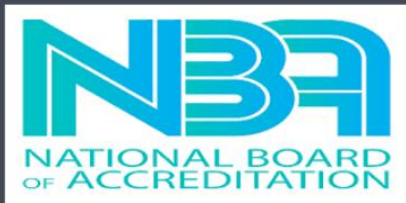


Edition IV, Volume III 2020-21

Mechanical Engineering E-Magazine (LBRCE)

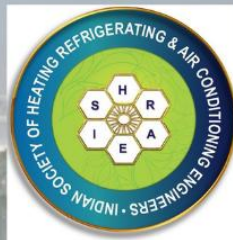


(TIER-I)



MECH PULSE

(JAN-MAR 2021)



DEPARTMENT OF MECHANICAL ENGINEERING
LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(Autonomous)

Accredited by NAAC & NBA (CSE, IT, ECE, EEE & ME) under Tier - I
Approved by AICTE and Permanently Affiliated to JNTUK, Kakinada

Mechanical Engineering E-Magazine (LBRCE)

MESSAGE FROM HEAD OF THE DEPARTMENT

I am very happy to inform you that the department of mechanical engineering is bringing **MECH PULSE-an e-magazine** its edition IV and volume III. The department of mechanical engineering is Accredited by **National Board of Accreditation (NBA) under Tier-I** and is started in the year 1998 with an intake of 60 students. At present the department is offering B.Tech Mechanical Engineering with an intake of 120 students and M.Tech – Thermal Engineering with an intake of 18 students. The department has thirteen state of art laboratories worth of 2.8 crores, with advanced computing facilities, software and research equipment. Advanced **Research Laboratories** in the area of **Cognitive Science, Material Testing, Tribology and Thermal Engineering** are available. Sophisticated **ANSYS Skill Development Centre** with 110 users of ANSYS 18.1 and **Dassult 3D Experience centre** (in association with APSSDC) is available. The department has 34 faculty members with 9 Doctoral degrees. Thirteen faculty are actively pursuing for their Ph.D in various universities and nine research scholars are working for their doctoral under the department faculty. The department faculty constantly upgrade their knowledge in the area of their domain by attending various Faculty Development Programs, workshops, seminars etc. The faculty are actively engaged in their research work and are active in publishing papers in journals and conferences.

VISION OF THE DEPARTMENT

- To impart knowledge in Mechanical Engineering with global perspectives for the graduates to serve the society and industry.

MISSION OF THE DEPARTMENT

- To enable the graduates technically sound with the state- of- the –art curriculum and innovative teaching methods
- To provide training programs that bridge the gap between academia and industry
- To create a conducive environment and facilities to improve overall personality development of the graduates
- To make the graduates aware of role and responsibilities of an engineer in society.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO1: To build a professional career and pursue higher studies with sound knowledge in Mathematics, Science and Mechanical Engineering.

PEO2: To inculcate strong ethical values and leadership qualities for graduates to become successful in multidisciplinary activities.

PEO3: To develop inquisitiveness towards good communication and lifelong learning.

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: To apply the principles of thermal sciences to design and develop various thermal systems.

PSO2: To apply the principles of manufacturing technology, scientific management towards improvement of quality and optimization of engineering systems in the design, analysis and manufacturability of products.

PSO3: To apply the basic principles of mechanical engineering design for evaluation of performance of various systems relating to transmission of motion and power, conservation of energy and other process equipment.

ONGOING RESEARCH PROJECTS

S.No.	Name of the Faculty	Title of the Project	Funding Agency	Amount Sanctioned	Sanctioned Year
1.	Dr.N.Sunil Naik	Evaluation of engine parameters affecting the performance of enzymatic transesterification process using test fuel blends	DST/SERB/EEQ	22,81,000	2019
2.	Dr.P.Vijay Kumar	Prerana scheme	AICTE	4,80,000	2019
3.	Dr.K.Murahari	Frontier of 3D Printing Technology & its Industrial Applications (Sponsored FDP)	AICTE	4,77,833	2020

RESEARCH PROJECTS APPLIED

S.No.	Name of the Faculty	Title of the Project	Funding Agency	Amount Applied	Applied Year
1.	B.Chaitanya, A.Nageswara Rao	Experimental studies on factors influencing the cause of driving errors leading to accidents among motorcyclists in India	CSRI	21,61,000	2021

CONFERENCES ATTENDED BY THE FACULTY

- **Dr.P.Ravindra Kumar**, “Experimental Analysis on Solar Assisted Thermoelectric Refrigeration” in Advances in Mechanical Engineering at Sri Sairam Engineering College, West Tambaram, Chennai on 28.01.2021.
- **Mr.J.Subba Reddy**, “Multi Objective Optimization of Machining parameters of EDM of High Speed Steel using Response Surface Methodology” in First International Conference on Engineering, Science and Technology (ICEST 2021) in RSB Science Hub, Tamilnadu, from 09th to 10th Jan 2021.
- **Mr.J.Subba Reddy** “Experimental Investigation of Electro Discharge Machining Parameters of Aluminum 7075” in International Conference on AICTE sponsored Advances In Mechanical Engineering (ICAME’21) - Virtual Mode in Sri Sairam Engineering College, West Tambaram, Chennai from 27th to 28th Jan 2021.
- **Mr.J.Subba Reddy**, “Experimental Investigation of process parameters of Electro Discharge Machining of Al 6061 using Taguchi Methodology” in Second International Conference on Science and Technology (ICOST 2021) in Global Conference Hub, Coimbatore from 30th to 31st Jan 2021.
- **Mr.Ch.Siva Sankara Babu**, “Assessment of Damage in Plate-Like Structure Using Mode Shapes and its Curvatures” in International Conference on Condition Monitoring (ICCM–2021) in TATA STEEL, Jamshedpur and Condition Monitoring Society of India (CMSI), Visakhapatnam 21st - 22nd January 2021.
- **Dr.Murahari Kolli**, Ravi Prakash Babu K, Nageswara Rao M, “Investigation on Material Removal Rate and Taper Angle in Abrasive Aqua Jet Machining of Al7075/SiC/Gr Composites Using RSM Approach” in International Conference on Recent Advances in Mechanical Engineering (ICRAME-2021) in PVPSIT, Vijayawada 26.03.2021 to 27.03.2021.

