Profile

Raj Kumar
Professor in Mechanical Engineering and Dean- Faculty of Engineering & Technology,
Department of Mechanical Engineering,
J. C. Bose University of Science & Technology, YMCA,
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Haryana, India.
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Career Objective: Oriented for challenging position for optimal utilization of my potentialities and self-fulfilment with duties.

Professional Experience

Faculty: 22nd April, 1994- till date.

More than 31 Years progressive teaching and research experience.

Professor**:** 11th February, 2011- till Date, Department of Mechanical Engineering, J.C. Bose University of Science & Technology, YMCA, Faridabad, Haryana.
(Erstwhile YMCA University of Science & Technology, Faridabad, Haryana)

Assistant Professor (5th Pay Commission) /Associate Professor: 31st August, 2004- 10th February, 2011, Department of Mechanical Engineering, J.C. Bose University of Science & Technology, YMCA, Faridabad, Haryana.
(Erstwhile YMCA University of Science & Technology, Faridabad, Haryana /YMCA Institute of Engineering, Faridabad, Haryana)

Senior Lecturer**:** 27th January, 2000-30th August, 2004, Department of Mechanical Engineering, Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur (Punjab**).**

Lecturer: 22nd April, 1994- 26th January, 2000, Department of Mechanical Engineering, Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur (Punjab).

Personal Profile

Father's Name	**:**	**Sh Budh Singh**
Date of Birth	**:**	**8th May, 1970**
Birth Place	**:**	**Village Atohan, Tehsil and Dist. Palwal, Haryana**
Marital Status	**:**	**Married**
Religion	**:**	**Hindu**
Nationality	**:**	**Indian**

Address

House No. 899, Sector 55,
Faridabad -121004,
Haryana, India.

Education Qualification:

10th (March, 1986)	**: Government High School, Village Asawata, Palwal. (Haryana Board of School Education, Bhiwani)**
12th (March, 1989)	**: Government Senior Secondary School, NIT Faridabad. (Haryana Board of School Education, Bhiwani)**
B.Tech (May, 1993)	**: Regional Engineering College (NIT), Kurukshetra.**
M.Tech (December, 1999)	**: Indian Institute of Technology, New Delhi.**
Ph.D (June, 2010)	**: Maharshi Dayanand University, Rohtak.**

Administrative Responsibilities:

- **Since May 18, 2023 working as Dean-Faculty of Engineering & Technology**
- **Worked as Chairman (From May 18, 2020 to May 17,2023), Department of Mechanical (Department Administration & Development, Teaching, Research are/were the chief duties, during recent, FDPs and International conference was organised,**
  The chief aim is to develop the R & D facility to fulfil the University/Department vision and mission)
- **Worked as Officiating Registrar from 01.04.2019 to 06.09.2019 for period of 5 months in 2019. (Administration under the direction of Hon'ble V C was the chief duty.**
- **Worked as Dean, Faculty of Sciences & Humanities (From February 22, 2014 to May 18, 2020).**
  (With aim of providing education that allows students to be creative, adaptive, and well-rounded scientific and technical leaders who ultimately find employment in industry, academia, and government, I assumed the office of Dean and Chairman of Department.

  With the aim of providing, a strong establishment in the fundamental sciences and humanities, the department took care of core subjects like Mathematics, Physics, Chemistry, Environment Sciences, English, Management Studies and Economics. The department was made competent and equipped with knowledgeable faculty and well-equipped laboratories in Physics, Chemistry, Environmental sciences, Mathematics Laboratory, Language, Journalism related laboratories etc

  The Department acquainted the graduate, post graduate and research students so that to have ability and to choose successful careers in engineering, technology, as well as every aspect of science, computer science, technology, mathematics, physics and research.

  In the 2014, the faculty was running only MSc (Physics) and MSc (Maths) and in 2015 onwards, more new courses started in Department viz. MSc (Chem), MSc (EVS), BSc (Hon) Physics, BSc (Hon) Mathematics, BSc (Hon) Chemistry, MA (Journalism), BA (Journalism) and MA (English).
  For successful running of courses, curriculum, laboratories and other infrastructure were developed. Side by side many other activities were held viz.

