



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

Accredited by NAAC & NBA (CSE, IT, ECE, EEE & ME)

Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada

L.B.Reddy Nagar, Mylavaram-521230, Krishna Dist, Andhra Pradesh, India

DEPARTMENT OF MECHANICAL ENGINEERING

(Design Engineering Stream Group)

Introduction:

The success of any organization depends greatly on the group work or collaborative work rather than single individual work. This is because the better ideas from a small group of people can be given a shape and eventually transformed into a reality in the form of a quality paper or a project or a working/prototype model. The collaborative working environment not only brings out the inherent potential, skills and expertise of the faculty members but also provides an opportunity to develop leadership qualities, team work capabilities, improve the confidence levels when they come forward voluntarily for contributing their wisdom in research group interactions and periodical group meetings. Hence, with this motto, the Department of Mechanical Engineering created Design Engineering research group which will function for the following objectives and concerned faculty from design stream to act as group members.

Objectives:

Design Engineering Research group work with the following objectives.

- To identify the burning topics and key areas of research in Design stream and work seriously in that direction.
- To develop a system/experiments beyond the curriculum.
- To have the updated information regarding project proposals from different funding agencies (SERB, DST, UGC, AICTE, MNRE, ISRO, DRDO etc.,) and motivate the faculty to prepare and submit quality project proposals for the above funding agencies.
- To have collaborative work among the members and bring out quality paper publications with mutual sharing of skills and expertise.

- To motivate the young faculty towards developing interest in R&D activities and also guide them register for Ph.D. programmes under IIT/NIT/IIIT/JNTUK/AU.

This group has concentrating following categories:

- Tribology (Friction & Wear)
- Mechanical vibrations
- Condition Monitoring
- Shock and Vibration
- Fracture Analysis

Members of Design Engineering Research Group:

S.No	Faculty Name	Designation	Research Area	Mobile Number
1	Dr.P. V. Chandra Sekhar Rao,	Professor	Tribology, Composite Materials	9391901585
2	Dr.Ch. Siva Sankar Babu	Assoc. Professor	Mechanical Vibrations, Machine Design	9000350390
3	Dr. B. Sudheer Kumar	Sr. Asst. Professor	Mechanical Vibrations, Machine Design	7893924491
4	Mr. K.V.Viswanadh	Sr. Asst. Professor	Composite structures, Machine Design	7702893880
5	Mr.S.Srinivasa Reddy	Sr. Asst. Professor	Machine Design	8247866690
6	Mr. V. Sankara Rao	Sr.Asst.Professor	Machine Design	9493245354
7	K. Venkateswara Reddy	Asst.Professor	Machine Design	7386872267

Growth Facilities:

1. Electronic Tensometer
2. Wear and Friction monitor
3. Vibrations Analysis Setup for analysing Dynamic Response of Beams, Plates and vibrational Mounts

Peer-reviewed recently papers for following Journals:

S.no	Name of the journal	Revied (Nos)
1	Journal of Testing and Evaluation	2
2	International Journal of Automotive Technologies	2

3	Shock and Vibrations	1
4	Journal of mechanical Science and Technology	1
5	Structures	2

Research Guides under JNTUK Research Center:

S.No.	Name of the Faculty	Designation
1	Dr.P. V. Chandra Sekhar Rao,	Professor

Research Publications of Design Engineering Research Group

A.Y:2024-2025

SCI		ESCI	Scopus	Scopus Proceedings	Total	
-		02	-	01	03	
S. No	Title of paper	Name of the author/s	Department of the Teacher	Name of journal	Year of publication	ISBN/ISSN number
1	Experimental and numerical investigations on elastic and thermal properties of banana-jute fiber-reinforced hybrid composites	K. Lalith Narayan, G. V. Punna Rao, V. Sankararao , and S. B. R. Devireddy	Mechanical	International Journal of Computational Materials Science and Engineering	Aug 2024	2047-6841 / 2047-685X ESCI
2	Evaluation of mechanical and thermal characteristics of e-glass/epoxy composites with the inclusion of graphene nanoparticles	Ravi Prakash BabuKocharla, Siva Sankara Babu Ch Murahari Kolli, Satyanarayana Kosaraju, Oleg IgorevichRozhdestvenskiy, Ankita	Mechanical	Cogent Engineering	Nov 2024.	2331-1916 ESCI

