



Department of Mechanical Engineering

5.7.1: Academic Research

Academic research in the department is actively pursued and supported to contribute to the body of knowledge in mechanical engineering and allied areas. The faculty members are encouraged to publish their research findings in reputed peer-reviewed journals, guide doctoral candidates, and enhance the research culture within the department. The institute also facilitates infrastructure and resources to promote quality research output.

Key Highlights:

- Faculty members have published a total of 12 research papers in reputed journals during the assessment period (AY 2022–23 to AY 2024–25).
- One faculty member, Dr. Malagouda Patil, has consistently published research work across all three academic years.
- Two faculty members have been awarded their Ph.D. degrees during the current academic year (2024–25) while serving in the institute.
- Research contributions span a wide range of topics including composite materials, renewable energy systems, machine learning applications in tribology, and design innovations.

Table 5.7.1.1 List of paper publications by faculties

Academic year	CAY 2024-25	CAYm1 2023-24	CAYm2 2022-23
No. of publications	11	03	01
Ph.D. Guided	-	-	-
Ph.D. Awarded	2	-	-

Sr.NO.	Name of the Faculty	Papers published during AY			
		AY 2025-26	CAY 2024-25	CAYm1 2023-24	CAYm2 2022-23
1.	Dr. Malagouda Patil	1	1	1	1
2.	Dr. Pooja Angolkar	2			
	Krishnakumar A. Jere	2			
3.	Aravind B. Muddebihal		5	2	
4.	V. Sushanthkumar	1			
5.	Rajashekharoud H. Angadi	1	1		
6.	Kiran Udoshi	3	1		
7.	Sujit Sali	2	1		
8.	Rahul Sheri	2	1		
9.	Vijay Palled	2	1		
	Total	16	11	03	01

Academic year	2025-26	2024-25	2023-24	2022-23
No. of publications	16	11	03	01
Scopus/WOS etc	02	05	03	01



Table 5.7.1(a) List of publications by the faculty during the assessment period.

ACADEMIC YEAR 2025-26

Sl.No.	Name of the Faculty	Title of the paper	Name of the Journal	Year	Vol No. Issue No.	ISSN	Web site link	Indexing
1.	Dr. Pooja Angolkar	Studies on high temperature wear behaviour of additively manufactured Ti-6Al-4V alloy using machine learning models.	Journal of materials engineering and Performance.	2025		1059-9495	https://doi.org/10.1007/s11665-025-12596-2	WOS Q3
2.	Dr. Pooja Angolkar	Microstructural analysis of spin arc welding on hastelloy C-276	Canadian Metallurgical quarterly	2025		0008-4433	https://doi.org/10.1080/00084433.2025.2598962	Scopus
3.	Dr. Malagouda Patil	Design and Fabrication of Shoe Foot Cleaning Machine	International Journal of Advanced Research in Science, Communication and Technology	2026	Volume 6, Issue 1	2581-9429	https://ijarsct.co.in/Paper30749.pdf	Google scholar/ Research Gate
4.	Mr. Krishnakumar Jere	Multipurpose Hybrid Renewable Energy Charging Station for Portable Application	International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)	2026	Volume 5, Issue 1	2581-9429		Google scholar/ Research Gate
5.	Mr. Krishnakumar Jere	Design and Fabrication of Indoor and Outdoor Attachment for Handicap Wheel Chair	International Journal of Advanced Research in Science, Communication and Technology	2026	Volume 6, Issue 1	2581-9429	https://ijarsct.co.in/Paper30722.pdf	Google scholar/ Research Gate
6.	Mr. V.Sushanthkumar	Study On Hardness, Elemental Composition And Corrosion Behavior Of EN31 Steel After Brine Quenching	International Journal of creative research thoughts(IJCRT)	2025	Volume 13, Issue 8	2320-2882	https://www.ijcrt.org/papers/IJCRT2508688.pdf	Google scholar/ Research Gate



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7.	Mr. Kiran Udoshi	Design and Fabrication of Effortless Trolley for Material Handling	International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)	2026	Volume 5, Issue 1	2581-9429	Volume 5, Issue 1, January 2026	Google scholar/ Research Gate
8.	Mr. Kiran Udoshi	Sea Water Desalination by Solar Energy	International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)	2026	Volume 5, Issue 1	2581-9429	Volume 5, Issue 1, January 2026	Google scholar/ Research Gate
9.	Mr. Kiran Udoshi	Study on Optimization and Crash Worthiness of A Composite Side Car Door	International Journal of Advanced Research in Science, Communication and Technology	2025	Volume 5, Issue 2	2581-9429	Volume 5, Issue 2, October 2026	Google scholar/ Research Gate
10.	Mr. Rahul Sheri	Effortless Rope Way Drive for Industry / Agriculture	International Journal of Advanced Research in Science, Communication and Technology	2026	Volume 6, Issue 1	2581-9429	Volume 6, Issue 1, January 2026	Google scholar/ Research Gate
11.	Mr. Rahul Sheri	Neumatic Powerd Net Thrower	International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)	2026	Volume 5, Issue 1	2581-9429	Volume 5, Issue 1, January 2026	Google scholar/ Research Gate
12.	Mr. R. H. Angadi	Wireless controlled water jet floor cleaning machine using solar power	International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)	2026	Volume 5, Issue 1	2581-9429	Volume 5, Issue 1, January 2026	Google scholar/ Research Gate
13.	Mr. Sujit Sali	Design & Fabrication of Conversion of Plastic Into Crude Oil	International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)	2026	Volume 5, Issue 1	2581-9429	Volume 5, Issue 1, January 2026	Google scholar/ Research Gate