  - BARC Outreach Programme 2014
  - Science conclave in 2015
  - National Conference 2016
  - Science conclave in 2017
  - Rashtriya Media Sammelan Evam Filmotsav - (RMSF-2017)
  - Many STP/STCs were conducted
  - National conference, NHTSEE 2017, was organized jointly by Department of Electrical Engineering and Department of Humanities & Sciences on 9th-10th March, 2017 at YMCA University of Science and Technology, Faridabad
  - Many research projects were brought in Faculty

- Served as Coordinator, Staff Development and Networking under TEQIP (2005 to 2008),
- Served as Chairman, SC/ST Cell (21.03.2014 to 02.01.2023),
- Served as Chairman of Equal Opportunity Cell (08.07.2015 to 22.04.2025), and Anti-Discrimination Officer (03.06.2015 to 22.04.2025),
- Served as Chairman, Grievances Redressal Cell (28.09.2012 to 29.06.2020),
- Served as a Member of Faculty/ Staff Grievances Redressal Committee (30.06.2020 to 29.06.2022),
- Serving/ Served as Member of Board of Studies, Board of Faculty, Academic Council, Executive Council, Finance committee etc.,
- Worked as Chairman Library/ Nominated member of Library committee (2008 to 2017),

(University library was developed, fully made computerized, Book Bank created and expanded by adding more and more titles/volumes),

- Worked as Chairman, Central Purchase Committee (September, 2011 to October, 2013),
- Worked as Chairman, SAF (March, 2011 to May, 2013),
- Also worked as Director, Sponsored Projects Cell,
- Director, Open Distance Learning,
- Conducted UGC-NET Examination December 2014.

Administrative Experience/ Post (s) & responsibilities held (in detail)

S. No.	Post	Organization/ University	Duration		Experience (In Years & Months)
			From (Date)	To (Date)	
1.	Dean (Faculty of Engineering and Technology)	JC Bose UST Faridabad	18.05. 2023	Till date	
2.	Head of the Department	JC Bose UST Faridabad Chairman, HAS Chairman Mechanical	22.02.2014 18.05.2020	01.08.2018 17.5.2023	04 Years and 04 Months 03 Years
3.	Chairman, Board of Studies,	JC Bose UST Faridabad HAS Department of Mechanical	22.02.2014 18.05.2020	18.05.2018 17.05.2023	04 Years and 04 Months
4.	Member, Board of Studies	JC Bose UST Faridabad (Mechanical) DCRUST Murthal (Mechanical)	11.02.2011 27.09.2021	Till date 20.09.2023	Two Years
5.	Chairman, Board of Faculty	JC Bose UST Faridabad	18.05.2023	Till date	Ex Officio
6.	Dean of Faculty (HAS) (Dean, Faculty of Humanities & Dean, Faculty of Sciences)	JC Bose UST Faridabad	22.02.2014 27.09.2017	04.06.2020 04.06.2020	06 Years and 04 Months
7.	Member of Academic Council	JC Bose UST Faridabad	10.10.2013 16.09.2024	04.06.2020 ------	06 Years (Ex officio Member) Ex-Officio Member
8.	Member of Executive Council	JC Bose UST Faridabad	05.05.2014 23.08.2018 31.08.2024	04.05.2016 30.08.2026	
9.	Member of Professional/ Academic Bodies	Life member of ISTE Life member Alumni IIT Delhi Fellow of Institution of Engineers Member (Ex) of ASHRAE and ISHRAE Editorial Board member and Reviewers of National and International Journals. Advisers & reviewers in Conferences outside the University.			
10.	Others (Specify) 1. Registrar	JC Bose UST Faridabad	01.04.2019	06.09.2019	05 Months