		Joshi, Muntather Almusawi				
3	Experimental Analysis on Turning of Super Duplex UNS 32750 Steel Using Minimum Quantity Lubrication Process	Murahari Kolli, Siva Sankara Babu Ch Sankararao V K.Satyanarayana, K. Kalpana	Mechanical	E3S Web of Conferences	July 2024	2267-1242 Scopus Conf. Proceedings I

A.Y:2023-2024

		SCI	ESCI	Scopus	Scopus Proceedings	Total
		02	--	03	05	10
S. No	Title of paper	Name of the author/s	Department of the Teacher	Name of journal	Year of publication	ISBN/ISSN number
1	Experimental investigation of air jet impingement cooling in car radiator with hollow cone nozzle plate spacing using nanofluids	P.Venkataramana, V. Mani Kumar, N. Raghu ram, Siva Sankara Babu Chinka	Mechanical	Heat and Mass Transfer	April 2024	1432-1181/0947-7411 SCI
2	Study of the Analysis of the Corrosion Resistance of Ti6Al4V and CoCrMo Metallic Alloys	M. Thiruchit rambalam, Putta Nageswara Rao, Siva Sankara Babu Chinka , R. Sampath Kumar, Mohammad Jahidul Islam, B. Ashok Kumar,	Mechanical	Int. J. Vehicle Structures & Systems,	Nov 2024.	0975-3540 SCI

3	Deep Learning based Fault Diagnosis in Electrical Machinery in Industrial Sector based on Data Mining Techniques	Sudheer Hanumanthakari; Neha Garg; P Chandrakanth; Navdeep Dhaliwal; R Ramadevi; Siva Sankara Babu Chinka	Mechanical	IEEE	Aug-2023	959-964 Scopus Conf. Proceedings
4	Fault Analysis of An Induction Motors Using AI and ML: An Efficient Way	Naveen Kumar Bind; Siva Sankara Babu Chinka ; ShaikVaseem Akram; Neelamegan Sengodan; Md. Shakil Hossain,	Mechanical	IEEE	July 2023	1424-1430 Scopus Conf. Proceedings
5	MATLAB coding and experimental analysis of spiral plate heat exchanger	K. Srinivasa Rao; K. V. Viswanadh ; M. Oliva; A. Dhanujay Kumar; A. Pratyush; N. R. Medikodu,	Mechanical	AIP Conference Proceedings	NOV 2023	1551-7616 Scopus Conf. Proceedings
6	Data mining application in task scheduling system	Vinjavaram Sri Harsha; Mohammad Arshad; V. Sankara Rao ; K. Prakash Babu; N. R. Medikodu; B. V. Dharmendra	Mechanical	AIP Conference Proceedings	NOV 2023	1551-7616 Scopus Conf. Proceedings
7	Improve the performance of complex system through artificial intelligence	N. R. Medikodu; V. Sankara Rao ; Jaya Raju Gandepudi; K. Prakash Babu; A. Sri Harsha; B. V. Dharmendra	Mechanical	Materials today Proceedings	NOV 2023	1551-7616 Scopus Conf. Proceedings
8	Precision Machining of Inconel Alloy through	Satyanarayana Tirlangi, Hari Banda, R. Vadivel, Sudheer	Mechanical	IGI Global Publisher	June 2024	9798369333143 Scopus

	hybrid Taguchi and Meta heuristic GA Method in Electrochemical Machining	Kumar Battula , M. Sabarimuthu, Mohammed Ali				
9	A review on reinforcements, fabrication methods, and mechanical and wear properties of titanium metal matrix composites	Dhanunjay Kumar Ammisetti; S. S. Harish Kruthiventi; Sankararao Vinjavarapu ; Nelakuditi Naresh Babu; Jaya Raju Gandepudi; Sudheer Kumar Battula	Mechanical	Journal of Engineering and Applied Science	Oct 2024	2536-9512 Scopus
10	Comparative Thermal Analysis by Using Simulation of Circular Fin Manufactured with Several Materials,	Venkateswara Reddy Kolagotla , Sai Babu Kolahalam, Emmanuel Buradagunta, Naresh Babu Nelakuditi, Pichi Reddy Seelam, DhanaRaju Vallapudi and Mallikarjuna Rao Dandu	Mechanical	Nano World Journal	Nov 2023	2379-1101 Scopus

