi@jmi.ac.in); [mnkarimi64@gmail.com](mailto:mnkarimi64@gmail.com);  
0091-8882269171; 9971027283,  
009-11-2698259 (Office)

**PROFESSION** : TEACHING

**DESIGNATION** : PROFESSOR IN MECHANICAL ENGINEERING

**POSTED AT** : DEPARTMENT OF MECHANICAL ENGINEERING,  
FACULTY OF ENGINEERING & TECHNOLOGY,  
JAMIA MILLIA ISLAMIA, NEW DELHI.

**(NAAC 'A' Grade University and NBA Department)**

**PAN NUMBER** : AKYPY5336P

**FIELDS OF SPECIALISATION**

THERMAL  
REFRIGERATION AND AIR-CONDITIONING

**CONSULTANCY** :

- AS "**COLD CHAIN EXPERT**" UNDER MINISTRY OF FOOD PROCESSING INDUSTRIES; Government of India, with IL&FS, New Delhi

S.No.	Project No.	Type of Consultancy	Year	Amount
1	2014/384	Type-I	2014	1,75,000
2	2014/567	Type-I	2014	2,00,000
3	2014/757	Type-III	2014	2,25,000
4	2015/960	Type-III	2015	2,00,000

- Have been doing Consultancy of Vetting the projects.

5.	2018/2437	Type-III	2018	14,160

**COUNTRIES VISITED** :

**ENGLAND** (York, Manchester, London); **SCOTLAND** (Edinburgh); **Saudi Arabia** (Riyadh, Abha, Mecca and Madina) and **QATAR** (Doha).

**QUALIFICATION** :

S.NO.	COURSE	YEAR OF PASSING	INSTITUTE	CGPI/DIVISION	SUBJECTS/SPECIALIZATION
1	HIGH SCHOOL	1979	B.S.E.B	63.9/l	SCIENCE MATH, BIO
2	PRE-UNIVERSITY COURSE	1980	A.M.U., ALIGARH	66.7/l	SCIENCE, MATH
3	BSC. MECHANICAL ENGINEERING	1985	A.M.U., ALIGARH	73.9/l	MECHANICAL ENGINEERING
4	M.TECH	1994	I.I.T.D	6.34	MECHANICAL ENGINEERING
5	PH.D	2007	J.M.I.	-	MECHANICAL ENGINEERING

**RESEARCH DEGREE :**

Degrees	Title	Date of award	University
Ph.D.	"Assessment and evaluation of economic impact on India due to use of alternative Refrigerants"	April 22, 2007	Jamia Millia Islamia, New Delhi Supervisor: Professor Abid Haleem (J.M.I.); Co-Supervisor: Professor Sushil (I.I.T.D.)

**INDUSTRY EXPERINCE :**

Designation	Name of Employer	Date of		Salary with Grade	Reason of leaving
		Joining	Leaving	Reason of leaving	
HVAC System Design Engineer	at 'Gupta Consultants' Delhi	September 1985	March 1986	Rs:1700	Joined teaching at J.M.I
Mechanical Engineer	at 'Heatly& Gresham (I) LTD', Delhi	March 1988	July 1989	Rs 1800 basic	No creativity
Sales Engineer	at K.G.Khosla Compressors Ltd, Delhi	July 1989	April 1990.	Approx Rs 2000/-	Joined teaching at J.M.I
"Sales Engineer"	Al Saadah Trading Establishment, Riyadh, K.S.A	in 1998, (on Extra Ordinary Leave)	2001	SAR 4-000 basic	Joined teaching at J.M.I

**TEACHING EXPERIENCE:**

Designation	Department	Date of		Salary in INR
		Joining from	to	
Worked as Lecturer,	Department of Mechanical Engineering,	from March 1986 to	September 1987	700/- basic
Worked as Lecturer,	Department of Mechanical Eng21ineering,	since 1990	September 1998.	700/- basic