	2. Member of Establishment committee Estb/Univ Auth/16/4027, Dated 16.08.16 (137/27.11.2019)	**JC Bose UST Faridabad**	**16.08.2016**	**31.07.2018**	**02 Years**
	3. Member of Establish Committee	**JC Bose UST Faridabad**	**29.05.2014 16.08.2016**	**01.07.2015 31.07.2018 11.10.2018 27.11.2019**	
	4. Member of Finance Committee	**JC Bose UST Faridabad**	**20.10.2014 07.12.2016**	**19.10.2016 06.12.2018**	**04 Years**
	5. Member of Departmental Promotion Committee	**JC Bose UST Faridabad**	**12.08.2015**	**11.08.2017**	**02 Years**
	6. Court (As Dean HAS) (As Dean FET)	**JC Bose UST Faridabad JC Bose UST Faridabad**	**11.08.2014 18.05.2023**	**04.06.2020 -----**	**06 Years (Ex officio Member) Ex-Officio Member**
	7. Chairman, Board of Faculty (HAS)	**JC Bose UST Faridabad**	**22.02.2014**	**04.06.2020**	**As Dean**
	8. Chairman/ Nominated Member, Library	**JC Bose UST Faridabad**	**2007**	**15.12.2017**	
	9. Chairman, Central Purchase committee	**JC Bose UST Faridabad**			**Two Years**
	10. Chairman, SAF	**JC Bose UST Faridabad**		**23.05.2013**	
	11. Chairman, Grievance Redressal Cell	**JC Bose UST Faridabad**	**28.09.2012**	**--**	**--**
	12. Chairman, SC/ST Cell	**JC Bose UST Faridabad**	**22.07.2014**	**20.12.2022**	
	13. Chairman, Equal Opportunity Cell	**JC Bose UST Faridabad**	**13.07.2015**	**22.04.2025**	
	14. Director, Open Distance Learning	**JC Bose UST Faridabad**	**25.10.2024**	**Till Date**	
	15. University Nominee, BOG, AITM, Palwal	**JC Bose UST Faridabad**	**18.06.2018**	**17.06.2020**	**02 Years**

Research Experience: Research field includes Thermal, Energy conservation, Power plants, IC Engines and Refrigeration and Air Conditioning.

Projects & Dissertation Work:

- Ph.D. (Mechanical Engineering): Topic of Research "Exergoeconomic Evaluation of Thermal Power Plants"
  Research Supervisor - Professor Ashok Kumar, YMCAIE Faridabad and Professor S C Kaushik, CEC, IITD.

- M.Tech. (Energy Studies): Topic: "Thermoeconomic and exergoeconomic evaluation for conventional and solar heat pumps" Research Supervisor- Professor S C Kaushik, CEC, IITD.

Thesis/ Projects Supervise: Doctorate:

- **As Supervisor**
  - Topic: Finite Time Thermodynamic and Thermoeconomic Analyses of Thermal energy Conservation systems (Co-Supervisor- Professor S C Kaushik, CEC, IITD).
    Name of Student: Mr. Rajesh Kumar (Reg. No.: YMCAUST/Ph36/2011), awarded in January, 2017.
  - **Topic**: Experimental Investigation of Hybrid Cold Storage Cum Power Generator.
    Name of Student: Mr. Anil Kumar (Reg. No.: YMCAUST/Ph35/2011), awarded in July, 2017.
  - **Topic:** Optimization of a Coal Fired Thermal Power Plant Using Thermoeconomic Technique.
    Name of Student: Mr. Mukesh Gupta (Reg. No.: YMCAUST/Ph27/2010), awarded in November, 2017.
  - **Topic:** Thermoeconomic Analysis of Refrigeration Systems with Alternative Refrigerants
    Name of Student: Gaurav (Reg. No.: YMCAUST/Ph37/2011), awarded in November, 2019.
  - **Topic:** An Experimental Investigation and Performance Analysis of Passive Pyramid Solar Still.
    Name of Student: Mr. Abhishek under AICTE 2021(JCBUST, YMCA Faridabad) and converted to part time
  - **Topic:** Yet to decide
    Name of Student: Mr. Sanjeev 2021 (JCBUST, YMCA Faridabad)

- **As Co-Supervisor**
  - **Topic**: Multistage Gearbox Design using Advanced Optimization Techniques.
    Name of Student: Mr. Edmund Shingirayi Maputi (Enroll. No. A501115416001, 31/03/2016, Mechanical Engineering/ Amity School of Engineering & Technology, Amity University, Haryana. Viva held o 22/03/2021 and degree to be awarded yet.