JOURNALS PUBLISHED BY THE FACULTY

Dr. V. Dhana Raju,

Assoc. Professor

ghanaraju.v@lbrce.ac.in

ghanaraju1984@gmail.com



Title of the Paper: Mitigation of harmful exhaust pollutants of DI diesel engine using emulsified fuel and hythane gas in a dual-fuel mode

Name of the Journal: Energy Sources, Part A: Recovery, Utilization, and Environmental Effects

Co-Authors:

Publication on: 04.01.2021

ISSN No: 1556-7036 (Print), 1556-7230 (Online)

Doi: <https://doi.org/10.1080/15567036.2020.1861131>

Abstract: The current investigation aims to explore the effects of hythane gas and water in diesel emulsion (WiDE) in a dual-fuel mode. Generally, the Wide gives a drastic reduction of NOX emissions due to the vaporization of water particles in the combustion chamber results in lower combustion temperature. On the other side, the WiDE causes a decline in thermal efficiency due to its lower low heating value. The combination of methane and hydrogen (hythane) gas samples has been used as secondary fuel for getting the promising reduction of exhaust emissions without reduction of thermal efficiency of the engine. Initially, experiments are conducted with Wide fuel with water concentrations of 5%, 10%, and 15% and the rest of the diesel fuel by volume. The physicochemical properties of the prepared fuels were measured using ASTM standards. The base test results revealed that the WiDE10 is shown higher brake thermal efficiency (BTE) and lower exhaust emissions when contrasted with the other emulsified fuel samples. Later, the Wide10 emulsion fuel is further examined as the primary direct fuel along with hythane as a secondary fuel. The hythane fuel is prepared in two samples like hythane10 and hythane20 by means of methane and hydrogen percentage on an energy basis. The hythane fuel samples are supplied to the diesel engine at two flow rates like 4 liters per minute (lpm) and 5lpm. The maximum BTE was found of the WiDE10 with hythane20 at 5 lpm is 28.02% at full of load condition which is 5.69% of the higher when contrasted with the WiDE10 operation in a single fuel mode. The maximum in-cylinder pressure is found for the WiDE10 with hythane20 at a flow rate of 5lpm because of the higher hydrogen content shows the higher the flame speed results in improved combustion phenomena.

JOURNALS PUBLISHED BY THE FACULTY

Dr. K. Murahari,

Assoc. Professor

kmhari.lbrce@gmail.com



Title of the Paper: Multi-objective optimization of AAJM process parameters for cutting of B4C/Gr particles reinforced Al 7075 Machinability studies of lead induced Ti-6Al-4V alloy using Taguchi technique on WEDM process

Name of the Journal: Elsevier Materials Today proceedings

Co-Authors:

Publication on: 09.02.2021

ISSN No: 2214-7853

Doi: <https://doi.org/10.1016/j.matpr.2020.12.652>

Abstract: The advanced materials such as Titanium alloys have been used in aerospace, spacecraft and missile applications, due to their high tensile strength and ability to withstand high temperatures. In the present investigation, wire electrical discharge machining process (WEDM) has been used for machining of Lead induced Ti-6Al-4V. The experiments were conducted based on Taguchi L27 orthogonal array. The input factors namely current (I_p), pulse-on-time (T_{on}), servo voltage (SV) and pulse-off-time (T_{off}) were used and varied in order to observe cutting speed (CS), surface roughness (R_a), dimensional deviation (DD), recast layer thickness (RLT), micro hardness (MH) and surface integrity characteristics of machined component. Finally, the surface topography of alloys has been examined on the optimum conditions of performance characteristics WEDM samples.

JOURNALS PUBLISHED BY THE FACULTY

Dr. P. Vijay Kumar,

Professor

pjoel2013@gmail.com



Title of the Paper: An Experimental Investigation of Tube-in-Tube Type Heat Exchanger to Enhance Heat Transfer Using Titanium Oxide TiO_2 -Water Nanofluid

Name of the Journal: Springer Materials Today proceedings

Co-Authors: B. Kamala Priya

Publication on: 27, June 2021

ISSN No: 2214-7853

Doi: https://doi.org/10.1007/978-981-33-4165-4_5

Abstract: This paper presents the results of the enhancement of heat transfer performance and parametric study of the tube in a tube heat exchanger using TiO_2 -water nanofluid. Initially, a tube in tube heat exchanger experimental set up is fabricated with hot water flows in the outer tube and distilled water flows in the inner tube. Experiments have been conducted to estimate the heat transfer parameters such as Nusselt number, heat transfer coefficient, and Peclet number for different mass flow rates of heat transfer fluids. Later, distilled water is replaced with TiO_2 -water nanofluid, which flows in the inner tube; hot water flows in the outer tube. Experiments were conducted for different volume concentrations of TiO_2 -water nanofluid, and the variations in heat transfer parameters such as Nusselt number, heat transfer coefficient, and Peclet number were observed and analyzed. Finally, the performance of TiO_2 /water nanofluid was compared with distilled water and observed that the TiO_2 /water nanofluid causes the enhancement of the heat transfer coefficient, Nusselt number of the tube in a tube heat exchanger.

STUDENTS PROJECT

Title of the Project: LOCALIZED INTELLIGENT VEHICLE - ELECTRIC (LIV-E)

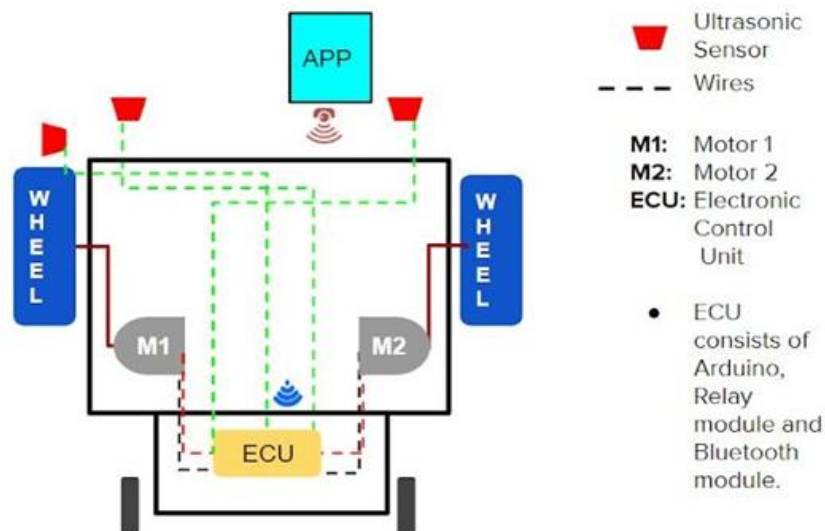
Project Members:

16761A03D6
 16761A03G3
 17765A0338
 17765A0334

Project Supervisor: DR. V. DHANA RAJU

Abstract:

In this era where technology is growing exponentially, there is a need for developing technologies which also solves societal problems along with the advancement to the future. This project is a similar step focussing on a group of people in society who are struggling with different types of disability. Localized Intelligent Vehicle (LIV-E) is a wheelchair based vehicle assisted with self driving i.e. autonomous driving technology. It is a user friendly vehicle which serves disabled people to move from one place to another and perform various day to day activities. As the LIV gets command from the user, it autonomously selects the path and moves to the desired destination. It has a voice command feature especially for blind people to control the motion. LIV is equipped with obstacle avoidance technology and provides safe travel. A light based sensor is used to detect obstacles and a microprocessor (arduino) processes the data and performs corresponding required action. The Arduino processor is programmed using Arduino IDE software in such a way that it can intelligently select a path and read the input data from sensors. This vehicle is the only vehicle of its kind with voice assisted self driving technology which has a wide potential users to help with its affordability.



HOW TO USE

STEP 1: Command your desired Destination using any of our 3 modes.

Mode 1: User navigation

Mode 2: Select a location on App

Mode 3: Just give Voice command of destination



STEP 2: Path selection based on command from step 1.



STEP 3: Identifying Obstacles in path and avoiding it.



The Destination is arrived!

