

# VISION

- The Mechanical Engineering department strives to produce quality engineers to enable them pursue diverse careers with professional standards and ethical values

JULY-DEC 2016, Vol-2, Issue-1



# NEWSLETTER

## MISSION

- To provide relevant and quality education to meet needs of industry and society.
- To equip with requisite set of skills and knowledge to succeed and thrive as engineers and leaders.
- To provide a continuous learning environment for promoting research activities
- To provide a competitive atmosphere to encourage innovative and original thinking.

2016 - 2017

## DEPARTMENT OF MECHANICAL ENGINEERING



### Editorial Board:

**Head:** Dr.D.Hanumantha Rao

**Principal:** Dr.D.Hanumantha Rao

**Faculty:** Mrs Poojitha

**Faculty:** Mr M V Kishore

**Student:** Mrs Anandini

**Student:** MrAbhishek

## Faculty Corner

### Faculty Publications

- ❖ Mr M V Kishore Assistan Professor, Professor Dr. D. Hanumantha Rao has published a paper on Development of a mathematical model to study fluidity in Thixofoming using Fuzzy logic approach in IOSR journal of MECH & Civil Engineering NOV/DEC 2016
- ❖ Mr M V Kishore Assistan Professor, Professor , Dr. D. Hanumantha Rao has published a paper on Effect of mechanical stirring on the preparation of billet for A 356 alloy in semisolid metal processing in Indian Foundry Journal July 2016
- ❖ Mr. C. Venkateshwar Reddy has published a paper on Influence of Hybrid Resin System on Mechanical Properties of carbon fibre T700 by Filament Wound Composites in ICAMM 8-10 Dec, OU, Hyd.
- ❖ Mr. A. KALYAN CHARAN, Asst .Prof , presented a technical paper entitled "Heat transfer enhanced through perforated fins" International conference on emerging trends in Mechanical Engineering. ICFAI ,Hyderabad (sep 23-24 ,2016)
- ❖ Mr. A. KALYAN CHARAN Asst .Prof ,presented a technical paper entitled "Study on thermal analysis of a rectangular plate perforated fins" national conference on advances in emerging trends in Mechanical Engineering ,Vasavi college of engineering, Hyderabad (OCT 6-7 ,2016)

### FDPs / STTPs / Workshops attended by the Faculty

- ❖ Mr.M.V.Kishore Assistant. Professor
  - One day workshop on "ENTERPRENEURSHIP DEVELOPMENT" at MECs HYderabad on 1.10.2016
  - Three day workshop on "Quality Initiatives in outcome Based Technical Education" organized by IEEE at MECS Hyderabad from 01.09.2016-03.09.2016
  - Three day orientation program on "Engineering Graphics using AUTOCAD" at MECS Hyderabad from 21.07.2016- 23.07.2016
- ❖ Mr.C Venkateshwara Reddy Assistant. Professor
  - One day workshop on "ENTERPRENEURSHIP DEVELOPMENT" at MECs HYderabad on 1.10.2016
- ❖ Mr.M.Krishna Assistant. Professor
  - Three day orientation program on "Engineering Graphics using AUTOCAD" at MECS Hyderabad from 21.07.2016- 23.07.2016
  - One week workshop on Faculty Updation Program on Product Design & manufacturing atC-DAC,HYD from 28.11.2016- 02.12.2016
  - Three day workshop on "Quality Initiatives in outcome Based Technical Education" organized by IEEE at MECS Hyderabad from 01.09.2016-03.09.2016
- ❖ Mr.T Somashekar Assistant. Professor
  - Three day orientation program on "Engineering Graphics using AUTOCAD" at MECS Hyderabad from 21.07.2016- 23.07.2016

- Three day workshop on Faculty Updation Program on Product Design & manufacturing at C-DAC, HYD. from 28.11.2016- 02.12.2016
- Two day workshop on Advanced Welding Techniques” at O.U Hyderabad from 21.10.2016- 22.10.2016
- ❖ Mr.Naveen Kishore Assistant. Professor
  - Three day workshop on Faculty Updation Program on Product Design & manufacturing at C-DAC, HYD. from 28.11.2016- 02.12.2016
- ❖ Mr. A Kalyan Charan Assistant. Professor
  - Two day seminar on “Turbo Machinery & Electrical Equipment” at MVSREC,HYD from 21.12.2016- 22.12.2016
- ❖ Mr.Aditya seshu Assistant. Professor
  - Three day orientation program on “Engineering Graphics using AUTOCAD” at MECS Hyderabad from 21.07.2016- 23.07.2016
  - One day workshop on “ENTERPRENEURSHIP DEVELOPMENT” at MECs HYderabad on 1.10.2016
  - Two day seminar on Turbo Machinery & electrical equipment at MVSR, HYD from 21.12.2016- 22.12.2016
- ❖ Mr.Sampath Siddam Assistant. Professor
  - Three day orientation program on “Engineering Graphics using AUTOCAD” at MECS Hyderabad from 21.07.2016- 23.07.2016
  - One day NPTEL Workshop at VCE,HYD on 09.07.2016
- ❖ Mrs B Laxmi Assistant. Professor
  - Three day workshop on Faculty Updation Program on Product Design & manufacturing at C-DAC, HYD. from 28.11.2016- 02.12.2016

