



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

Name of the Group: Design Engineering

Head of the Group: Mr. B. Sudheer Kumar, Sr. Assistant Professor

The fast pace of technological advances in recent time's mandates the students to be industry-ready by acquiring wider skills while graduating from the institutes of higher education. It to implement their novel and creative ideas originating from fundamental concepts learned in the classroom and to perpetuate the hands-on knowledge gained in the laboratory into a new product or a novel process. The advantage of the group assists the students and faculty to come together and utilize the ideas, perspectives and exclusive skills of one another to solve problems beyond the scope of design engineering.

Aim

The design group mainly focuses on the design, modelling and development of components for industrial needs and challenges for environmental sustainability. This group facilitate various advanced software's to model and analyses the components to integrated industrial applications.

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
- Fatigue analysis

Group members:

S. No	Faculty members	Qualification	Email ID	Designation
1	Dr.P. V. Chandra Sekhar Rao	M.Tech, Ph.D	paruchuru70@gmail.com	Professor
2	Mr. B. Sudheer Kumar	M.E, (Ph.D)	sudheerbattula1984@gmail.com	Sr. Asst. Professor
3	Mr.Ch. Siva Sankara Babu	M.Tech, (Ph.D)	sivachinka@gmail.com	Sr. Asst. Professor
4	Mr. K.V.Viswanadh	M.Tech, (Ph.D)	viswanadhmailing2u@gmail.com	Sr. Asst. Professor
5	Mr. S. Srinivasa Reddy	M.E	ssreddy.mech@gmail.com	Sr. Asst. Professor
6	Mr. V. Sankararao	M.Tech, (Ph.D)	sankar.356@gmail.com, v.sankar@lbrce.ac.in	Asst. Professor
7	Mrs. B. Udaya Lakshmi	M.Tech	udayalakshmi37@gmail.com	Asst. Professor
8	Ms. S. Snigdha	M.Tech	snigdhasurapaneni11@gmail.com	Asst. Professor
9	V.Venkatrami Reddy	M.Tech	vvreddy.324@gmail.com,	Asst. Professor
10	K. Venkateswara Reddy	M.Tech	venkateswarareddyk7@gmail.com,	Asst. Professor
11	B. Dyva Isaac Prem Kumar	M.Tech	dyvaprem@gmail.com,	Asst. Professor
12	K. Karthik	M.Tech	kanullakarthik84@gmail.com,	Asst. Professor

Growth Facilities:

- Dassaults system lab
- Design and Simulation lab
- NI Lab view sound and vibration tool kit
- Computerised Electronic Tensometer
- Wear and Friction monitor
- Forced and free vibrations setups
- Rotating beam apparatus for Fatigue testing

Recently peer-reviewed papers for following Journals:

S. No.	Name of the journal	Reviewed (Nos)
1	Journal of Testing and Evaluation	1
2	Journal of Shock and Vibrations	1
3	Journal of Mechanical Science and Technology	1
4	Journal of Structures	2
5	International Journal of Research And Analytical Reviews	1
6	Journal of Emerging Technologies and Innovative Research	1
7	International Journal of Innovative Research in Engineering	1

Research Guides:

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

Sponsored Project/Grants:

S.No.	Name of project	Name of Faculty	Amount	Funding Agency/ Scheme	Sanctioned Year
1.	Investigated on fatigue behavior of materials subjected to reverted bending	Dr. P. V. Chandra Sekhar Rao	4, 80,000	AICTE	2014-2015

Research Publications:

S.No	Title of paper	Name of the author/s	Name of journal	Year of publication	ISBN/ISSN number
1	Damage Assessment on Beam-Like Structures through Mode Shapes and its Curvatures	Siva Sankara Babu Chinka, Srinivasa Rao Putti, Balakrishna Adavi	International Journal of Disaster Recovery and Business Continuity	2020-21	2005-4289/2207-8363 SCI
2	Modal testing and evaluation of cracks on cantilever beam using mode shape curvatures and natural frequencies	Siva Sankara Babu Chinka, Srinivasa Rao Putti and Bala Krishna Adavi	Structures	2020-21	2352-0124 SCI