Worked as Sr. Lecturer,	Department of Mechanical Engineering,	2001	2003	8000/- basic
Senior Lecturer (Selection Grade) equivalent to Reader grade	Department of Mechanical Engineering,	from 2003,	till 2006.	12,000/- basic
Reader	Department of Mechanical Engineering,	from 22.04.2007,	06.07.2012	46390/- basic
<b>Professor</b>	<b>Department of Mechanical Engineering,</b>	<b>from 06.7.2012,</b>	<b>Till date</b>	<b>1,99,000/- Basic approximate</b>

#### TEACHING EXPERINCE OUTSIDE INDIA:

Worked as A. Professor	King Khalid University, Abha Kingdom Of Saudi Arabia	October 2008	7th July 2010 (on Extra Ordinary Leave)	SAR 8000
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#### RESEARCH:

##### Ph.D, SUPERVISED:

S.No.	Name of Student	Title of Research	Completed	Presently Posted
1.	Dr. Basant Kumar Agrawal	"Thermodynamic Performance Assessment for A Novel Power & Ejector-Absorption Refrigeration Cycle"	21.04.2014	Amity University UP, Noida
2.	Dr. Sandeep Kumar Kamboj	"Exergy Analysis of Internal Combustion Engine based Combined Power Plant and Cooling Cycles"	16.07.2015	Dr. Sandeep Kumar Kamboj HOD Mechanical Vidya College of Engineering Mobile: +9557367667   E-mail: sandeepkamboj@vidya.edu.in
3.	Dr. Umesh Kumar	"Study of the Scope for the recovery of Waste Heat from Different Industries and it's Optimized Utilization towards improving Energy Efficiency"	28.05.2015	Adelaide Australia

4	Dr Vipin Kumar	“Exergy Destruction and Second Law Analysis of Combined Refrigeration Systems”	February 2021	Assistant Professor Krishna Engineering College, Ghaziabad
5	Dr. Salem Alabd Mohamed Abdasslam	“Analysis of Vapor Absorption System”	April 2021	Libya
6.	Salma Khatoon	“Comparison of Fourth Generation Refrigerants HFO1234YZ and HFO1234ZE by Second Law Efficiency & Energy Destruction Analysis for Automotive Sector”	July 2023	USA
7.	Mohammad Shahid	“Optimization of Building Energy Performance”	June 2023	Teaching in Haryana
8.	Mohammad Nawaz Khan	“Some Studies on Tree Like Branching Rectangular Micro-Channel”	June 2023	Associate Professor, Integral College, Lucknow Uttar Pradesh

**Ph.DS UNDER SUPERVISION:**

S.No.	Name of Students	Title of Research	Roll Number/Enrolment Number/ Date of Admission
1	Md Imran Alam	Analysis of Phase Change material and its application of passive cooling of electronic devices using CFD Simulation	22PHDMED002 202400608/23-83144/02.04.2024

## M.TECH PROJECT

S.No.	Name of Students/Roll Number	Title of Research	Submitted on
1.	Shazia Khanam 17MMH008	“Comparative Performance Analysis of Different Types of Photo Voltaic Modules for Four Different Climatic Zones of India”	May, 2019
2.	Ashfaq Ahmed 16-MMH-001,	“Comparison of Different Types of Solar Collectors in VAS Generator Use”	May, 2018
3.	Sadia Aman 16MMH007	“Solar Based Vapor Absorption Refrigeration System (Ammonia-Water)”	May 2018
4.	Mohd. Jamshed Khan 16MMH004	“Exergy Analysis of cascade Refrigeration System (NH <sub>3</sub> -CO <sub>2</sub> ) for different Cold Storages of Food Processing Industries”	May 2018
5.	Salma Khatoon 15MME1007	“Comparison of Fourth Generation Refrigerants HFO1234yf and HFO 1234ze by Second Law Efficiency and Exergy Destruction Analysis for Automobile Sector”	May, 2017
6.	Mogheez Ahmad 14MME1003	“Thermodynamic Analysis of Kalina Cycle”	May,2016
7.	Md. Ozair Arshad 13-MET-03	“Optimization of Parameters for Humidification with different Cooling Pads”	May,,2015
8.	Dharmendra Singh Shekhawat 13-MET-02	“Optimization of Organic Rankine Cycle Operated by Low Grade Waste Heat by Using Genetic Algorithm”	May, 2015
9.	Salma Khatoon 15MME1007	“Comparison of Fourth generation Refrigerants HFO1234yf and HFO 1234ze by Second Law Efficiency and Exergy Destruction Analysis for Automobile Sector”	May, 2017
10.	Wahj Ahmed Mohammad Mari	“Heating, Ventilation and Air-conditioning System for Multi-Storied Building”	June, 2016
11.	Md. Saqlainul Hoda MTTE-13-19 (Co-Supervisor)	“Optimization of Parameters for Adiabatic Humidification in Delhi”	June 2015