Post-Graduation (M Tech):

Sr. No.	Year	Title of Thesis	Name of Candidate
1	2005	Exergy Analysis in Steel Plant	Mr. Arvind Kumar
2	2005	Inventory Control by Multiple Classification-A Case Study at HMT Tractors Ltd. Pinjore	Mr. Parveen Rathee
3	Jun-05	Exergy Flow in Sugar Mill	Mr. Aman
4	Jul-07	Energy Audit of 210 MW Thermal Power Station NTPC Badarpur	Mr. Ajit Singh Tewatia
5	Jun-10	Energy Audit of 250 MW Thermal Power Stations PTPS Panipat	Mr. Vikrant Bhardwaj
6	Apr-13	Modified Amine based CO_2 Capture System	Mr. Praveen
7	May-13	Study of Life (Residual) Assessment of Boilers in Power Plant	Mr. Siddhartha

8	May-16	Analysis of the Effects of Parameters on Mild Steel (AISI-1018) during CNC Turning	Mr. Sachin Jangra
9	May- 20	Exergy consumption in Manufacturing Industry	Mr. Shivam Aggarwal
10	May-21	Exergy consumption in Manufacturing Industry	Mr. Shivam Aggarwal
11	July - 22	Performance analysis of flat plate and evacuated tube collectors	Mr Gaurav Bhardwaj
12	August-22	Study and calculation of solar panel power generation: Tree form Vs matrix form Centre for Energy Studies, JCBUST, Faridabad	Mr Vineet Kumar
13	August-2023	Shaping of Future of Solar Energy	Nitin Rastogi (Energy and Environmental Engineering)
Numerous projects were undertaken at UG level.			

Subject Taught

UG: Thermal, Refrigeration and Air Conditioning, IC engines, Heat Transfer, SOM, KOM-DOM, Engineering Drawing and Design, Machine Design etc.

PG: Energy, Non conventional Sources of Energy

PhD: Renewable Energy-Resources and application
Finite Time Thermodynamics and Thermoeconomics of Thermal Systems (PHDME-114A)
Thermoeconomics and power plants **(PHDME 107A)**

Research Projects: No. of Projects completed / ongoing as Chief Coordinator/ Co-Investigator in the following format

Sl. No.	Name of the funding agency	Name of the Scheme	Programme Title	Year of Funding	Duration	Amount Sanctioned	Status Completed/ Ongoing
1.	MHRD	MODROB	Modernization of Heat Transfer Lab	01-02	2 Years	8 lakhs	These Projects were assigned at SLIET Longowal , transferred to other faculty due to joining at YMCAIE
2.	MHRD	MODROB	odernization of RAC Lab	03-04	2 Years	7 lakhs	

Laboratory Developed

- **Refrigeration and Air Conditioning Laboratory**
- **Danfoss Excellence centre**
- **Bosch Excellence centre**
- **All other laboratories in Department of Mechanical Engineering as Laboratory coordinator.**

Conference Conducted and Chaired

National Conference on Trends and Advances in Mechanical Engineering-2006 (As Co-convener)
National Conference on Trends and Advances in Mechanical Engineering-2012 (As Convener)
National Conference on Trends and Advances in Mechanical Engineering-2021 (As Co-Chair/ Chairman)
Participated as Session Chair in the various International and National Level Conferences

Membership of Professional Bodies and Reviewer

Life member of ISTE
Life member Alumni IIT Delhi
Fellow of Institution of Engineers
Member (Ex) of ASHRAE and ISHRAE
Editorial Board member and Reviewers of National and International Journals.
Advisers and reviewers in Conferences outside the University.

Cultural/ Extra-curricular Activities

Member for organizing University Convocations in University
Member for organizing various technical cultural functions
Member for organizing sport activities
Member for organizing various technical events