3	Design Optimization and Computational Flow Analysis of Annular Type Combustion Chamber	T J Prasanna Kumar , P Gopala Krishnaiah, Siva Sankara Babu Chinka, Kanulla Karthik, Kolahalam Sai Babu	International Journal of Disaster Recovery and Business Continuity	2020-21	2005- 4289/2207- 8363 SCI
4	Fabrication and Modal Analysis of Composite Leaf Spring	Sankararao Vinjavarapu, K. V. Viswanadh, B. Sudheer Kumar, P.Gopala Krishnaiah, Jaya Raju Gandepudi	International Journal of Disaster Recovery and Business Continuity	2020-21	2005- 4289/2207- 8363 SCI
5	Design and Static Structural Analysis of Pressure Vessel Using Finite Element Technique.	P.Mastan Rao, T J Prasanna Kumar, P Gopala Krishnaiah, K Anupama Francy, Kolagotla Venkateswara Reddy	International Journal of Disaster Recovery and Business Continuity	2020-21	2005- 4289/2207- 8363 SCI
6	Modeling & Testing of 3D - Printer Specimens by Universal Testing Machine	Snigdha Surapaneni, B. Lakshmana Swamy, Mohan Awasthy, Pankaj Kumar Mishra	Design Engineering	2020-21	0011-9342 Scopus
7	Super charging of IC Engines with thermoelectric generator and run generator from the waste heat of IC engines	K.Madhu Babu, K.Karthik, S. Uma Maheswara Reddy, OmNarendra, V. Nagaraju	Turkish Online Journal of Qualitative Inquiry (TOJQI)	2020-21	1309-6591 Scopus
8	Fatigue and wear behaviuor of Ti-6Al-4V implant Alloy	K.G. Basava Kumar, P.V. Chndra sekhar Rao, Pichi Reddy Seelam	Indian Foundry Journal	2020-21	Open access
9	Super charging of IC Engines with thermoelectric generator and run generator from the waste heat of IC engines	K.Madhu Babu, K.Karthik, S. Uma Maheswara Reddy, Om Narendra, V. Nagaraju	Turkish Online Journal of Qualitative Inquiry (TOJQI)	2020-21	Open access
10	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	Lecture Notes on Multidisciplinary Industrial Engineering	2019-20	978-981- 13-7643-6 Scopus
11	Numerical Simulation of shell and Tube heat exchanger using Ansys Fluent	Kamala Priya B, B.Udaya Lakshmi, A.Hari Krishna	International Journal of Innovative technology and exploring Engineering	2019-20	2278-3075 Scopus

12	Multi-Parametric Optimization of Electrical Discharge Machining of Inconel-690 Using RSM-GRA	Murahari Kolli, Bhavani M, Adepu Kumar, S Pichi Reddy, Sai Naresh D	Advances in Applied Mechanical Engineering-Springer	2019-20	2195-4356 Scopus
13	Tensile properties of bamboo fiber filled with rockdust filler reinforced hybrid composites	T. Venkateswara Rao, V. Sankara Rao and K.V. Viswanadh	Innovative Product Design and Intelligent Manufacturing Systems, Springer	2019-20	Scopus
14	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, Nuruddin Shaik	International Journal of Innovative Technology and Exploring Engineering	2019-20	2278-3075 Scopus
15	Design and Fabrication of Hybrid Magneto Rheological Elastomeric Angular Mounts With Iron Nano Particles	B.Sudheer Kumar. Rama Murthy Raju, Ch.Ratnam	International Journal of Engineering and Advanced Technology (IJEAT)	2019-20	2249-8958 Scopus
16	Exact Damage Identification of Plate-Like Structure Using Mode Shapes	Siva Sankara Babu Chinka, G. Jyosthana Surya Kumari, M. Guna Sahithi, S. Mahesh, M. R. Krishna Mohan	International Journal of Innovative Technology and Exploring Engineering	2019-20	2278-3075 Scopus
17	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.Sankararao	International Journal of Mechanical and Production Engineering Research and Development	2019-20	2249-6890 Scopus
18	Novel CFD analysis on heat transfer characteristics of nano coolants for automobile radiators	Vidya CH, G.Ravi Kiran Sastry, P.Phani Prasanthi, Snigdha Surapaneni	International Journal of Mechanical and Production Engineering Research and Development	2019-20	2249-6890 Scopus

Patents Published:

A.Y.	Name of Inventor	Title of the patent	Published Date	Patent Application ID	Status
2020-21	Ch. Siva Sankara Babu	Navigation technique for industrial cleaning robots with multi height and width adaptability	23.06.2021	2021102660	Published
2020-21	V.Venkatrami Reddy	Method of Synthesizing Hybrid Metal Wood Composite And 3D Printing Thereof	07.05.2021	202141019607 A	Published