A.Y:2022-2023

		SCI	ESCI	Scopus	Scopus Proceedings	Total
		02	02	--	03	07
S. No	Title of paper	Name of the author/s	Department of the Teacher	Name of journal	Year of publication	ISBN/ISSN number
1	An Optimisation Method of Construction for Warping Copper Plates and Engines Using Complete Block Designs with Some Special Types of Graphs	P. Karthikeyan, K. Kalaiselvi, M. Pachamuthu, Kanulla Karthik , A. Johnson Santhosh,	Mechanical	Materials Science and Engineering	Jan 2023	1687-8434 SCI
2	Synthesis of nickel coated graphene and analysis of the efficacy of its reinforcement on the hyper eutectic AlSi alloys that are grain modified and refined	C.Sumaltha, P.V. Chandra sekhar Rao,V.V.Subba Rao,	Mechanical	Diamond &Related material	Nov 2022.	0925-9635 SCI
3	Effect of Graphite on Mechanical and Tribological Properties of Al6061/SiC Hybrid Composites	Mastan Rao Papabathina; Siva Sankara Babu Chinka ; Nageswara Rao Putta; Murkonda Vijaya; Dhoria, Sneha,	Mechanical	Annales de Chimie - Science des Matériaux,	June, 2023	0151-9107 ESCI

4	Optimizing wear of Al 6062 alloy using machine learning and tungsten carbide nanoparticles	Soundararajan S, E Srimathi, Sudheer Kumar Battula , R Malkiya Rasalin Prince, N Suresh,	Mechanical	European Chemical Bulletin, ,	March 2023,	2063-5346. ESCI
5	Experimental Investigation on Water Cooler Test Rig With And Without Diffusers	Mallikarjuna Rao Dandu, K. Sai Babu, Nelakuditi Naresh Babu, A. Dhanunjay Kumar, K. Venkateswara Reddy , B. Sai Rama Krishna and V. Dhana Raju		E3S Web of Conferences	June 2023),	2267-1242 Scopus Conf. Proceedings
6	Enactment of Fiber Reinforced Hybrid Epoxy Composite for Passenger Car Bumper Beam	Vinjavarapu Sankararao , P. Nageswara Rao, Siva Sankara Babu Ch., Medikondur Nageswararao and Kosaraju Satyanarayana,	Mechanical	E3S Web of Conferences	June 2023	2267-1242 Scopus Conf. Proceedings
7	Synthesis and characterization of silicon dioxide reinforced AZ91D magnesium composites	A M.Chandra Sekhara Reddy, G.Rajesh, G.Anbuezhayan, J.Anichai, Siva Sankara Babu , B.Nagaraju Goud,	Mechanical	Materials today Proceedings	June 2023	2214-7853 Scopus Conf. Proceedings

A.Y:2021-2022

SCI		ESCI	Scopus	Scopus Proceedings	Total	
02		02	01	03	07	
S. No	Title of paper	Name of the author/s	Department of the Teacher	Name of journal	Year of publication	ISBN/ISSN number
1	Mechanical Properties of Arecanut and GFR Hybrid Polypropylene Composites	Yarrapragada K. S. S. Rao, Ayaz Ahmad, Sudheer Kumar Battula , Reem Mohammed Alharbi.	Mechanical	Advances in Polymer Technology	May 2022	0730-6679 SCI
2	Dynamic mechanical properties of magnetorheological polyurethane elastomer in comparison to existing antivibration rubber	Battula Sudheer Kumar , P.Rama Murthy Raju, Ch. Ratnam,	Mechanical	Advances in Materials and Processing Technologies	Feb 2022	2374068X. SCI
3	Influence of grain refiner, modifier and grapheme on the Dry sliding Wear of Hypereutectic Al-Si Alloys, of Electrical Discharge Machining of Inconel-690 Using RSM-GRA Technique	C.Sumalatha, P.V.ChndraSekhar Rao , V.V.Subba Rao, M.S.K.Deepak,	Mechanical	Metallography Microstructure and Analysis ,	May 2022	2192-9270. ESCI