#Projects before 2016 also completed for MTech, shall be updated if possible.

**BESIDES MANY B.TECH AND B.E. EVENING COURSES PROJECTS ALSO COMPLETED.**

### CONTRIBUTION TO UNIVERSITY WORK:

#### Students Administration:

- Worked as Assistant Proctor
- Worked as Senior Warden of S.R,K Hostel supervised “Annual Dinner “of the students Hostel.
- As Coordinator B.E. Course

#### Faculty/Departmental Activity:

- Part of the National Board of Accreditation (NBA) team for arrangement of Criteria-wise accreditation of Department of Mechanical Engineering, Faculty of Engineering & Technology.

- Contributed in National Assessment and Accreditation Council (NAAC) of the university in the Department.
- Has been associated with Committee appointed for work of Government of India.
- Has also been member of committees of University Grants Commission (UGC).

#### EVENTS ORGANISED:

Organizing Secretary of “*International Conference on Building Utilities Cum Exhibition*” in 2016.

#### ACADEMIC STAFF COLLEGE ORIENTATION/REFRESHER COURSE ATTENDED:

Name of the Course/ Summer School	Place	Duration	Sponsoring Agency
“Human Health Risk Assessment of Emerging Contaminants”	Civil Engineering Department, I.I.T.Delhi	16th to 20th May 2012 (One Week)	I.I.T. Delhi
“Utilization of Solar Energy and its application”	Energy Studies, IIT Delhi,	Feb 08-22, 2008, (Two Weeks)	IIT Delhi
"Combustion generated Pollution"	Jamia Millia Islamia, New Delhi.	2 Weeks Short Term Training Program between 18th to 29th March 2004	AICTE/ISTE held
"Recent Trends in Thermal Design of Energy Systems "	NIT, Calicut, Kerela.	2 Weeks Short Term Training Program between 5th to 16th January 2004	sponsored by the AICTE/ISTE
‘Experimental Methods and Analysis’.	IIT Delhi	2 weeks QDP summer school from July 1 to 12, 2002 i	IITD
“Orientation Program”	at the Academic Staff College, Jamia Millia Islamia, New Delhi.	4 Week completed on 6th December 1997	J.M.I.New Delhi
"New Trends in Refrigeration"	IIT Kanpur	Summer school of Two weeks held between 17-30, 1996	IITK
"Energy Management and Utility Engineering"	Jamia Millia Islamia, New Delhi,	Summer school from 20 May to 2nd June 1995	ISTE New Delhi
“Reciprocating Compressors ”	"K.G.Khosla Compressors limited”	Training of two weeks year 1990.	K.G.Khosla Compressors Ltd New Delhi

#### TRAINING COURSES, TEACHING-LEARNING-EVALUATION TECHNOLOGY PROGRAMMES, FACULTY DEVELOPMENT PROGRAMMES

S. No.	Program Duration	Organized by
“Human Health Risk Assessment of Emerging Contaminants”	16th to 20th May 2012 (One Week)	Civil Engineering Department, I.I.T.Delhi
“Conference on “Laboratory & Analytical Technologies”	Two Days; 2010	Scientificdealers.com