Short Term/ Workshops/Conferences Attended and Publications			
Sr. No.	Name of STC	Period	Organising Institute
1.	Dist. Comput. And E-Commerce	14.07.98 to 25.07.98	SHSL-CIET
2.	Solar Architecture	10.05.99 to 24.05.99	CES, IITD
3.	Ferro Electric Materials	14.02.00 to 25.02.00	SLIET, Longowal
4.	Mod. & Siml	31.07.00 to 11.08.00	SLIET, Longowal
5.	Fuels Combustion	02.07.01 to13.07.01	SLIET, Longowal
6.	Mod.&Siml.(W/S)	16.07.01 to 27.07.01	SLIET, Longowal
7.	Mechatronics& Automation	07.01.02 to 18.01.02	SLIET, Longowal
8.	Alternate Fuels, Low Emission and Pollution Control	15.12.02 to 26.12.02	SLIET, Longowal
9.	Materials Management	19.06.2006 to 23.06.2006	NITIE, Mumbai
10.	Workshop on III	20.07.2006 to 21.07.2006	NPIU-SPFU, DTE Andhra Pradesh
11.	Exergy Applications in Design and Analysis of Thermal Systems	27.10.2006 to 28.10.2006	Jadavpur University, Kolcutta
12.	Management of Quality and Productivity	23.07.2007 to 27.07.2007	NITIE, Mumbai
13.	Energy Auditors and Energy Managers PC-BEE	09.07.2008 to 11.07.2008	ESI, Hyderabad
14.	Optimization of Thermal Power Plants	21.06.2010 to 25.06.2010	ESI, Hyderabad
15.	Management Research: Methods and Statics	01.07.2013 to 05.07.2013	Calcutta Business School, Kolcutta
16.	Effective Communication and Time Management for Personality Development	22.07.2013 to 26.07.2013	NITTTR, Goa
17.	Solar Power and Space Conditioning	02.06.2014 to 08.06.2014	CES, IIT Delhi
18.	PDP For Heads of Institutions	19.01.2019 to 21.01.2019	IIM Udaipur as a part of TEQIP -III
19	UK-India Education and Research Initiative AICTE Technical Leadership Programme	15.12.2020 onwards 2020-21	Online
20.	Research Writing and Professional Ethics	07.09.2021 to 13.09.2021	Online at JC Bose UST, Faridabad
21	Haryana Karamyogi Programme	January 2023	Faridabad
22	Artificial Intelligence & Machine Learning in the Space Sector	13.10.2025 to 19.10.2025	Indian Space Academy Online

Conferences

Sr No	Title of Paper	Conference proceeding	ISSN/ISBN No.	Conference Name	Date	Page No
1	Graph theoretic approach for performance evaluation of a boiler	Yes	978-0-7695-5013-8/13	ICMIRA	3-4 Sept, 2012	520
2	Energy Analysis: An efficient tool for evaluation of power plants in India	Yes	978-1-4675-4606-5	ICATRPD	3-4 Sept, 2012	
3	Performance investigation of a compact tri-generation system based on renewable energy power plant exhaust gas waste heat utilization	Yes	978-93-5087-574-2	TAME-2012	19-20 October, 2012	17-21
4	Alternatives to R134a (CF_3 CH_2 F) Refrigerant- A Review	Yes	978-93-5087-574-2	TAME-2012	19-20 October, 2012	73-77
5	Review of Different Technologies in the Solar Absorption Air-Conditioning Systems	Yes	978-93-5087-574-2	TAME-2012	19-20 October, 2012	153-161
6	Energy Method for Performance Evaluation of a Boiler in a Coal Fired Thermal Power Plant: A Review	Yes	978-93-5087-574-2	TAME-2012	19-20 October, 2012	162-166
7	Performance Based Comparative Analysis of Thermal Power Plants: A Review	Yes	978-93-5087-574-2	TAME-2012	19-20 October, 2012	174-179
8	Multi objective optimization of solar powered Ericson cycle using genetic algorithm and fuzzy decision making			2015 ICACEA (IEEE)	2015	553
9	Multi objective optimization of an irreversible regenerative Brayton cycle using algorithm			2015 ICFTCAKM (ablaze)	2015	340
10	Exergetic cost based analysis and diagnosis of open gas turbine cycle			NCET 2014(GEC, Thiruventpuram)	2014	
11	Diagraph & Matrix method using exergy for evaluation of coal based thermal power plants in India	Yes	978-0-7695-5013-8	2013 ICMIRA (IEEE)	2013	525
12	Effect of compressor pressure ratio on Thermoeconomic variables	Yes		NCET 2013 (GEC Thiruvanthpuram)	19-20 July, 2013	237
13	Analysis of solar ejector	Yes	2195-4364	Springer	2016	831-838
14	A literature review on plasma arc cutting process	Yes	978-93-5268-269-0	TAME 2017	March 16-17, 2017	250-255
15	Thermoeconomic optimization of a boiler used in coal fired thermal power plant based on feed water temperature			ICMRPS	Feb. 23-24, 2018	

16	Micro mould fabrication for plastic components	Yes	2319-6564	TAME 2019	April 4-5, 2019	202
17	Review of materials for solar thermal collectors	Yes	2319-6564	TAME 2019	April 4-5, 2019	55
18	Exergoeconomic Evaluation of Thermal Power Plants: A Case-Based Investigation			AMM-2025 (NITK)	7-9 November, 2025	