1. WORKING STEPS



2. FLOW OF COMMAND

STUDENTS PROJECT

Title of the Project: DRAIN CLEANING ROBOT

Project Members:

16761A03D5

17765A0329

17765A0335

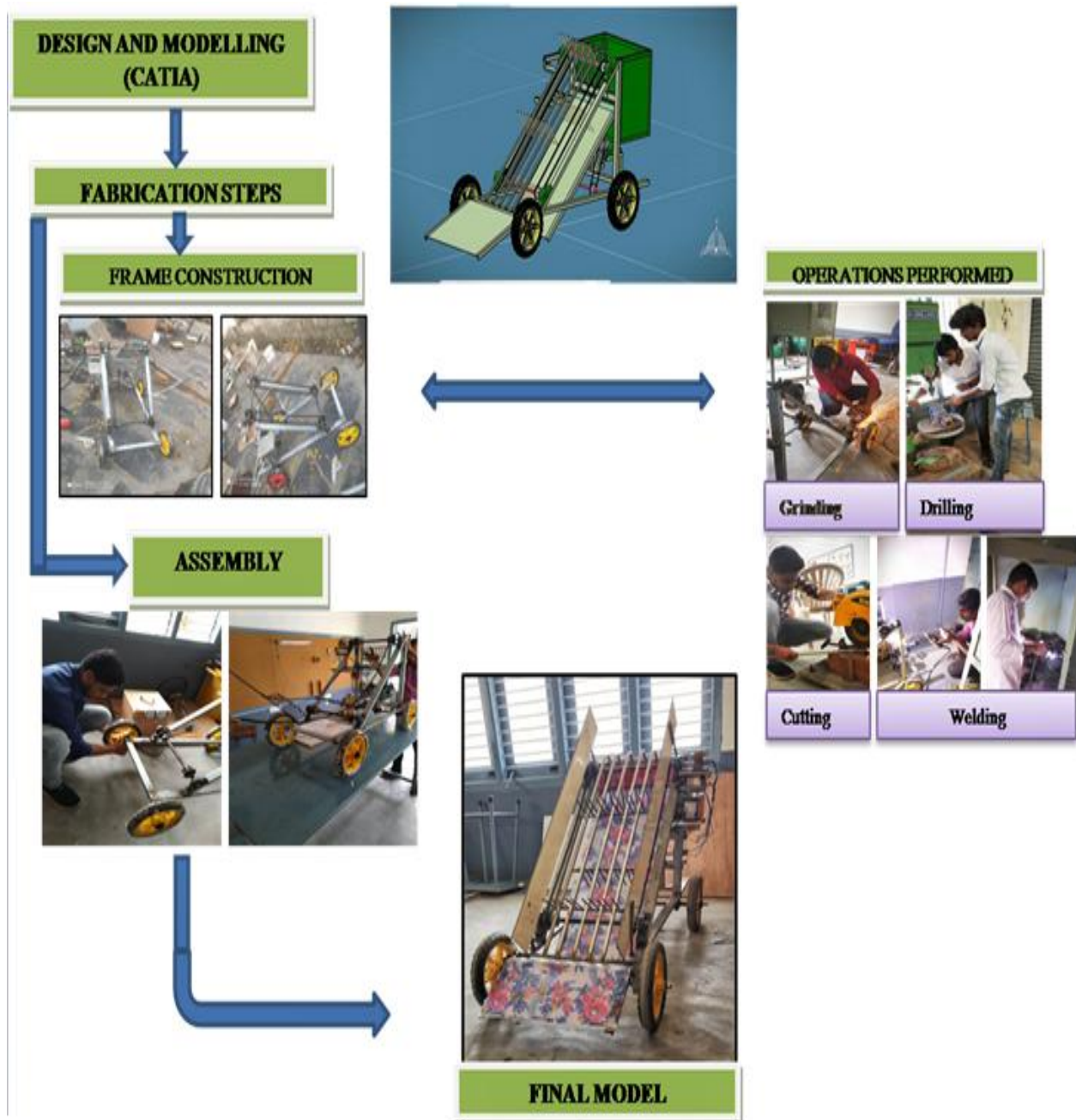
17765A0339

Project Supervisor: DR. N. SUNIL NAIK

Abstract:

Drainage is a daily outcome from each home which needs regular cleaning as well as in a short period of time. The advances in robotics, in the last ten years, have enabled robot technology to solve many practical problems that humans encounter in day to day activities. But, even today manual scavenging of drainage is practiced. In order to overcome these issues, an attempt has been made to design a drain cleaner robot. Manual extraction of the solid wastes can be dangerous for the life of the workers. So we have come with the idea of automatic extraction of the solid waste. This project automatically removes the solid waste and dumps into a dustbin and avoids the clogging of drainage. The project eliminates the need for manual extraction of solid waste. This robot reduces the risk of diseases, maintains the hygienic locality and reduces formation of dengue fever typhoid causes merge. This project emphasis on design and fabrication of the drain waste cleaning machine.

A robot is designed which can move along the drainage. The robot consists of a chain mechanism for transportation of waste materials which is present in the drain and through which waste will be collected in the container for bin. The main aim of the project is to reduce the involvement of men, time consumption for cleaning the drain and maintaining the proper flow of water by removing the blockages in the drain and efficiently cleans the floating as well as mud waste present in drain.



STUDENTS PROJECT

Title of the Project: DESIGN AND DEVELOPMENT OF MOTORCYCLE HELMET

Project Members:

16761A03G2

16761A03D8

16761A03G1

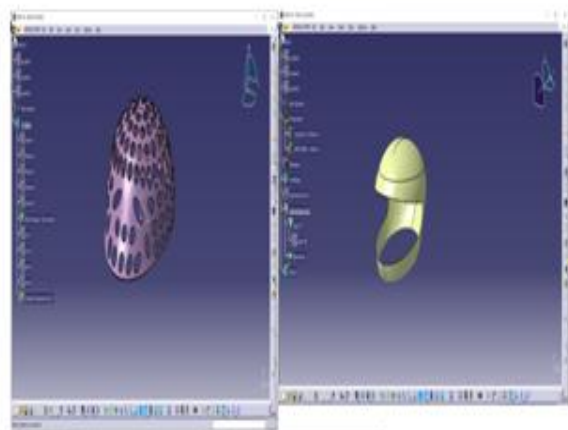
16761A03C1

Project Supervisor: DR. N. SUNIL NAIK

Abstract:

In recent times, due to rapidly growing population, traffic congestion and lack of parking space, two wheelers are the most popular mode of transportation. As per Indian traffic rules, it is mandatory to wear the helmet for safety while riding two wheeler. To provide safety for the rider, helmets are incorporated with lightweight plastic exterior, protective polystyrene layer and urethane comfort padding. It is very difficult to wear helmets for the longer duration in summer due to high temperature rise and lack of ventilation which increases the stress level of the humans. Since helmet designs are available in standard sizes and standard interior forms, it is difficult to fit for riders with different head shapes. There is a need for helmet which meets the requirement of human comfort, adjustable interior, and better visibility.

Through this project work an attempt is made to conceptually design a motorcycle helmet for improved human comfort, visibility, safety with adjustable interior form considering rider's ergonomics. Concept sketches will generate incorporating features like adjustable head form. Detailed design for the selected helmet concept and geometric model for the same will be create incorporating all the features as per the concept. A full scale working model of the helmet will built with all features, test and demonstrate for its functionality.