<b>“Tegrity Campus – Class Capture solution”</b>	One Day; 2009	King Khalid University, Kingdom of Saudi Arabia; Abha
<b>“ Blackboard Academic Suite – Learning System</b>	Two Days; 2009	King Khalid University, Kingdom of Saudi Arabia; Abha
“Utilization of Solar Energy and its application”	Feb 08-22, 2008, (Two Weeks)	Energy Studies, IIT Delhi,
“IT for All”	2 days; 2007	FTK-Center for information Technology, J.M.I, New Delhi
SEMINAR ON “Advances in Composite Material”	2 Days; 2006	Dr B.R.Ambedkar National Institute of Technology Jalandhar
Workshop on “ESP Performance: Role of Fly Ash	2 Days; 2004	Centre for Energies Studies; IIT Delhi



Resistivity"		
"Combustion generated Pollution"	2 Weeks Short Term Training Program between 18th to 29th March 2004	Jamia Millia Islamia, New Delhi.
"Recent Trends in Thermal Design of Energy Systems "	2 Weeks Short Term Training Program between 5th to 16th January 2004	NIT, Calicut, Kerela.
Workshop on "alternative Refrigerants and Cycles"	3 days; 2002	IITD
"50 Years of Women's movement in India"	One day Seminar; 1997	Jamia Millia Islamia, New Delhi.
"Passive Building Systems"	3 days; 1997	IITD
"Development of Quality Question Paper"	4 days; 2002	J.M.I., New Delhi
'Experimental Methods and Analysis'.	2 weeks QDP summer school from July 1 to 12, 2002.	IIT Delhi
"Faculty Development Program for Entrepreneurship"	2 Weeks	NAFEN in collaboration with DST; New Delhi
"Orientation Program"	4 Week completed on 6th December 1997,	JamiaMilliaIslamia, New Delhi.
"New Trends in Refrigeration"	Summer school of Two weeks held between 17-30, 1996	IIT Kanpur
"Energy Management and Utility Engineering"	Summer school from 20 May to 2nd June 1995	Jamia Millia Islamia, New Delhi,
"Reciprocating Compressors "	Training of two weeks year 1990"	K.G.Khosla Compressors limited, New Delhi

#### PAPERS PUBLISHED:

- [1] 2002 "A Comparative Study of Mechanical and Electromechanical Devices in the Measurement of Pressure", National Symposium of Instrumentation (NSI-27), 27-29 Nov 2002, Coimbatore, INDIA.
- [2] 2006 "*Business Dynamics- A Core and Alternative Technologies in car Air-conditioning Sector under Montreal Protocol: An Indian Perspective*", Pranjana: The Journal of Management Awareness, ISSN : 0971-9997, Vol-9, No.1, pp-29-38.
- [3] 2004 "*Implementation of Compressed Natural Gas Technology to Delhi Transport System*", page 374, *Third Global Conference on Flexible System Management "Innovation, Flexibility and Technology Transfer"* held on March 13-15 2004, J.M.I, N. Delhi.
- [4] 2004 "*Noise mapping in Urban Cities*", Page 238, 2004, International Conference on Energy & Environment at J.M.I., N Delhi.  
 004 "*Alternative Options of Refrigerants for Indian Domestic Refrigerator Industries*", page 451, 2004, International Conference on Energy & Environment at Jamia Millia Islamia, New Delhi 1100025.