### Events Organized

- ✓ Three Day Orientation Program on ENGG GRAPHICS using AUTO CAD” from 21st to 23rd July 2016, jointly conducted by Mechanical Engineering and civil engineering department
- ✓ A one day ENTREPRENEURSHIP DEVELOPMENT PROGRAM conducted in association with National small industry corporation on 1st October 2016

### Events Organized in association with Proccessional Society's

- ✓ SAE Tier 1 technical events held at MECS, Hyderabad on 26th September 2016

### Students' corner:

### State and National level participation

- ✓ D Abhiram of 4ME has participated in Demu Engine system, at Secundrabad on 16.7.2016
- ✓ V Shivarama of 3ME has participated in Robotics Workshop, at JNTUH, Hyderabad on 29.8.2016
- ✓ Adarsh, Akhil Sai, V Shivarama, of 3ME has participated in Tech Fest 2016, (Machine Assembly), at JNTUH, Hyderabad on 31.7.2016
- ✓ Adarsh, V Shivarama, of 3ME has participated in Tech Fest 2016, (Aero Modelling), at JNTUH, Hyderabad on 31.7.2016
- ✓ A group of 13 people with TEAM FLASH has participated in ISIE India –SDP On Solar Vehicle Design & Manufacturing of Electronic Solar Vehicle (ESV) of 2ME scheduled on 30-9-16 to 2-10-16 at SRK Engineering college Bhimavaram Andhra Pradesh
- ✓ S Sai Krishna, pruthviraj of 3ME has participated in SAE Tier 2 events, in (Threading) scheduled on 30.12.2017 at CMR, Hyderabad

### Prizes/ Awards received by students

About 6 students have secured I and II positions in various extracurricular events conducted by reputed institutes and Universities in the state.

- ✚ S Sai Krishna, P Shivaram goud, SK Dilshad of 2ME, has won 1st Prize in SAE Tier 2 (Work holding) organized at MRCET, Hyderabad from December 29th-30th 2016
- ✚ Shashank, S Praneeth, Krishna Teja of 3ME, has won 2nd Prize in SAE Tier 2 (Aero design & Fabrication) organized at MRCET, Hyderabad from December 29th-30th 2016
- ✚ Y Prashanth of 2Me has awarded 3rd prize in Micro mouse kshitij-16, held at MVSR engineering college Hyderabad from 25-26th Sept 2016

### Faculty Achievements

- ❖ Mr A Kalyan charan has registered Phd in JNTUH in Thermal Engineering on 20.7.2016
- ❖ Mr V Harinath has registered Phd in JNTUH in Thermal Engineering on 22.7.2016

### Student Articles

#### Cleaner and Greener Fuel-The only way out

'Modern technology owes ecology an apology'. The ever increasing technological advancements has had manifold ramifications, both good and bad. On one hand while it has made human lives easier, on the other hand it has spelt doom to our fragile ecology. The rapid depletion of natural resources, extinction of flora and fauna and global warming stand testimony to this fact. As someone rightly said 'Necessity is the mother of invention.' The dire need for alternate and renewable sources of energy has lead a team of scientists and engineers in Purdue University, US to design a micro-propulsion system that uses a water as a liquid propellant. The surprising part is that this propulsion system has been tried and tested in tiny satellites called Cubesats.

What are Cubesats?

Cubesats are tiny satellites that typically weigh around two kilograms. They are believed to take over the sky in future to carry out tasks like imaging and remote sensing currently performed by heavier satellites which are expensive to build and launch as well.

How does the Water propulsion system work?

- The propulsion system will be integrated with thrusters that use capillaries thinner than human hair through which the water propellant flows.
- The miniscule capillaries act like valves that can be turned on and off by activating the heaters.

A new possibility:

With the success of water propellant system, scientists and engineers are exploring and testing the possibilities of using the same system on a macro scale in different variants of 2 wheeler motor bikes. Recycled sewage water can be put to excellent use this way, thereby cutting down on both expenses and carbon emissions.

**Thrilochan Sharma**  
**BE 3/4 Mech.Engg**

### **VEHICULAR SAFETY MANAGEMENT SYSTEM**

The vehicle safety is the main issue today. Public vehicle are destroyed by many reasons like fire in vehicle, internal problems. The VSMS system is more useful for Public transport, it includes the Fire management system, Vehicle health system.