4	Effectiveness of Shannon Entropy Weight Method on Wear Behaviour of Polyester/Carbon Fibre Composites Using GRA,	Naga Venkata Saira, Yellapragada Sameer Kumar, DevarakondaKonda la Rao, Dasari Naga Sai Rama Krishna Thati, Jaya Sai AbhayaVeeranjane yaVara Prasad Alapati,	Mechanical	Annales de Chimie - Science des Matériaux,	March 2022,	0151-9107 ESCI
5	Properties of Magnesium Alloy Az91d With Tic Reinforced Composite Material Based On Tensile And Wear Tests,	Siva Sankara Babu Ch, Abhi Ram G, Srinu K, Prudhvi Raj G, NuruddinShaik	Mechanical	International Journal of Mechanical Engineering	March-2022	0974-5823 Scopus
6	Effect of machining parameters on cutting forces during turning of EN 08, EN 36 & mild steel on high speed lathe by using Taguchi orthogonal array	K. Bhaskar Mutyalu , V. Venkatrami Reddy, S. Uma Maheswara Reddy, K. Lakshmi Prasad	Mechanical	Materials today Proceedings	July 2021	2214-7853 Scopus Conf. Proceedings
7	Impact of nano-filler WC on the fracture strength of epoxy resin	A.Sreenivasulu, S.Rajkumar, Sridhar Sathyanarayana, S.Suresh kumar, G.V.Gaurav, Bandaru Dyva IsacPremkumar,	Mechanical	Materials today Proceedings	May 2022,	2214-7853 Scopus Conf. Proceedings
8	Effect of grain refiner, modifier and graphene on the mechanical properties of	C.Sumalatha, P.V.ChndraSekhar Rao, V.V.Subba Rao, M.S.K.Deepak	Mechanical	Materials today Proceedings	May 2022	2214-7853 Scopus Conf. Proceedings

	hyper eutectic Al-Si alloys by experimental and numerical investigation					
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A.Y:2019-20

SCI	Scopus	UGC	Total
-	09	---	08

S. No	Title of paper	Name of the author/s	Department of the Teacher	Name of journal	Year of publication	ISBN/ISSN number
1	Effect of Crack Location and Crack Depth on Natural Frequencies of Fixed Beam Using Experimental Modal Analysis	Siva Sankara Babu, Balakrishna Adavi, Srinivasa Rao Putti	Mechanical	Lecture Notes on Multidisciplinary Industrial Engineering	Aug 2019	978-981-13-7643-6 Scopus
2	Numerical Simulation of shell and Tube heat exchanger using Ansys Fluent	Kamala Priya B, B.Udaya Lakshmi, A.Hari Krishna	Mechanical	International Journal of Innovative technology and exploring Engineering	Sep 2019	2278-3075 Scopus
3	Multi-Parametric Optimization of Electrical Discharge Machining of Inconel-690 Using RSM-GRA Technique	Murahari K , Bhavani M, Adepu Kumar, S Pichi Reddy, Sai Naresh D	Mechanical	Advances in Applied Mechanical Engineering- Springer	Feb 2020	2195-4356 Scopus

4	Tensile properties of bamboo fiber filled with rockdust filler reinforced hybrid composites	T. Venkateswara Rao, V. Sankara Rao and K.V. Viswanadh	Mechanical	Innovative Product Design and Intelligent Manufacturing Systems, Springer	March 2020	Scopus
5	Effect of Condenser Length on Performance of Water Cooling Refrigeration System cum Air Cooler	Siva Sankara Babu Ch , Abhi Ram G, Srinu K, Prudhvi Raj G, NuruddinShaik	Mechanical	International Journal of Innovative Technology and Exploring Engineering	April 2020	2278-3075 Scopus
6	Design and Fabrication of Hybrid Magneto Rheological Elastomeric Angular Mounts With Iron Nano Particles	B.Sudheer Kumar. Rama Murthy Raju, Ch.Ratnam	Mechanical	International Journal of Engineering and Advanced Technology (IJEAT)	June 2019	2249-8958 Scopus
7	Exact Damage Identification of Plate-Like Structure Using Mode Shapes	Siva Sankara Babu Chinka , G. Jyosthana Surya Kumari, M. GunaSahithi, S. Mahesh, M. R. Krishna Mohan	Mechanical	International Journal of Innovative Technology and Exploring Engineering	April 2020	2278-3075 Scopus
8	Fabrication and AL Alloy composite reinforced with silicon carbide and graphite through stir casting process and wear analysis	K.Sridivya, Ch.Mohan Sumanth, J.Surendra, V.Sankara Rao	Mechanical	International Journal of Mechanical and Production Engineering Research and Development	June 2020	2249-6890 Scopus
9	Novel CFD analysis on heat transfer characteristics	Vidya CH, G.Ravi kiran Sastry, P.Phani Prasanthi,	Mechanical	International Journal of Mechanical and Production	June 2020	2249-6890 Scopus

	of nano coolants for automobile radiators	Snigdha Surapaneni		Engineering Research and Development		
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A.Y:2018-19