- [5] 2004 "Clean Fuel for Public Transport A Study of Delhi", Proceedings of National Conference on "Energy and Fuel Issues of Future" NCEFIF 2004 5-6, November 2004, Pune Institute of Engineering & Technology, Pune.
- [6] 2004 "Comparative Performance Evaluation of Engine Oils for 4-Stroke Two Wheelers", Proceedings of National Conference on "Energy and Fuel Issues of Future" NCEFIF 2004 5-6, November 2004, Pune Institute of Engineering & Technology, Pune
- [7] 2005 "Domestic Refrigerator Disposal A Case Study of Delhi India", Proceedings National conference on Solid and Hazardous Waste Management Problems and Solutions, 28-29 April 2005, New Delhi.
- [8] 2007 "Indian Implementation of Alternative Refrigerant Technology: A Dynamic Analysis", Global Journal of Flexible Systems Management Vol-8 No. 3 pp39-48.
- [9] 2012 "Effect of Fuel, Compression ratios and Energetic and Exergetic Efficiency of Spark Ignition (SI) Engine", Proceedings of World Congress on Engineering Vol III July 4-6, London, U.K.
- [10] 2012 "Thermodynamics Performance Assessment of a Novel Waste heat based triple effect refrigeration Cycle", **International Journal** of Refrigeration, Volume 35, issue 6, sept, pp 1647-1656.
- [11] 2012 "Review: Theoretical and experimental Exergy analysis of waste heat based combined power and ejector cycle" page 60-67, **International Conference** on Innovative Technologies in Mech Engg ITME-2012 24-25 August, K. I. E. T., Ghaziabad.
- [13] 2012 "A review of Energetic and Exergetic analysis of Spark Ignition Engine", **International Conference** on Innovative Technologies in Mech Engg ITME, " Page 127-139 2012 K. I. E. T., Ghaziabad.
- [14] 2012 "A review of Researches in Waste Heat Recovery for Improving Energy Efficiency in Industries", **International Conference** on Innovative Technologies in Mech Engg ITME- 24-25 August, Page 279-287, K. I. E. T., Ghaziabad
- [15] 2012 "Exergy Destruction and Chemical Irreversibilities during Combustion in Spark Ignition Engine Using Oxygenated and Hydrocarbon Fuels" International Journal of Mechanical and Industrial Engineering, Vol-2, Iss-3.
- [16] 2012 "Waste Heat Recovery and its utilization in Textile Industry: An Indian Perspective", National Conference on Computer Aided Design and Technology (NCCADT-2012) 21 pp 96-99, April, MAIT, Delhi.
- [17] 2012 "Effect of Thermal Efficiency, Mileage and Cylinder Volume on the Ecological Efficiency of Passenger Cars and Two-wheeler Four Stroke Vehicle", National Conference on "Innovations in Mechanical Engineering" APRIL 19 – 20th, 2012, Sinhgad Institute of Technology, LONAVALA, TAL- MAVAL, DIST- PUNE Maharashtra.
- [18] 2012 "Review of Ejector Refrigeration Cycle: Development and Applications", National Conference on "Advances in Mechanical Engineering and Emerging Technologies" April 7-8 2012, Sultanpur U.P. India.
- [19] 2012 "Effects of performance parameters on the energy and specific heats of alternative fuels in spark- ignition engine", National Conference on "Advances in Mechanical Engineering and Emerging Technologies" April 7-8 2012, Sultanpur U.P. India.