DESIGN

3D PRINTER



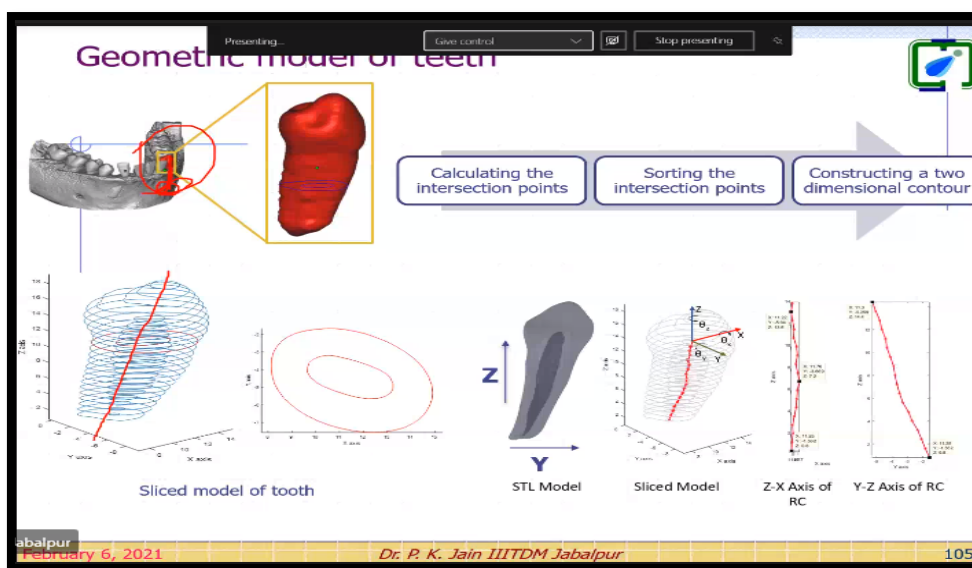
3D MODEL



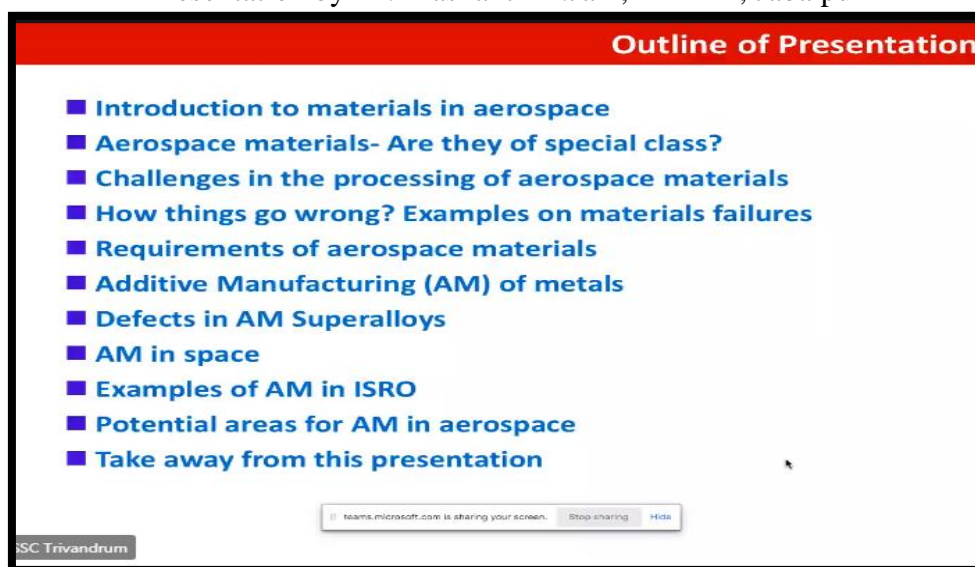
EVENTS ORGANIZED BY THE DEPARTMENT

ONLINE FACULTY DEVELOPMENT PROGRAM FRONTIER OF 3D PRINTING TECHNOLOGY AND ITS INDUSTRIAL APPLICATIONS (PHASE-II)

- The Department of Mechanical Engineering, organized a AICTE sponsored online faculty development program on “**Frontier of 3D printing technology and its industrial applications (Phase-II)**” through online from 25/01/2021 to 06/02/2021 by various faculty from reputed institutions. Dr.Murahari Kolli, J.Subba Reddy, K.V.Viswanadh coordinated the event.



Presentation by Dr. Prashanth K.Jain, IIITDM, Jabalpur



Presentation by Dr.S.V.S.Narayana Murthy, VSSC Trivandrum

WEBINARS

- The Department of Mechanical Engineering organized an online webinar on “**Cold chain 4 Life**” on 07/01/2021 by Mr. Vijayabaskaran, Ex-President, ISHRAE chapter Chennai. Dr. P. Vijay Kumar, Professor coordinated the event.

Learning objectives.

- **Introduction to Blood cold chain.**
 - The blood cold chain system & process
 - Temperature monitoring devices.
 - Blood cold chain equipment
- **Introduction to vaccine cold chain.**
 - Vaccine cold chain system.
 - Vaccine cold chain equipment and vaccine transport equipment .
 - Immunization schedule.

Saandeevani Vajje, Program Chair's screen

Presentation by Mr. Vijayabaskaran, Ex-President, ISHRAE chapter Chennai

Blood cold chain equipment

BLOOD BANK REFRIGERATORS

- Uniform 4°C Temperature Recovery
- Forced Air Circulation system
- Audible Visual Alarm
- Temp. Display

Role of blood cold chain equipment

Guest Lecture

- The Department of Mechanical Engineering organized an online guest lecture on **“Thermal Power Generation with focus on Gas Turbine based Combined Cycle Power Plant Operation & Environmental Aspects”** on 04/02/2021 by Mr.S.Anand, General Manager, Genting Lanco Power (India), Pvt. Ltd., Kondapalli. Dr.P.Ravindra Kumar, K.V.Viswanadh, K.Lakshmi Prasad coordinated the event.



Types of Thermal Power Plants



Working of Steam Turbine & Condensor

FRESHERS DAY CELEBRATIONS

- The Department of Mechanical Engineering organized Freshers day for A.Y. 2020-21 first year students on 27/02/2021 in drawing hall 3S09.



I year Students in Freshers Day celebrations



Dr.S.Pichi Reddy, HoD Interacting with I Year Students

SUMMARY OF COLLOQUIMS ORGANIZED

S. No	Name of The Faculty	Name of the Topic	Date
1.	B.Sudheer Kumar	Magnetorheological hybrid engine mounts	08.01.2021
2.	A.Naresh Kumar	Performance of biodiesel fuelled CI engine under the effect of various additives	25.01.2021
3.	K.V.Viswanadh	Vibration analysis of honey comb structures sandwich panel	08.02.2021
4.	S.Rami Reddy	Recent trends in IC engines	25.02.2021
5.	Ch.Siva Sankara Babu	Modal testing and evaluation of cracks on beam like structures using mode shape curvatures and natural frequencies	10.03.2021
6.	K.Narayana	Applications of composite materials in computer integrated manufacturing	23.03.2021