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14.	Mr. Sujit Sali	Design and Fabrication of Solar Powered Waste Oil Skimming Boat	International Journal of Advanced Research in Science, Communication and Technology	2026	Volume 6, Issue 1	2581-9429	Volume 6, Issue 1, January 2026	Google scholar/ Research Gate
15.	Mr. Vijay Palled	Solar Based Fertilizer Harvesting Machine	International Journal of Advanced Research in Science, Communication and Technology	2026	Volume 6, Issue 1	2581-9429	Volume 6, Issue 1, January 2026	Google scholar/ Research Gate
16.	Mr. Vijay Palled	Smart Food Pelletizing Machine for Aquaculture	International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)	2026	Volume 5, Issue 1	2581-9429	Volume 5, Issue 1, January 2026	Google scholar/ Research Gate



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1) CAY : 2024-25

Sl. No.	Name of the Faculty	Title of the paper	Name of the Journal	Year	Vol No. Issue No.	ISSN	Web site link	Indexing
1.	Mr. Aravind Muddebihal	Mechanical performance of glass fiber epoxy laminates with embedded circular and square cutouts	Materials Joining and Manufacturing Processes: MJMP 2025	2025			https://doi.org/10.21741/9781644903612-8	Scopus
2.	Mr. Aravind Muddebihal	Dual Microcapsules Self-Healing Performance in Glass Epoxy Composite Under Flexural Load	Wiley online library	2025			https://doi.org/10.1002/pc.70079	Scopus
3.	Mr. Aravind Muddebihal	Performance of glass epoxy composites under combined effect of in-plane fiber waviness with circular cutout through tensile test, and image processing technique	Polymer composites Wiley	2024			http://wileyonlinelibrary.com/journal/pc	Scopus
4	Mr. Aravind Muddebihal	Mechanical performance of glass fiber epoxy laminates with embedded circular and square cutouts	Materials Research Forum LLC	2025			https://doi.org/10.21741/9781644903612-8	Scopus
5	Mr. Aravind Muddebihal	Dual Microcapsules Self-Healing Performance in Glass Epoxy Composite Under Flexural Load	Society of Plastics Engineers.	2025			https://doi.org/10.1002/pc.70079	Scopus
6.	Dr. Malagouda Patil	Designing and fabrication of fire fighting robot and water system	International Journal of research and analytical reviews(IJRAR)	2025	12, 02	2348-1269		-
7.	Mr. Kiran Udoshi	Design and Fabrication of Multifunctional Operating	International Journal of Advanced Research in	2025	05,09	2581-9429	Volume 5, Issue 9, May 2025	



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		Machine to Reduce Cycle Time and Floor Space	Science, Communication and Technology					
8.	Mr. Rahul Sheri	Design and Development of Bio Cups from Agricultural Waste	International Journal of Advanced Research in Science, Communication and Technology	2025	05,09	2581-9429	<u>Volume 5, Issue 9, May 2025</u>	
9.	Mr. Vijay Palled	360 Degree Rotating Fire Extinguisher	International Journal of Advanced Research in Science, Communication and Technology	2025	05,09	2581-9429	<u>Volume 5, Issue 9, May 2025</u>	
10.	Mr. R. H. Angadi	Design and Fabrication of Magnetic Levitating wind mill	International Journal Of Innovative Research In Technology	2025	12,01	2349-6002		
11.	Mr. Sujit Sali	Smart Agricultural Mechanization: A Multi Tasking Machine for Efficient Farm Management	International journal of innovative research of science , Engineering and Technology (IJRSET)	2025	14, 5	2347-6710	<u>Volume 14, Issue 5, May 2025</u>	



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2) CAYm1 : 2023-24

S.N o.	Name of the Faculty	Title of the paper	Name of the Journal	Year	Vol No. Issue No.	ISSN	Web site link
1.	Dr. Malagouda Patil	Experimental study of solar PV/T panel to increase the energy conversion efficiency by air cooling	Science Direct	2023	92, 01		https://doi.org/10.1016/j.matpr.2023.05.007
2.	Aravind Muddebihal	Performance of glass epoxy composites under combined effect of in-plane fiber waviness with circular cutout through tensile test, and image processing technique	Wiley online library	2024	46,03		https://doi.org/10.1002/pc.29141
3.	Aravind Muddebihal	Techniques of creating in-plane fiber waviness in composites and its mechanical performance –a review	Engineering research express	2024			https://doi.org/10.1088/2631-8695/ad4fdb



3) CAYm2 : 2022-23

S. No.	Name of the Faculty	Title of the paper	Name of the Journal	Year	Vol No. Issue No.	ISSN	Web site link
1.	Dr. Malagouda Patil	Experimental study of solar PV/T panel to increase the energy conversion efficiency by air cooling	Science direct	2023	92,01		https://doi.org/10.1016/j.matpr.2023.05.007

Table 5.7.1(b) Ph. D. guided by the faculty during the assessment period.

Sl. No.	Research Guide	Research Scholar	Research Centre	Year
1.				
2.				

Table 5.7.1(c) Ph. D. awarded during the assessment period.

Sl. No.	Research Guide	Research Scholar	Research Centre	Year
1.	Dr. S.A. Alur	Dr. M.K.Patil	S.G.B.I.T Belagavi	2024
2.	Dr. Mazoor hussin M.	Dr. Pooja Anagolkar	Anurag Group of Institutions	2024