#### **FIRE CONTROL SYSTEM (FCS)**

Due to fire many public vehicles are destroy, to control the fire in vehicle, we need to find the fire location and control the fire with help of automatic control for fire sensing and respond it to the controller.

#### **HOW IT WORKS**

In the event of a very high speed, high-energy rear impact, a system of crash sensors and high speed electronic processors determines that the system needs to deploy. The system delays deployment until the ABS wheel sensors indicate the wheels have slowed and the vehicle is coming to rest.

If the vehicle speed sensors have been so damaged in the accident that they are unable to command deployment, a back-up timer will deploy the system six seconds after impact. The fire suppression materials are stored in an unpressurized liquid state. When the deploy signal is given, two gas generators, similar to the gas generators used in airbags, generate high pressure gas. Suppressant and surfactant materials are then emitted through a system of manifolds and nozzles to suppress the fire.

#### **VEHICLE HEALTH SYSTEM**

Public vehicles are continuously running on road for many hours. Once they break down, it takes substantial cost to repair them. Besides, since repairing a vehicles takes much time, it significantly affects the activity rate. Therefore, publicvehicle, especially large ones, are required to be free of down time and capable of planned operations without interruption. In order to secure such machines, it is necessary to early detect any symptoms of vehicular trouble by physical examination, etc. and have the maintenance personnel take suitable measures without delay. Transmission and rotors to detect developing problems.

The method that has been recommended most is to carry out prescribed periodical inspection and repair in a prescribed way. However, if some vehicle trouble occurred, there was no alternative but to rely on the experience of a skilled instruments. Several attempts have been made to have the vehicle collect data and diagnose trouble for itself. However, it was impossible to detect symptoms of vehicle trouble beforehand and take suitable preventive measures

**Phani**  
**BE 1/4 Mech.Engg**



## Gallery

Three Day Orientation Program on **ENGINEERING GRAPHICS using AUTO CAD**, 21st –23rd July



Commencement of 2/4,3/4,4/4 Class Work for Mechanical and Civil departments in the new Building. Which was inaugurated on 11th July,2016



The following labs were relocated to the new building





**Abhishek Ranga and J.Anandini Sravya of BE 2/4 Mech won the 1st and 3rd prizes respectively in the Inter-College Elocution com-petitions conducted by Midhani (Mishra Dhatu Nigam),Ministry of Defence, Govt. of India on the occasion of Vigilance Awareness Week conducted from 31st Octo-ber to 5th November 2016**



***Students from Matrusri Engineering College of Mechanical, Electrical & Electronics has participated in Electric Solar vehicle design National level event held at SRK Engineering college Bhimavaram, Andhra Pradesh organized by ISIE( Imperial Society of Innovative Engineer) on 28.3.2017 to 02.04.2017 and Topped in Braking test event.***

#### **Details of SAE events conducted:**

SAE conducted an Event named SAE Student Convention 2016-2017.

There were 3 levels –

1. Tier 1 – College Level held at Matrusri College, Hyd.
2. Tier 2 – Division Level held at Mallareddy College, Hyd.
3. Tier-3 - South India (South Section Level) held at Kongu Engineering College, Perundurai, Tamil Nadu.

#### **Students participated in the following events:**

1. Aero Modelling,
2. Business plan,
3. Welding,
4. Work Holding

## WINNERS OF SAE TIER-I EVENTS

Competition	Event	Winner
Winner	Aero modeling	1. Saikiran (BE-3/4), 2. Krishnateja (BE-3/4), 3. S. Praneeth (BE-4/4), 4. Shashank (BE-4/4)
Runner	Aero modeling	1. Surya (BE-2/4), 2. Vinay (BE-2/4), 3. J. Anandini (BE-2/4)
Winner	Business plan	1. Trilochan Sharma(BE-3/4)
Runner	Business plan	1. Adarsh(BE-3/4) , 2. Karthik(BE-3/4)
Winner	Welding	1. C. Manaswini( BE-2/4), 2. Dilshad( BE-2/4)
Runner	Welding	1. Thrilochan Sharma( BE-3/4), 2. Varun( BE-3/4), 3. Anjali Priyadharshini( BE-3/4)
Winner	Workhold-ing	1. S Sai Krishna, 2. SK Dilshad, 3. P.Shivaram Goud
Runner	Workhold-ing	1. D.Sainath Vittal, 2. MD Salahuddin 3. K Surya Chaitanya

Winners of Tier 1 events, further progressed to Tier 2 events in Mallareddy Engineering. College. Winners of Tier 2 events, i.e, Sai Krishna, Dilshad and Shivaram, Mech 2/4 for work holding pro-gressed to Tier 3 in Tamil Nadu.