SCI	Scopus	UGC	Total
01	11	15	27

1	Investigation of Mechanical/Tribological Properties of Composite Ersatz Articular Cartilage with Nano Fillers	K. N. D. Malleswara Rao, R. Praveen Kumar, T. Venkateswararao, B. Sudheer Kumar and G. Babu Rao	Mechanical	Advances in Materials and Metallurgy, Lecture Notes in Mechanical Engineering, springer	August 2018	2195-4356 Scopus
2	Experimental analysis of jet impingement on aluminium heat sink	EsubBasha, K.Lakshmi Prasad, G.kartheek, K.V.Viswanath	Mechanical	International Journal of Mechanical Engineering and Technology	July 2018	1129-1140 Scopus
3	Shock and vibration prevention using Angular mounts with different types of oil-based elastomers	Sudheer kumar Battula , P.Rama Murthy Raju, Ch.Ratnam	Mechanical	Advances in Materials and Metallurgy, Lecture Notes in Mechanical Engineering, Springer	August 2018	2195-4356 Scopus
4	Engine Isolation angular mount with different types of Elastomers	Sudheer Kumar battula , Rama Murthy Raju R, Ratnam CH	Mechanical	Materials Today proceedings Elsevier	August 2018	2214-7853 Scopus
5	Innovative Technique to calculate Optimal cure time of Elastomeric Compound for Angular Mounts Using Dynamic Mechanical Analysis	Sudheer Kumar Battula , Rama Murthy Raju, Ratnam.CH	Mechanical	Journal of Advanced Research in Dynamic and Control systems	October 2018	1943-0023X Scopus

6	Vibration Analysis on Engine Elastomeric Angular Mount	Sudheer Kumar Battula , Rama Murty Raju, Ratnam.CH	Mechanical	International Journal of Mechanical and Production Engineering Research and Development	December 2018	2249-6890 (P), 2249-8001 (E) Scopus
7	Damage Identification of Fixed-Fixed beam using Normalized frequency zones	Siva Sankar Babu Chinka , Balakrishna Adavi, Srinivasa Rao Putti	Mechanical	Journal of Advanced Research in Dynamic and Control systems	September 2018	1943-0023X Scopus
9	Effect of Reinforcement on compacting characteristics of Aluminium/10-Al ₂ O ₃ /Fly ash Metal Matrix composite	Dr. Seelam Pichi Reddy, Dr. P. V. Chandrasekhar Rao, Dr. Kolli Murahari	Mechanical	Journal of Testing and Evaluation	April 2018	0090-3973 SCI
10	Thermal conductivity of Fin materials	N.Venkateswara Rao, N.Someswara Rao, Dr.K.SriDivya, Ch. Mohan Samarth, M.Somaiah Chowdary, M.Bhavani	Mechanical	International Journal of Research and Analytical reviews	May-2019	2349-5138 UGC
11	Influence of addition of CU doped ZNO nanoparticles to diesel fuel on a four stroke CI engine performance: Experimental study	Dr. P. Vijay Kumar, Sankararao. V, K. Somasekhar	Mechanical	International Journal of Research and Analytical reviews	May-2019	2349-5138 UGC

12	Design and fabrication of self-charging parallel hybrid electric vehicle with variable platform	K.Somasekhar, V.Sankara Rao, Mallikarjuna Rao Dandu, B.Deepak Kumar	Mechanical	International Journal of Research and Analytical reviews	May-2019	2349-5138 UGC
13	Dry Sliding Wear Behaviour of Hypo Eutectic Al7Si Alloys with Melt Treatments	Dr.P.V.Chandra Sekhar	Mechanical	International Journal of Research and Analytical reviews	May-2019	2349-5138 UGC
14	Fabrication and Analysis of Vertical Axis Wind Turbines on Highways	VenkataSomi Reddy J. V.Venkatesu, R.Praveen Kumar	Mechanical	Journal of Emerging technologies and Innovative Research	June-2019	2349-5162 UGC
15	Three Dimensional Finite element analysis of thin hybrid FRP skew Laminates for thermo elastic behaviour of different Materials	B.Susmitha, K.Durga, K.N.D.Malleswara Rao , K.V. Ravisankar, Narayana Karagani , SP.Krishna Mithra	Mechanical	Elsevier-materials today proceedings	March 2018	2214-7853 Scopus
16	A CFD Investigation of Heat transfer Enhancement of shell and tube Heat exchanger using Al ₂ O ₃ -water Nano fluid	K.Somasekhar, K.N.D.Malleswara Rao, V.Sankara Rao , Raffi Mohammed, M.Veerendra, T.Venkateswara Rao	Mechanical	Elsevier-materials today proceedings	February 2018	2214-7853 Scopus