Journals

S. No	Title of the paper	ISSN/ISBN	Indexing (UGC/SCOPUS/ESCI/SCI/SCIE)/ Peer Review	Impact Factor (if any) As per Clarivate/Thomson Reuters list/ Citations	Year of Publication (Publisher)
1	Man Mohan Kakkar and Raj Kumar, *Energetic and Exergetic analysis of combined cycle gas power plant* International Review of Applied Engineering Research	2248-9967	Peer Reviewed	--	2012-13
2	Mukesh Gupta and Raj Kumar, *Exergy based evaluation of coal based thermal power plants: A review* International Journal of Emerging Technology and Advanced Engineering	2250-2459	Peer Reviewed	--/02	2012-13
3	Anil Kumar and Raj Kumar, *Performance evaluation of downdraft gasifier for generation of engine quality gas.* Natural resources conservation	2331-6365 (Print) 2331-6373 (Online)	Peer Reviewed, EBSCO, J-Gate, Index Copernicus, Researchbib, Google Scholar	--/10	2013
4	Anil Kumar and Raj Kumar, *Thermodynamic analysis of biomass-based integrated refrigeration cycle.* International Journal of Exergy	1742-8297 (Print) 1742-8300 (Online)	SCI	1.3 (2023)	April, 2015 (Inderscience)
5	Anil Kumar and Raj Kumar, *Thermodynamic analysis of a novel compact power generation and waste heat operated absorption, ejector-jet pump refrigeration cycle.* Journal of Mechanical Science and Technology	1226-4865	SCIE/SCSCOPUS, INSPEC, Google Scholar, CNKI, Current Contents/Engineering,	1.6 (2022)/12	September, 2014 (Springer)
6	Mukesh Gupta and Raj Kumar,	2200-5854	Peer Reviewed	--/10	2015 (Wireilla)

	Thermoeconomic optimization of a boiler used in a coal fired thermal power plant based on hot air temperature. International Journal of Recent Advances in Mechanical Engineering.				
7	Rajesh Kumar, S C Kaushik and Raj Kumar, *Perform analysis of Brayton heat engine at maximum efficient power using temperature dependent specific heat of working fluid.* Journal of Thermal Engineering.	2148-7847	SCOPUS and ESCI	--/17	2015 (DergiPark)
8	Rajesh Kumar, S C Kaushik and Raj Kumar, *Performance analysis of an irreversible regenerative Brayton cycle based on ecological optimization criterion.* International Journal of Thermal &EnvironmentalEngineering	1923-7316	Peer Reviewed, OAJI, EBSCO	5.9/23	2015
9	Mukesh Gupta and Raj Kumar, *Exergoeconomic analysis of a boiler for a coal fired thermal powerplants* American Journal of Mechanical Engineering	2328-4102 **(Print)** 2328-4110**(Online)**	Peer Reviewed, J-Gate, CNKI Scholar	--/07	2014
10	Anil Kumar and Raj Kumar, *Energy and exergy analysis of compact power generation and hybrid solar energy-waste heat based triple effect ejector-vapour absorption refrigeration cycle,* International Journal of Air-Conditioning and Refrigeration (World Scientific)	2010-1325 (Print) 2010-1333(Online)	ESCI, Scopus, Peer Reviewed, J-Gate	--/10	December, 2013
11	Gaurav and Raj Kumar, *Performance analysis of household refrigerator with alternate refrigerants* International Journal of Innovative research in Science, Engineering and Technology	2349-6002	Peer-reviewed		
12	Mukesh Gupta and Raj Kumar, *Optimization of an open cycle gas turbine power plant using Exergoeconomic* International journal of recent advances in mechanical engineering	2200-5854	Peer Reviewed, J-Gate	--/02	November 2015
13	Mukesh Gupta and Raj Kumar, *Exergy based analysis of an open cycle gas turbine power plant.* Canadian Journal of basic and applied sciences	2292-3381	Peer Reviewed		2015-16