FDP's/STTP's/STC's/WORKSHOP's ATTENDED BY FACULTY

- Dr.P.Ravindra Kumar**, has participated in a faculty development program on “NBA Accreditation and Teaching - Learning in Engineering (NATE)” organized by IISc, bangalore from January to April 2020.
- Ch.Siva Sankara Babu**, has participated in a faculty development program on “Advances in Composite Materials and their Applications” organized by CMR Institute of Technology, Hyderabad from 28th to 30th Jan 2021.
- K.Lakshmi Prasad**, has participated in a faculty development program on “Introduction to Research” organized by IIT Madras from Sep-Nov 2020.
- B.Kamala Priya**, has participated in a faculty development program on “Advances in Composite Materials and their Applications” organized by CMR Institute of Technology, Hyderabad from 28th to 30th Jan 2021.
- V.Venkatrami Reddy**, has participated in a faculty development program on “Advances in Composite Materials and their Applications” organized by CMR Institute of Technology, Hyderabad from 28th to 30th Jan 2021.
- K.Sai Babu**, has participated in a faculty development program on “Advances in Composite Materials and their Applications” organized by CMR Institute of Technology, Hyderabad from 28th to 30th Jan 2021.
- Jonnala Subba Reddy**, has participated in a short term training program on “Additive Manufacturing for Medical & Aerospace Applications (Phase-IV)” organized by Sri Vishnu Engineering College for Women, Bhimavaram from 04.01.2021 to 09.01.2021.
- Sankararao Vinjavarapu**, has participated in a short term training program on “Additive Manufacturing for Medical & Aerospace Applications (Phase-IV)” organized by Sri Vishnu Engineering College for Women, Bhimavaram from 04.01.2021 to 09.01.2021.

9. Sankararao Vinjavarapu, has participated in a short term training program on “Effective Engineering Teaching Practices” organized by PVPSIT, Vijayawada during 18.01.2021 to 23.01.2021.
10. **K.Venkateswara Reddy**, has participated in a short term training program on “Exergy and Exergoeconomic Evaluation of Thermal power plants” organized by Pragati Engineering college (Autonomous), Surampalem from 04.01.2021 to 09.01.2021.
11. **K.Karthik**, has participated in a short term training program on “Exergy and Exergoeconomic Evaluation of Thermal power plants” organized by Pragati Engineering college (Autonomous), Surampalem from 04.01.2021 to 09.01.2021.
12. **Dr.V.Dhana Raju**, has participated in a workshop on “Fuel cell technology and research opportunities” organized by NIT, Warangal from 04.01.2021 to 08.01.2021.
13. **Dr.N.Sunil Naik**, has participated in a workshop on “Fuel cell technology and research opportunities” organized by NIT, Warangal from 04.01.2021 to 08.01.2021.
14. **S.Rami Reddy**, has participated in a workshop on “Fuel cell technology and research opportunities” organized by NIT, Warangal from 04.01.2021 to 08.01.2021.
15. Dr.P.Vijay Kumar, has participated in a faculty development program on “Inculcating Universal Human Values in Technical Education” organized by AICTE, New Delhi during 01.02.2021 to 05.02.2021.
16. The following are the list of faculty participated in AICTE sponsored online faculty development program on “Frontier of 3D Printing Technology and its Industrial Applications (Phase-II)” organized by Lakireddy Bali Reddy College of Engineering, Mylavaram from 25.01.2021 to 06.02.2021.

S.No.	Name of the faculty	Designation
1.	Dr.P.Ravindra Kumar	Professor
2.	Dr.N.Sunil Naik	Associate Professor
3.	S.Srinivasa Reddy (Jr)	Sr.Assistant Professor
4.	Ch.Siva Sankara Babu	Sr.Assistant Professor
5.	V.Sankararao	Assistant Professor
6.	B.Udaya Lakshmi	Assistant Professor
7.	Mallikarjuna Rao Dandu	Assistant Professor
8.	A.Dhanunjay Kumar	Assistant Professor
9.	S.Snigdha	Assistant Professor
10.	V.Venkatrami Reddy	Assistant Professor
11.	K.Karthik	Assistant Professor
12.	K.Srinivasa Rao	Assistant Professor
13.	B.Dyva Issac Prem Kumar	Assistant Professor

17. B.Chaitanya, has participated in a faculty development program on “Research Methodology and Data Analytics using SPSS and R” organized by Sree Vidyanikethan Institute of Management during 01.02.2021 to 06.02.2021.
18. Dr.K.Murahari, has participated in a faculty development program on “Additive Manufacturing” organized by Hindustan College of Engineering & Technology during 16.02.2021 to 20.02.2021.
19. Dr.V.Dhana Raju, has participated in a faculty development program on “Hybrid Vehicle Technology” organized by JNTUH, Hyderabad during 11.02.2021 to 13.02.2021.
20. Ch.Siva Sankara Babu, has participated in a faculty development program on “Strategic Methods and Tools For Product Development” organized by SRKR Engineering College, Bhimavaram during 02.02.2021 to 26.02.2021.
21. Ch.Siva Sankara Babu, has participated in a faculty development program on “Strategic Methods and Tools For Product Development” organized by SRKR Engineering College, Bhimavaram during 02.02.2021 to 26.02.2021.
22. A.Nageswara Rao, has participated in a faculty development program on “Research Methodology and Data Analytics using SPSS and R” organized by Sree Vidyanikethan Institute of Management during 01.02.2021 to 06.02.2021.
23. B.Kamala Priya, has participated in a faculty development program on “Thermal Engineering” organized by KIT, Tiptur, Karnataka during 17-02-2021 to 23-02-2021.
24. Sankararao Vinjavarapu, has participated in a short term training program on “Advanced Vibrations- Various Engineering Applications with hands on sessions” organized by JNTUK, Kakinada during 08.02.2021 to 13.02.2021.
25. K.Venkateswara Reddy, has participated in a short term training program on “Advanced Vibrations- Various Engineering Applications with hands on sessions” organized by JNTUK, Kakinada during 08.02.2021 to 13.02.2021.
26. B.Chaitanya, has participated in a short term training program on “Strategic Methods and Tools For Product Development (Phase-I)” organized by Sagi Rama Krishnam Raju Engineering College (A), Bhimavaram during 22.02.2021 to 26.02.2021.
27. Ch.Siva Sankara Babu, has participated in a short term training program on “Strategic Methods and Tools For Product Development (Phase-I)” organized by Sagi Rama Krishnam Raju Engineering College (A), Bhimavaram during 22.02.2021 to 26.02.2021.
28. A.Nageswara Rao, has participated in a short term training program on “Strategic Methods and Tools For Product Development (Phase-I)” organized by Sagi Rama Krishnam Raju Engineering College (A), Bhimavaram during 22.02.2021 to 26.02.2021.
29. K.Karthik, has participated in a short term training program on “Strategic Methods and Tools For Product Development (Phase-I)” organized by Sagi Rama Krishnam Raju Engineering College (A), Bhimavaram during 22.02.2021 to 26.02.2021.