17	Effect of Twin-Pin profile tool on the Microstructure and mechanical properties of friction stir welded Dissimilar AA2024 and AA6061 Aluminium Alloys	Ch.Ratnam, B.Sudheerkumar , K.N.D.Malleswara Rao	Mechanical	International journal of mechanical Engineering and technology	March 2018	0976-6340 Scopus
18	Optimization of Residual Stresses in Hard tuning of super alloy Inconel 718	G.Kartheek ,Kolla Srinivas, Ch.Devraj	Mechanical	Elsevier-materials today proceedings	March 2018	2214-7853 Scopus
19	Improving energy efficiency of a vapour compression refrigeration system using a phase change material	Mallikarjuna Rao Dandu, Dr.P.Vijaykumar. J.Venkatasomireddy	Mechanical	International Journal of creative research thoughts	April 2018	2320-2882 UGC
20	Simulation of stress distribution in Leaf spring variable parametric and loading conditions	JonnalaSubba Reddy, M.Bhavani, J. Venkata Somi Reddy	Mechanical	International journal of Engineering research and technology	April 2018	2278-0181 UGC
21	Influence of parameters on safe design of leaf spring for static and dynamic loading using Finite	Jonnala Subba Reddy, M.Bhavani, G.Kartheek, J. VenkataSomi Reddy	Mechanical	International journal of Advanced engineering and Research development	April 2018	2348-6406 UGC

	Element Analysis					
22	Processing and Characterization of Sn O ₂ thin film fabricated mechanism for suitability of sensor applications	Jonnala Subba Reddy, M.Bhavani, G.Kartheek, J. VenkataSomi Reddy, P. Sandeep Kumar	Mechanical	International Journal of Advance Engineering and Research Development	April 2018	e-ISSN: 2348-4470 UGC
23	Optimization of a product mix in a paper mill – a case study	Jonnala Subba Reddy, M.Bhavani, G.Kartheek, J. VenkataSomi Reddy	Mechanical	International Journal of Advance Engineering and Research Development	April 2018	2348-4470 UGC
24	Effect of Fibre angle on Inter laminar stresses of FRP angle Ply Laminate	Siva SankarBabuCh , Viswandh K.V, Venkateswara Rao.T, Sudheerkumar. B	Mechanical	International Journal of creative research thoughts	March 2018	2320-2882 UGC
25	A Comprehensive review on the finite element analysis of mechanical components	B.Udaya Lakshmi, K.N.D.Malleswara Rao, V.Sankara Rao	Mechanical	International Journal of creative research thoughts	March 2018	2320-2882 UGC
26	Design and FEA Analysis of Shafting system in a Fleet Support vessel	J.VenkataSomi Reddy,P.V.D.Vivek Kumar, Mallikarjuna Rao Dandu	Mechanical	International journal of Advanced engineering and Research development	March 2018	2348-6406 UGC
27	Flexural Properties of Bamboo Fiber	T.Venkateswara Rao, K.N.D.Malleswara Rao, V.Sankar Rao,	Mechanical	International journal of Innovative research in technology	January 2018	UGC

	Reinforced Hybrid Composite	B.Sudheerkumar				
28	A Comprehensive review on Friction stir welding of aluminium alloys	Ch.Ratnam, B.Sudheerkumar , K.N.D.Malleswara Rao	Mechanical	International journal of Advanced engineering and Research development	January 2018	2348-6406 UGC

Patents details in the A.Y 2024-25

S.No.	Patent Title	Applicants/ Inventors	Patent No.	Filed Date	Published date	Publish ed agency
1	Nano structured Phase Change Materials for Improved Heat Transfer	Dr. Battula Sudheer Kumar , Poosapadi, Dhivakar, Gaddala , Dr. Babu Rao, L.R, Gouri, Kumar R, Arun, Sekhar, K Ch	1227850	02.11.2024		IPR-Canada
2	Design and Fabrication of Indoor Air Purifier	Mr. Sankarrao Vinjavarapu , Dr.MuraharKolli, Dr. Siva Sankara Babu Chinka, Dr. Seelam Pichi Reddy, Dr. Kondapalli Siva Prasad, Mr. Jaya Raju Gandepudi, Jitendra Gummadi	20244106 5368 A	29.08.2024	06.09.2024	IPR India