- [20] 2012 "Waste Heat recovery in Textile Industry- A case study", National Conference on "Advances in Mechanical Engineering and Emerging Technologies" April 7-8 2012, Sultanpur U.P. India.
- [21] 2012 "*Exergetic Analysis of Economizer for Waste Heat Recovery in Textile Industry Economic analysis*", International Conference "MANFEX 2012" during March 29 to March 30, 2012 at Amity University Uttar Pradesh, Noida.
- [22] 2012 "*Effect of Compression Ratio, Fuels Temperature on the combustion and Reactant irreversibilities in Spark- Ignition engine*", International Conference "MANFEX 2012" during March 29 to March 30, 2012 at Amity University Uttar Pradesh, Noida.
- [23] 2012 "*Exergy analysis of waste heat operated combined power and ejector refrigeration cycle*", International Conference "MANFEX 2012" during March 29 to March 30, 2012 at Amity University Uttar Pradesh, Noida.
- [24] 2012 "*Study of Heat Transfer between Underground Railway Tunnel and Earth*", National Conference on Hydrocarbon, Energy and Environment (HEEcon - 2012) February 25, 2012 Aligarh Muslim University Aligarh.
- [25] 2012 "*Exergy analysis of waste heat based combined Rankine ejector-absorption refrigeration system*", OTH-28, International Conference on Energy Security Global Warming and Sustainable Climate SOLARIS 2012; 7-9 February,
- [26] 2012 "*Effect of Thermal Efficiency, Mileage and Cylinder Volume on the Ecological Efficiency of Light Petrol Vehicles*", OTH-26, International Conference on Energy Security Global Warming and Sustainable Climate SOLARIS 2012; 7-9 February.
- [27] 2013 "*Experimental Study on the performance and Emission Characteristics of a four stroke Diesel Engine running with Mathua Oil Ethyl Ester*", International Journal of Sustainable development and Green Economics, Vol-2,I-1.
- [28] 2013 "*Effect of Fuel and Equivalence ratios on the Exergy analysis of Standard Otto Cycle*", **International Journal** of Sustainable Development and Green economics, Vol 2, I-1,2.
- [29] 2013 "*An Experimental investigation of Spark Ignition Engine Fueled with Ethenol/Iso-Octane and methanol/Iso-Octane Blends*", **International Journal** of Automotive Engineering, Vol 3, Number 2, June.
- [30] 2013 "*Thermodynamic Analysis of Kalina Cycle*", **International Journal** of Science and Research, ISSN 2319-7064.
- [31] 2013 "*Effect of Compression ratios and Fuels on the Energetic, Exergetic and Ecological Efficiencies of an Air Standard Cycle*", **International Journal** of Energy Sciences Vol 3, Issue 5 October.
- [32] 2013 "*Thermodynamic Performance assessment and a Novel Heat based Ejector Refrigeration System*", **International Journal** of Mechanical Engineering & Research, Vol 3 No. 3
- [33] 2013 "*Parametric Analysis of a Waste Heat based Combined Ejector-Absorption Refrigeration Cycle*" **International Journal** of Sustainable Development and Green Economics" V2, 1-1.

- [34] 2013 "Optimization and Selection of Organic Rankine Cycle for Low Grade Heat Recovery by using Graph Theoretical Approach" **International Journal** of Sustainable Development and Green Economics" V2, 1-1.
- [35] 2014 "A Study of Spark Ignition Engine with Methanol and Ethanol Fuel Blends with Iso-Octane" **International Journal** of Thermal & Environmental Engineering, Volume 8, No. 2531.
- [36] 2014 "Application of Taguchi Methods for Optimizing Organic Rankine Cycle for Recovering Low Grade Industrial waste Heat", **International Journal** of Thermal & Environmental Engineering Volume 8, No. 2, pp 91-101.
- [37] 2014 "Low Grade Waste Heat Recovery for Optimized Energy Efficiencies and Enhanced Sustainability in Process Industries: A Comprehensive Review" **International Journal** of Multi-disciplinary Science and Engineering Vol 5 No.4 April.
- [38] 2015 "Comparison and Suitability Assessment of Available Optimization Techniques for Optimizing Waste Heat Recovery in Industries", **International Journal** of Research, Vol 3, July.
- [39] 2015 "Energy Efficiency Improvements through Optimization of Low Grade Industrial Waste Heat Recovery Organic Rankine Cycle by Using Genetic Algorithm and Taguchi's method", **International Journal** of Thermal & Environmental Engineering Volume 9, No.2, pp 107-115.
- [40] 2015 "A Review of Organic Rankine, Kalina and Goswami Cycle", **International Journal** of Engineering Technology, Management and Applied Sciences, Sept Vol 3.
- [41] 2015 "A Review of Energetic and Exergetic analysis of Spark Ignition", **International Conference** on Innovative Technologies in Mechanical engineering, 7<sup>th</sup>& 8<sup>th</sup> August.
- [42] 2016 "A Comparison of the Performance Analysis of the Spark Ignition Engine Fuelled with ethanol-Iso-Octane and Methanol-Iso-Octane Fuel Blends", **International Journal** of Sustainable Energy, Vol 35, No.3 205-216.
- [43] 2016 "Parametric Optimization of Organic Rankine Cycle for Power generation from Low Grade waste Heat", **International Journal** of Sustainable Energy, Taylor & Francis Volume 35, No. 774 -792.
- [44] 2016 "Study of Simple Ejector Refrigeration Cycle with Combined Cycle", Invertis Journal of Standard Otto Cycle", **International Journal** of Energy Science Volume 3, Issue 5, October.
- [45] 2018 "Exergy Analysis of Internal combustion Engine Based Cooling Cycle", **International Journal** of Thermal & Environmental Engineering Volume 16, No.2, pp 113-118.
- [46] 2018 "A review paper on Vapor Absorption System working on LiBr/H<sub>2</sub>O", **International Research Journal** of Engineering and Technology, Vol-5 issue-5, pp-857 onwards.
- [47] 2018 "Absorber Design and Performance in Vapor Absorption Refrigeration System: A Review", **International research Journal** of Engineering and Technology, Vol 5, Issue 5.