30. B.Chaitanya, [has participated in a short term training program on “Strategic Methods and Tools For Product Development \(Phase-II\)”](#) organized by Sagi Rama Krishnam Raju Engineering College (A), Bhimavaram during 22.03.2021 to 26.03.2021.
31. Ch.Siva Sankara Babu, [has participated in a short term training program on “Strategic Methods and Tools For Product Development \(Phase-II\)”](#) organized by Sagi Rama Krishnam Raju Engineering College (A), Bhimavaram during 22.03.2021 to 26.03.2021.
32. A.Nageswara Rao, [has participated in a short term training program on “Strategic Methods and Tools For Product Development \(Phase-II\)”](#) organized by Sagi Rama Krishnam Raju Engineering College (A), Bhimavaram during 22.03.2021 to 26.03.2021.
33. K.Karthik, [has participated in a short term training program on “Strategic Methods and Tools For Product Development \(Phase-II\)”](#) organized by Sagi Rama Krishnam Raju Engineering College (A), Bhimavaram during 22.03.2021 to 26.03.2021.
34. S.Rami Reddy, [has participated in a short term training program on “Model Curriculum”](#) organized by NIT, Mizoram during 15.03.2021 to 19.03.2021.
35. B.Kamala Priya, [has participated in a short term training program on “AICTE-ISTE Refresher Programme on "Thermal Engineering”](#) organized by Kalpataru Institute of Technology, Tiptur, Karnataka during 17.03.2021 to 23.03.2021.
36. K.Venkateswara Reddy, [has participated in a short term training program on “Recent Trends in Electric Vehicles \(Phase-I\)”](#) organized by Gudlavalleru Engineering College, Gudlavalleru during 17.03.2021 to 19.03.2021.
37. V.Venkatrami Reddy, [has participated in a short term training program on “Recent Trends in Electric Vehicles \(Phase-I\)”](#) organized by Gudlavalleru Engineering College, Gudlavalleru during 17.03.2021 to 19.03.2021.
38. K.Srinivasa Rao, [has participated in a short term training program on “Recent Trends in Electric Vehicles \(Phase-I\)”](#) organized by Gudlavalleru Engineering College, Gudlavalleru during 17.03.2021 to 19.03.2021.
39. V.Venkatrami Reddy, [has participated in a short term training program on “Strategic Methods and Tools For Product Development \(Phase-II\)”](#) organized by Sagi Rama Krishnam Raju Engineering College (A), Bhimavaram during 22.03.2021 to 26.03.2021.
40. B.Dyva Issac Prem Kumar, [has participated in a short term training program on “Strategic Methods and Tools For Product Development \(Phase-II\)”](#) organized by Sagi Rama Krishnam Raju Engineering College (A), Bhimavaram during 22.03.2021 to 26.03.2021.

FACULTY ACHIEVEMENTS

Ph.D Submissions

Name of the Faculty	Designation	Name of the University	Month & Year of Submission
Ch.Siva Sankara Babu	Sr. Asst. Professor	Andhra University Visakhapatnam	Feb 2021
A.Naresh Kumar	Sr. Asst. Professor		

PATENTS PUBLISHED

Name of the Inventors	Patent number	Title of the Patent	Agency	Date of Published
V.Dhana Raju, K.Vinayak, K.Appa Rao, S.Pichi Reddy, J.Subba Reddy, P.Ravindra Kumar, M.B.S.Srikara Reddy, N.Sunil Naik, S.Rami Reddy	202141007160 A	Localized intelligent vehicle-electric	IP India	26.02.2021
R. Bhaskaran, Hireen Dekate, P.Ravindra Kumar, M. Gurusamy, D. Krishna Kumar, P. Uma Swarupa, Mohan Dattu Sangale, Satyanarayana Katakam, Sandeep Rout, Ajay Kumar Prusty	2020103242	Prevention of food harmfulness from production to customer for centralized kitchen facility using IoT	IP Australia	03.03.2021
Dr.A.Kishore Kumar Mrs.M. Padmapriya Mr.A.Anbazhagan Dr.N.Satheesh Kumar Dr.Udaya Kumar Durairaj Dr.M.Ananad Geeta.K R.Lakshmi Dr.A.V.G.Marthanda K Lakshmi Prasad Mr.M.Sivaramsrishnan Mr.V.Lokash	202141007828 A	Generation of E-Bill Transaction Number Using Blockchain Technology	IP India	05.03.2021

NPTEL ONLINE CERTIFICATIONS

- The following are the details of faculty completed the NPTEL online courses during 2020-21.

S.No.	Name of the Faculty	Title of the course	Duration	Awarding Institute	Grade
1.	Dr.P.Vijay Kumar	Effective Engineering Teaching Practice	Jan to Feb 2021	IIT, Madras	Elite
2.	Dr.P.Ravindra Kumar	NBA Accreditation and Teaching - Learning in Engineering (NATE)	Jan – Apr 2020	IISc, Bangalore	Elite + Silver
3.	Dr.P.Ravindra Kumar	Power Plant Engineering	Jan – Apr 2020	IIT Roorkee	Elite + Silver
4.	Dr.P.Ravindra Kumar	Laws of Thermodynamics	Jan to Feb 2021	IIT, Kharagpur	Successfully Completed
5.	J.Subba Reddy	Engineering Drawing and Computer Graphics	Sep to Dec 2020	IIT Kharagpur	Elite + Silver
6.	Dr.V.Dhana Raju	Power Plant Engineering	Jan – Apr 2020	IIT Roorkee	Top 5%
7.	A.Naresh Kumar	Module 7: Creative problem solving, Innovation and Meaningful Research and Development	Jan-May 2020	NITTTR-Chandigarh	Elite + Silver
8.	K.Lakshmi Prasad	Introduction to Research	Sep - Nov 2020	IIT Madras	Elite
9.	B. Kamala Priya	Effective Engineering Teaching in Practise	Jan-Feb 2021	IIT Madras	Successfully Completed
10.	S.Snigdha	NITTTR- Module 1: Orientation towards Technical Education & Curriculum Aspects.	Sep - Nov 2020	NITTTR-Chennai	Elite + Silver

- Dr.P.Ravindra Kumar received Appreciation certificate from NPTEL as Discipline Star Dec 2020.
- Dr.P.Ravindra Kumar got Appreciation certificate from NPTEL as NPTEL Belivers 2020.
- Dr.V.Dhana Raju acted as external supervisor to Mr.S.Rami Reddy for Ph.D part time course in KLEF, Vaddeswaram, Guntur from 23.02.2021.

STUDENT ACHIEVEMENTS/ACTIVITIES

- The following students got **consolation prize** in the event of poster presentation on 02.02.2021 in the eve of “WORLD WETLANDS DAY” conducted by prakruthi club, Lakireddy Bali Reddy College of Engineering, Mylavaram.