Patents details in the A.Y 2023-24

S.No.	Patent Title	Applicants/ Inventors	Patent No.	Filed Date	Published date	Publish ed agency
1	A Control System For Internal Combustion Engines Utilizing Flexible Alternative Fuels And Method Thereof	Mr. Alias Paul Sudheer Kumar Battula Dr. S. Thiruchitrambalam Dr.K.Balasubramanian Mr. Md. Farid Hossain Dr. P. Suresh Kumar Mr. M. Sudhakar	20234104 2495	25/06/20 23	07/07/2023	IPR India
2	Mono Wheel Bicycle With Enhanced Stability And Maneuverability	GANDHAM YEDUKONDALU Dr. T. Srinivasa Rao Dr. K. Satyanarayana Mr. B. Sudheer Kumar Mr. V. Kiran Kumar Ms. M. Lakshmi Vinitha Dr. SK. Jakeer Hussain Nadavapalli Venkata Naga Gopala Joga Rao	20234106 2471	17/09/20 23	06/10/2023	IPR India
3	Effect of fuel injection pressure on performance and emission characteristics of DI-CI engine with sheaolein biodiesel	Dr. K.Bhaskar Mutyalu Mr. V.Venkatrami Reddy Mr. K.V.Jawahar Mr. K.Lakshmi Prasad Dr. Gopala Rao Thellaputta Dr. Kiran Kumar Billa Seelam Umamaheswara Reddy K. Sai Babu Mr. K.Ramprasad VidyaSagari K	20234108 2074	02/12/20 23	22/12/2023	IPR India
4	Coconut Coir Fiber Reinforced Epoxy Composite With Cement Filler	Srinivasa Rao Kamana, Dr G. Bala MuraliKrishna, Siva Sankara Babu Chinka , Dr Jeevan Kumar N, Dr P Vasanth Kumar	20234106 3961	23/09/20 23	06/10/2023	IPR India
5	Utilizing self-healing materials for IOT Enabled Infrastructure	N. Rajesh Babu NarenderChinthamu A.Anansraj Rinoo Rajesh Nitin Kumar Dhimole	20244102 7525	03/04/20 24	12/04/2024	IPR India

	maintenance and repair in data communication networking	Varimadugu Sandhya JyothirmayiNarne Dr. Siva Sankara Babu Chinka Sivasankara Raju R M A Stephenraj				
	AI Based Body Scanner	SankararaoVinjavarapu Dr.Md.KhajaMoinuddin JothiSoni Manoj Tiwari AbhineetSamadhiya HansiniMedikondur Anna Eswara Kumar	414012-001	18/04/2024	22/05/2024	IPR India

Patents details in the A.Y 2022-23

S.No.	Patent Title	Applicants/ Inventors	Patent No.	Filed Date	Published date	Publish ed agency
1	Thermal Analysis Of Polymer-Modified Road Bitumens	Dr.S.Sathees Kumar Dr.Shashishankar.A Dr. S. SheejuSelvaRoji Dr. KatakamSatyanarayana Mr. Chandresh M. P. Dr. R. Meenakshi Reddy Mr. Sakthi Mr.Kolagotla Venkateswara Reddy	202241062488	02/11/2022	11/11/2022	IPR India
2	Design And Fabrication of Multi Functional Air Conditioning System	Kamala Priya. B Dr.Dilipkumar.K Mounika.p L.Bindu B.Sudheerkumar B.Udayalakshmi A.Dhanunjaykumar Kiran saigorle C.trishit	202341011370	20/02/2023	24/03/2023	IPR India
3	Predicting the industrial maintenance based on iot and ant colony	Dr.Yogesh Pal KeertiPatil Ravindra Kumar Yadav SubasishMohapatra SubhadarshiniMohanty Dr. Siva SankaraBabuChinka	202311025408	04/04/2023	19/05/2023	IPR India

	optimization algorithm	Sindu Devi J Prof. Dr. E. Daniel Francis Dr. Deepak Dalal Dr. Mamta Sharma Dr. Animesh Kumar Sharma Dr. Pasupuleti Subrahmanya Ranjit				
4	Ultra light weight natural fiber composites for aerospace applications	Sivasubramanian palanisamy Santhosh kumar D Kumaran Prema Kumar Sudheer kumar Battula Dr. P.C Krishnamachary Dr.p.Suresh Kumar M.Sudhakar	202321032319	08/05/2023	16/06/2023	IPR India