- [48] 2019 “*Simulation of Lithium Bromide-Water (LiBr-H<sub>2</sub>O) Vapor Absorption System(VAS) powered by Solar Flat Plate Collector (SFPC)*”, IOP Publishing Conference Series 69, 02031.
- [49] 2019 “*Multi-Criteria Decision making Approach for finding Optimal Energy Building Model*” International Journal of Emerging Technologies and Innovative Research, Volume 6, Issue 4, Pages 175-183
- [50] 2020 “*Comparative Analysis of cascade Refrigeration System Based on Energy and Exergy using different refrigerant Pairs*” **Journal** of Thermal Engineering Vol 6, No.1 , **Turkey**, January.
- [51] 2020 “*Mathematical Simulation of Fourth Generation Refrigerant R1243zf in Single Stage and Double Stage Vapour Compression Refrigeration System*” International Journal of Innovative Technology and Exploring Engineering Volume 9 Issue 4 Pages1706-1710
- [52] 2020 “*Comparative performance analysis of photovoltaic modules of different materials for four different climatic zone of India*” Journal of Urban Climate, Elsevier Volume 39, Pages 100957
- [53] 2020 “*Analysis of Air-Water Cooled Condenser in Vapor Compression System*” International Journal of Engineering Research & Technology (IJERT), Volume 10, Issue 5 Pages 228-233.
- [54] 2020 “*Analysis and optimization of Vapor Absorption Generator Heat Exchanger using KURN method and CFD*” Journal of Thermal Engineering, Volume 6, Issue 4 pages 440-45
- [55] 2021 “*Refrigerant progression – an investigation into eco-sustainability with evolution and viability of fourth generation refrigerants*” Journal of Thermal Engineering 8 (4), 490-504.
- [56] 2021 “*Optimum insulation thickness for external building walls for different climate zone in India*” Journal of Thermal Engineering 10 (5), 1198-1211
- [57] 2021 “*Analysis of heat transfer enhancement in microchannel by varying the height of pin fins at upstream and downstream region*” Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering
- [58] 2021 “*Comparative performance analysis of photovoltaic modules of different materials for four different climatic zone of India*” Urban Climate 39, 100957
- [59] 2022 “*Effect of base temperature and cooling degree day on optimum insulation thickness in building walls*” International Journal of Renewable Energy Technology 13 (4), 341-360.
- [60] 2022 “*A Fuzzy Multi-criteria Decision-Making Approach for Finding Energy-Efficient Building Model*” International Conference on Recent Advances in Materials, Manufacturing and Thermal Engineering.
- [61] 2022 “*Optimization of energy transmittance through building envelope for hot dry climate*” Journal of Thermal Engineering 8 (5), 595-605.
- [62] 2022 “*Effect of undercut slots on the overall performance of microchannel heatsink*” IOP Conference Series: Materials Science and Engineering 1259 (1), 012009