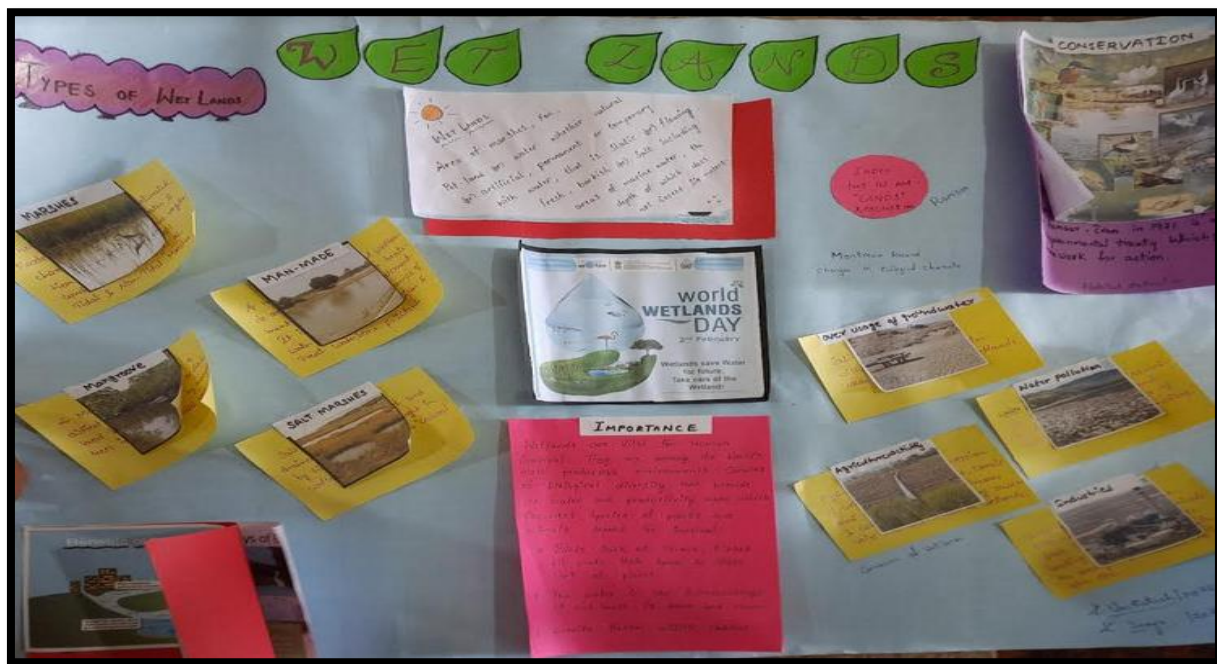
S.No.	Name of the student	Roll No.	Year
1.	K.Surya Durga Prasad	20765A0320	II
2.	K.Venkatesh	20765A0337	II



K.Venkatesh



K.Surya Durga Prasad



Poster presented in World Wetlands Day on 02.02.2021

STUDENT CONFERENCES

- The following are the list of students participated in AICTE Sponsored International Conference on Advances in Mechanical Engineering (ICAME21) organized by Sai Ram Engineering College, Chennai from 27.01.2021 to 28.01.2021.

S.No.	Name of the student	Roll No.
1.	Phani Kumar K.S.S	16761A0323
2.	Vinay V	16761A0355
3.	Leela Prasad K	17765A0307

STUDENTS QUALIFIED IN GATE/CAT/IELTS/GRE/TOEFL, etc

S.No.	Name of the student	Roll No	Qualified Exam	Qualified exam Hall Ticket No.	Score	Rank
1.	O.Sai Mahesh	16761A0395	TOEFL	7825812213604994	88	-
2.	Gutta Sai Pranay	16761A0376	GRE	8873566	308	-
3.	B.Samba Siva Rao	15761A0305	ICET	2438010179	53.64	32299
4.	M.Raghavendra Rao	15761A0393	IELTS	79321	6	
5.	Anagani Divya	15761A0303	PGE CET	6210151472	75	12
6.	A.Rama Vamsi Krishna	15761A0361	PGE CET	9106141417	55.28	913
7.	K. Surya Sai Kumar	17761A0325	GATE	ME21S86066168	399	13608
8.	R.Pavan Kumar	16761A03A2	TOEFL	2327003214062247	93	-
9.	P.Krishna Vamsi	16761A0345	IELTS	175542	7	-
10.	Sandeep S	16761A03A3	GRE	9107914	301	-

STUDENTS JOINED IN HIGHER STUDIES

S.No.	Name of the student	Roll No	Name of Course	Institute, Place
1.	Kothapalli Smadhil	16761A0386	M.Sc	University of Hertfordshire
2.	Obillaneni Sai Mahesh	16761A0395	MS	Wright State University
3.	Thotapalli Kranthi Deepak	16761A0354	M.Tech	JNTUA College of Engg - Pulivendula
4	Mallela Jaya Krishna	16761A03F0	MBA	Adikavi Nannaya University – Tadepalligudem
5.	Kokkiligadda Ramanjaneyulu	16761A0326	M.Tech	ANU College of Engg Technology- Guntur

6.	Kunduru Leela Prasad	17765A0307	MBA	Krishna University, Nuzvid
7.	A.V.Eshwara Sai Datta	15761A0359	MBA	Amity University
8.	Anagani Divya	15761A0303	M.Tech	A U college of Engg., Visakhapatnam
9.	Kokkiligadda Ramanjaneyulu	16761A0326	M.Tech	JNTUA College of Engg., Anantapuramu
10.	Kunduru Leela Prasad	17765A0307	MBA	Krishna University campus, Nuzvid
11.	Gorla Kusuma Reddy	16761A0316	MS	Wright State University
12.	Anagani Divya	15761A0303	M.Tech	A U college of Engg., Visakhapatnam

NSS

The following are the list of students participated as volunteers for pulse polio program on 31.01.2021.

Sl. No.	Student Name	Roll Number	Year
1.	M.Padmini	17761A0329	IV
2.	P.Rajani	18765A0312	IV
3.	G.Sasivardhan	17761A0371	IV
4.	V.Rakesh Sai	18765A0330	IV

- The following are the list of students participated as volunteers for Grama Panchayat elections Phase I & II.

S.No.	Student Name	Roll No.	Duration	Place
1	L.Kiran Siva Naga Kumar	17761A0327	8 th to 9 th Feb 2021	Mylavaram Region
2	Bathula Siva Krishna	17761A0356	8 th to 9 th Feb 2021	Mylavaram Region
3	L Krishna Kanth	17761A03D9	8 th to 9 th Feb 2021	Mylavaram Region
4	Nidamanuri Sridhar	17761A03E6	8 th to 9 th Feb 2021	Mylavaram Region
5	E Prasad	18765A0307	8 th to 9 th Feb 2021	Mylavaram Region
6	G.Rakesh Roshan	18765A0321	8 th to 9 th Feb 2021	Mylavaram Region
7	Gopae Veeranjanyulu	18765A0335	8 th to 9 th Feb 2021	Mylavaram Region
8	Pulicharla Ramakrishna	18765A0342	8 th to 9 th Feb 2021	Mylavaram Region
9	B.V.Gopi	18765A0303	8 th to 9 th Feb 2021	Mylavaram Region