14	Mukesh Gupta and Raj Kumar, *Optimization of turbine used in coal fired thermal power plants based on inlet steam temperature using thermoeconomics.* International journal of recent advances in mechanical engineering.	2200-5854	Peer Reviewed, J-Gate		2015-16
15	Sachin, Mukesh Gupta and Raj Kumar, *Analysis of the effects of parameters on mild steel (1018) during CNC turning using graph theory* IJESC	**2319-7242**	Peer Reviewed, J -Gate		2015-16
16	Gaurav and Raj Kumar, *Environmental sustainability of automobile AIR conditioning system with refrigerant R123YF.* International journal of advance research and innovation.	**2347-3258**	Peer Reviewed		2015-16
17	Rajesh Arora, S C Kaushik and Raj Kumar, *Multi-objective thermodynamic optimization of an irreversible regenerative Brayton cycle using evolutionary* Ain shams engineering journals (Science direct)	**2090-4479 (Print) 2090-4479 (Online)**	Scopus	6/72	2015-16
18	Rajesjh, SC Kaushik, Raj kumar and Ranjana, *Multi-objective thermo-economic optimization of solar parabolic dish Stirling heat engine with regenerative losses using NSGA-II and decision making* International Journal of Electrical Power & Energy Systems(Science direct)	**1420615**	SCI	5.2/108	2016
19	Rajesh, SC Kaushik and Raj Kumar, *Power optimization of an irreversible regenerative Brayton cycle with isothermal heat addition* Journal of Thermal Engineering	**2148-7847**	ESCI	--/23	2015
20	Rajesh Arora, SC Kaushik, Raj Kumar and Ranjana Arora, *Soft computing based multi-objective optimization of Brayton cycle power plant with isothermal heat addition using evolutionary algorithm and decision making.* Applied Soft Computing (Elsevier)	1568-4946 (Print) 1872-9681 (Online)	SCIE, Scopus	8.7/59	2016
21	Rajesh Arora, SC Kaushik and Raj Kumar,	1934-9424 (Online)	SCImago Scopus UGC Care list	--/26	2016

	Multi-objective thermodynamic optimization of solar parabolic dish stirling heat engine with regenerative losses using NSGA-II and decision making Applied solar energy	0003-701X (Print)	(India)		
22	Rajesh Arora, SC Kaushik and Raj Kumar, *Multi-objective thermodynamic optimisation of solar parabolic dish Stirling heat engine using NSGA-II and decision making* International Journal of Renewable Energy Technology (Inderscience)	1757-3971 (Print) 1757-398X (Online)	J-Gate UGC (University Grants Commission)	--/24	2017
23	Rajesh Arora, SC Kaushik and Raj Kumar, *Power optimization of an irreversible regenerative brayton cycle with isothermal heat addition* Journal of Thermal Engineering	2148-7847	ESCI, Scopus	--/23	2015
24	Gaurav and Raj Kumar *Sustainability of alternative material of R-134a in mobile air conditioning system: Review* Materials today: Proceedings 4 (2017) 112-118 (Science direct)	(Online) 2214-7853	Scopus INSPEC		2016-17
25	Gaurav and Raj Kumar, *Optimization of capillary tube parameters in vapour compression system-----R1234yf* International journal of engineering and technology	2319-8613	Peer Reviewed		2016-17
26	Sahil, Mukesh Gupta and Raj Kumar, *Experimental analysis and optimization of process-------method* World academy of science, engineering and technology		Peer Reviewed		2016-17
27	Anil and Raj Kumar, *Performance evaluation of downdraft gasifier for power generation and internal ------applications* RGI International Journal of Applied Science and Technology	• ISBN: 2230-939X	Peer Reviewed		2016-17
28	Gaurav and Raj Kumar, *Thermo- economic analysis of environmental friendly refrigerant mixtures for replacement of R134A* ARPN Journal of Engineering and applied sciences	1819-6608 •	Peer Reviewed		2017-18
29	Anil and Raj Kumar	(Print)0143-0750 (Online)	SCIE, Scopus, ESCI		2017-18

	Comparative thermodynamic analysis of compact cogeneration and tripple effect refrigeration cycle International journal of ambient energy	2162-8246			
30	Gaurav and Raj Kumar, *Computational energy and exergy analysis of R134a, R123yf, R1234ze and…..* *Ain shams engineering journal*	**2090-4479 (Print)** 2090-4479 (Online)	Scopus	6/33	2018-2019
31	Abhishek Bhardwaj, Raj Kumar and Nitin Panwar "Influence of wick material, pyramid shape and phase change material on performance enhancement of solar stills- A Review", Environment, Development and Sustainability, Springer	Accepted for Publication	SCImage, SCI, Scopus	4.2	2025

Prof. Raj Kumar