Patents details in the A.Y 2021-22

S.N o.	Patent Title	Applicants/ Inventors	Patent No.	Filed Date	Published date	Publish ed agency
1	Lateral and Longitudinal displacement measurement of tire cornering stiffness of All Terrain Vehicle using Recursive Least Square technique	Annamalai, K, ChakrabartiTulika, Gyara Ajay Kumar, Battula Sudheer Kumar, Chinka Siva SankaraBabu, ChinnamDilipShyam Prakash, Mandru Suresh Kuma, SanakaRajita, JaglanVivek, HatiAnanda Shankar, ChakrabartiPrasun and Kaur Gurusharan	2021102847	26.05.2021	07.07.2021	IPR Australian
2	Study of The Behaviour and Performance of A Solar Steam Turbine By Calculating	Dr. M.Ramarao Dr. S. Senthil Kumar Mr. T CH Anil Kumar Mr. N. Lingeshwaran Mr.Nagaraja T. K Mr. Amol L. Mangrulkar Mr. R. Sarweswaran Mr.Kanulla Karthik Dr.MotiLalRinawa Dr.Sanjay Kumar. S. M	202141027064	17.06.2021	02.07.2021	IPR India

	Three Variants Based	Mr. Channabasav Mr.Parthasarathy. K				
3	Design and Fabrication of Treadmill bicycle	Dr.V.Dhana Raju Dr.MBSSreekara Reddy Mr.J.Subba Reddy Dr.S.Pichi Reddy Dr.J.N.Nair Dr.HarishVenu Mr.S.Rami Reddy Mr. K.V.Viswanadh Dr.K.Bala Prasad Mr.R.AnjaneyuluNaik	20214105 1863	12.11.2021	24.11.2021	IPR India
4	Measurement and study of thermal cycle at steel or aluminium interface by both experimental and simulation approach	B.Nageswara Rao Narayanaswamy.C, Dr.Y.Robinson, MeheebubAlam Amol L. Mangrulkar Dr. S.SADHISH KUMAR Dr.Alagu Thillaivanan KANULLA KARTHIK Dr. Amit Kumar Sharma Dr.MotiLalRinawa Dr.M.Ramarao	20214105 5674 A	01.12.2021	10.12.2021	IPR India
5	Evaluation of mechanical properties and stability of lignocellulosic briquettes	A.N.R. Reddy Dr. T.Sivakumar Dr.P.Yuvarasimman Dr.A.M.Shanawaz Dr.Chinka Siva SankaraBabu Dr.Devaraj J Dr.K.Pazhanivel A.S. Karthik Sai Ashish Kumar Karanam Amereswara Prasad Chunduru Dr.M.Rama Rao	20224100 9462 A	22.02.2022	04.03.2022	IPR India
6	A Self-Destructive Composite Body Armor for Police during Riots	A.S. Karthik Dr. S.V.Gorabal Dipak S. Patil SanthoshGotagunki Rudresha S Arun A. Shivaimpi K.H.Pulkeshi Dr.Chinka Siva SankaraBabu Dr.Sai Ashish Kumar Karanam	20224102 0761 A	06.04.2022	22.04.2022	IPR India

		MallurBasavaraj				
7	Universal Flexible Wrench	Dr.M.Nageswara Rao, V.Sankar Rao , Dr.Md.KhajaMoinuddinFarik hDr.V.Venkata Kamesh Dr. S.VaraKumari	361415-001	23.03.2022	29.03.2022	IPR India

Research Facilities/Equipments:

Facilities available for To Carryout Research work:

The following labs are useful to conduct experiments and research studies for the students and faculty of the Department in the Design engineering stream

- i) Vibrations Analysis Setup for analysing Dynamic Response of Beams, Plates and vibrational Mounts.
- ii) Rotating Beam Fatigue Testing Rig.
- iii) Universal Testing Machine-Mechanical Testing Lab:
- iv) To conduct testing of various materials in order to know its mechanical properties
- v) CAD/CAM and Simulation Lab
- vi) Dassault systems lab.