10	B.Sai Chandu	17761A0342	8 th to 9 th Feb 2021	Mylavaram Region
11	Chellu Tharun Kumar	17761A0363	8 th to 9 th Feb 2021	Mylavaram Region
12	Chodavarapu Teja Sundhar	17761A0367	8 th to 9 th Feb 2021	Mylavaram Region
13	A D V Vinay Sandeep	19761A0301	20 th -21 st Feb 2021	Vissannapeta
14	Battula Suman	19761A0302	20 th -21 st Feb 2021	Telladevarapalli
15	Javvadi Uday Kiran	19761A0313	20 th -21 st Feb 2021	Telladevarapalli
16	Karuturi Sunil	19761A0318	20 th -21 st Feb 2021	Kondaparva
17	Padala Bhanu Prakash	19761A0327	20 th -21 st Feb 2021	Chandrupatla
18	Pujala Mani Srinivasarao	19761A0334	20 th -21 st Feb 2021	Polisetipadu
19	Shaik Imran	19761A0337	20 th -21 st Feb 2021	Marepalli
20	Simhadri Phani Raja	19761A0340	20 th -21 st Feb 2021	Marepalli
21	Varikuti Sai Manikanta	19761A0344	20 th -21 st Feb 2021	Khambampadu
22	Abdul Sameer Faisal	19761A0348	20 th -21 st Feb 2021	Atlapragada
23	Aluri Ajay	19761A0350	20 th -21 st Feb 2021	Patha konduru
24	Borra Vamsi	19761A0352	20 th -21 st Feb 2021	Patha Konduru
25	Modiboina Srinivasa Rao	19761A0363	20 th -21 st Feb 2021	Kotipalli
26	N C Manikanta Sai Krishna	19761A0370	20 th -21 st Feb 2021	Matriya Tanda
27	Orugu Srinivasa Rao	19761A0375	20 th -21 st Feb 2021	Matriya tanda
28	Peddiboina Subba Rao	19761A0379	20 th -21 st Feb 2021	Krishnarao palem
29	Potnuru Surya	19761A0381	20 th -21 st Feb 2021	Krishnarao palem
30	Tata Sai Pavan	19761A0387	20 th -21 st Feb 2021	Krishnarao palem
31	Azmeera Rupa Vinayak	19761A0398	20 th -21 st Feb 2021	New repudi
32	Banavathu Jaswanth Babu	19761A0399	20 th -21 st Feb 2021	New repudi
33	Borukati Phanendra Varma	19761A03A4	20 th -21 st Feb 2021	Krishnaraopalem
34	Gangireddy Sumanth Reddy	19761A03B0	20 th -21 st Feb 2021	Repudi thanda
35	Kagitha Chenna Gopi Raju	19761A03B4	20 th -21 st Feb 2021	Old repudi
36	Malavatu Nagaraju	19761A03C6	20 th -21 st Feb 2021	Repudi thanda
37	M.Chandra Sekhar Reddy	19761A03C7	20 th -21 st Feb 2021	Repudi thanda
38	M.Vijay Kumar Naik	19761A03C8	20 th -21 st Feb 2021	Repudi thanda
39	Pagadala Ravi Teja	19761A03D1	20 th -21 st Feb 2021	Repudi thanda
40	Rangiseti Naveen	19761A03D5	20 th -21 st Feb 2021	Repudi thanda



NSS Volunteers with NSS Officer Dr.P.Ashok Reddy



M.VIJAY KUMAR,19761A03C8

J.UDAY KIRAN,19761A0313

Students participated in Panchayat Elections Phase I & II

NCC

- On the occasion of Republic Day three of our students has participated in the parade was held on 26-01-2021 in LBRCE, Mylavaram.

S. No.	Rgtl No.	Name of the Cadet	Roll. No.
1.	AP 19 SWA 372091	M.Divya Teja	18761A0383
2.	AP 19 SWA 372083	T.Veena Naga Madhuri	18761A03A3
3.	AP 19 SWA 372082	K.Akanksha	18761A03D4

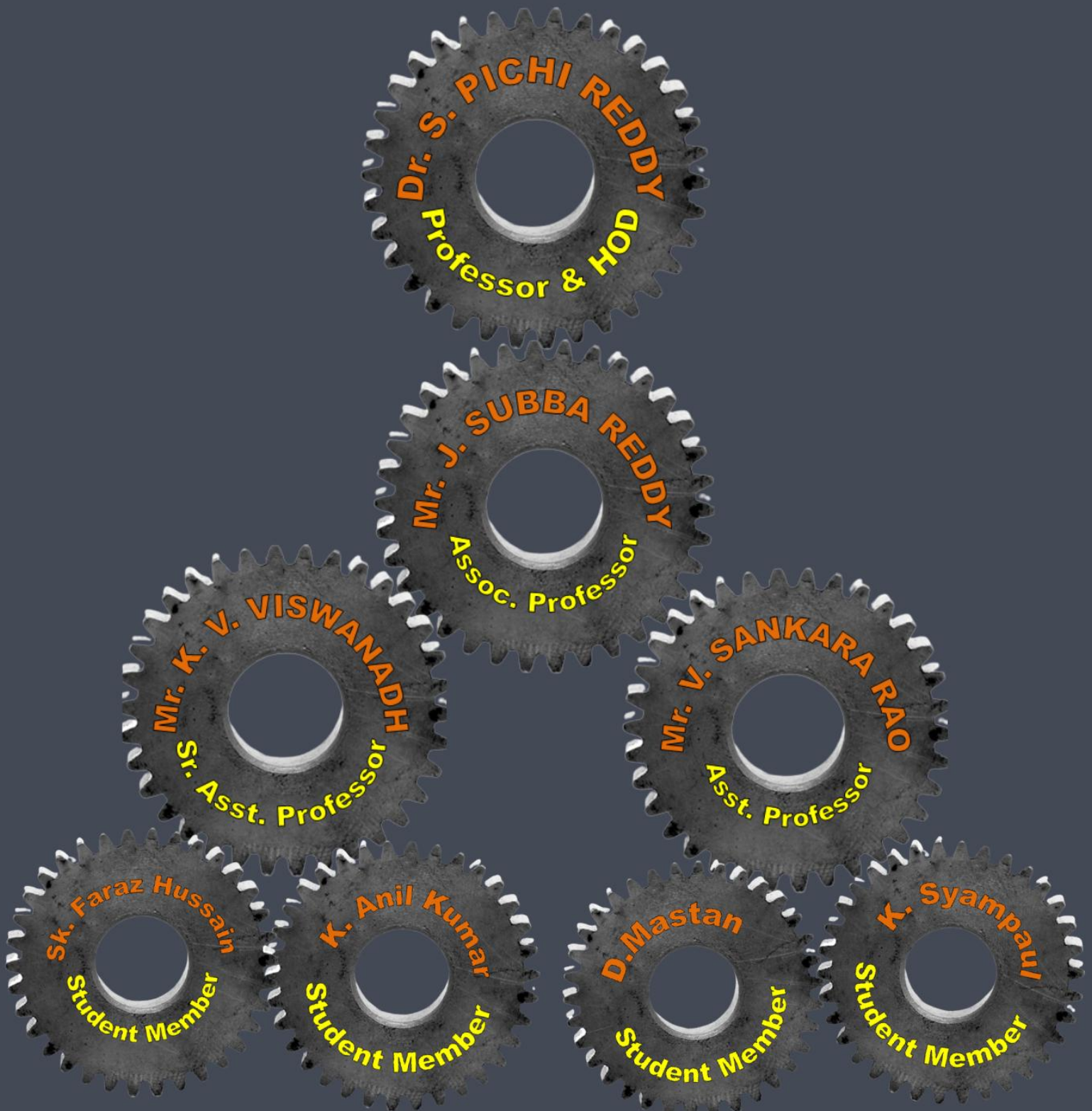


NCC girls participated in republic day celebrations on 26.01.2021

ACKNOWLEDGEMENTS

The department expresses sincere thanks to all faculty, technical staff and students for contribution towards the technical magazine- mech pulse.

Editorial Board



DEPARTMENT OF MECHANICAL ENGINEERING
LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(Autonomous)

Accredited by NAAC & NBA under Tier - I

Approved by AICTE and Permanently Affiliated to JNTUK, Kakinada

Mechanical Engineering E-Magazine (LBRCE)