- [63] 2023 “Dual evaporator system as an alternative for air-conditioning and refrigeration in automobiles” International Journal of Vehicle Performance 9 (3), 290-313.
- [64] 2023 “Effect of graphene oxide nano-particles dispersed biodiesel on combustion, performance and emission characteristics of a diesel engine” Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering.
- [65] 2023 “Thermodynamic analysis of two evaporator vapor compression refrigeration system with low GWP refrigerants in automobiles” International Journal of Air-Conditioning and Refrigeration 31 (1), 2
- [66] 2023 “Effect of circular perforated pin fin on heat transfer and fluid flow characteristics of rectangular microchannel heat sink” Numerical Heat Transfer, Part A: Applications 83 (6), 594-608
- [67] 2023 “Exploring the scalability and commercial viability of biosynthesized nanoparticles for cooling panels with the help of artificial intelligence and solar energy systems” Green Technologies and Sustainability 1 (3), 100036
- [68] 2024 “Thermodynamic and carbon emission analysis with low GWP refrigerants in automobile air conditioning system” International Journal of Global Energy Issues 46 (6), 693-717
- [69] 2024 “A hybrid MCDM optimization for utilization of novel set of biosynthesized nanofluids on thermal performance for solar thermal collectors” International Journal of Thermo-fluids 22, 100686 :
- [70] 2024 “A comprehensive analysis of a rectangular microchannel heat sink furnished with a circular perforated cylindrical pinfin” Numerical Heat Transfer, Part A: Applications 85 (13), 2128-2144

### Faculty Development Program

- Lecture for “**Applied Thermodynamics and its Application in Power Plant Engineering**” 22<sup>nd</sup> to 26<sup>th</sup> October 2018, at Vidya College of Engineering, Meerut U.P.
- Lecture for “**Thermal Engineering Applications**” at I.T.S Engineering College, Greater Noida (sponsored by Dr. A.P.J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow)

**PAPERS PRESENTED IN CONFERENCES, SEMINARS, WORKSHOPS, SYMPOSIA**

S. No.	Title of the Paper presented	Title of Conference / Seminar	Organized by	Whether international/national/state/regional level.
01	“Comparative Performance Evaluation of Engine Oils for 4-Stroke Two Wheelers”	“Energy and Fuel Issues of Future”	Pune Institute of Engineering & Technology, Pune, 2004.	National Conference
02	“ Clean Fuel for public Transport – A study of Delhi”	“Energy and Fuel Issues of Future”	Pune Institute of Engineering & Technology, Pune, 2004.	National Conference
03	“Fire side erosion control Tech for pulverised coal”	“Advances in Mechanical Engineering”	Department of Mechanical Engineering J.M.I., New Delhi	National Conference
04	Effect of Fuel, Compression ratios on Energetic and Exergetic efficiency of Spark Ignition (SI) Engine	World Congress on Engineering, The 2012 International Conference of Mechanical Engineering ( ICME )	WCE, IAENG, 4-6th July 2012 Imperial College, London, U.K.	International Conference

**LECTURES AND CHAIRMANSHIPS AT NATIONAL OR INTERNATIONAL/CONFERENCE/  
SEMINAR ETC**

S. No.	Title of Lecture/ Academic Session	Title of Conference / Seminar	Organized by	Whether international/national
01	"Use of Energy Recovery Ventilation and VAV systems with BAS for Efficient A/c"	1. "Recent Trends in Thermal Design of Energy Systems" sponsored by the AICTE/ISTE held between 5th to 16th January 2004.	Department of Mechanical Engineering, NIT, Calicut, Kerela.	National
02	"Solar Cookers"	"Technical, Socio and Legal Emancipation of Woman"	National Commission for Woman, New Delhi	National
03	"Solar Air-conditioning System"	"Utilization of Solar Energy and its Applications" organized from 08-22 February 2008	Centre of Energy Studies, I.I.T. Delhi	National



04	“ Pollution control in Delhi due to use of CNG as an alternative Fuel”	“Combustion generated Pollution”	Department of Mechanical Engineering, Faculty of Engineering & Technology, Jamia Millia Islamia, New Delhi.	National
05	“Issues related with CNG implementation in Delhi”	in Short term Training Program on “Combustion Generated Pollution”	18 March to 29 March 2004 by Deptt of Mechanical Engg, Faculty of Engineering & Technology. JMI, New Delhi	National
06	ICME Mechanical Engineering	The 2012 International Conference of Mechanical Engineering ( ICME )	World congress on Engineering, Imperial College, 4-6th July 2012, London, U.K.	International