Newsletter of Mechanical Engineering Association

DEPARTMENT OF MECHANICAL ENGINEERING
SHRI VISHNU ENGINEERING COLLEGE FOR WOMEN :: AUTONOMOUS

Vision of the Department

- To be recognized globally for quality education and research leading to well-qualified, innovative, entrepreneurial and successful mechanical engineer

Mission of the Department

- To Impart quality education to enhance skills and make graduates globally competitive.
- To Prepare students to pursue lifelong learning,, serve the profession and meet intellectual,, ethical and work place challenges.
- To Provide Research facilities and opportunities to faculty & students to create,, interpret,, apply and disseminate knowledge.

Program Educational Objectives

- Have foundation in engineering and science to apply Technical Knowledge and skills in various areas of Mechanical Engineering.
- Become effective engineers to meet society''s needs with their research capabilities in interdisciplinary subjects.
- Acquire skills for life-long learning and practice of professional ethics.

SHRI VISHNU ENGINEERING COLLEGE FOR WOMEN
Vishnupur, Bhimavaram – 534202

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INSIDE ISSUES:

BAJA SAE INDIA 2023

BAJA is an Off-Road Racing Competition for all the undergraduate Engineering Students from different Universities. BAJA event has two categories of competitions one is M-BAJA and the other is E-BAJA which means Engine driven vehicles and Electric Motor driven Vehicles. Team ZIBA & E-ZIBA RACERS from Shri Vishnu Engineering College for Women (Autonomous) has been participating in BAJA SAE INDIA from past 5 years in M Baja Category and 3 years in E Baja Category.

For any category the event is carried by two phases one is Virtual Round and the other is Dynamic Round. In **Virtual Round around 150 teams from M BAJA** and **80 teams from E BAJA** participates where the qualified teams are segregated based on the performance and qualify to the dynamic rounds. The dynamic rounds are conducted in Pithampur in the month of June, 2023. Nearly 46 teams are qualified for the physical dynamic round in E BAJA category for the main event in **Pithampur**.

Technical Evaluation and Brake Test are the qualification rounds for each and every team to participate in the Dynamic events. The dynamic round consists of static events and dynamic events.
The dynamic Rounds were- Acceleration Round, Sled Pull Round, Maneuverability, Suspension & Traction, Endurance Round, Design inspection, Cost validation, CAE Round, Go-Green.

This year we participated in all the events without a single breakdown and made podium finish for both the teams under the guidance of our **faculty advisors Dr. P. Srinivasa Raju** and **Mr. Manoneet Kumar** who has always been as our backbone support throughout the event.

Also, we want to extent our special thanks to our SVES Management for always supporting our Teams to grow high and provide all required funding and Resources for the completion of the project on time.

Achievements of E-BAJA in Physical Dynamic Event

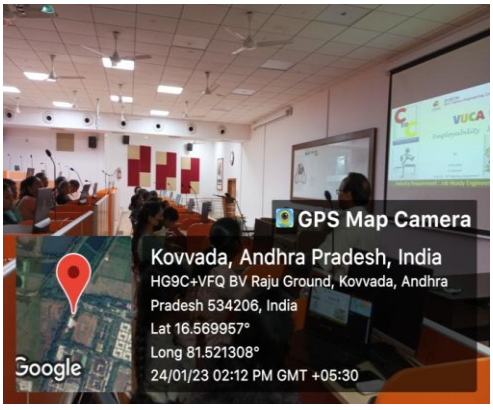
TEAM E-ZIBA RACERS

- Second runner up Engineering Design
- Winner sales presentation
- Second Runner-Up Sled Pull Award
- Second runner up overall statistics
- 7th runner up overall event
- Runner up preliminary virtual round.

"Two-Day Talk on "Innovative Trends In Automobile And Farm Equipment Machinery"

A 2 day Guest talk by industrial experts on 24th-25th Jan 2023 organized by the department of Mechanical engineering to provide the knowledge of what skills that are needed for the industry readiness to students. The guest lecture began with welcome address by the Head of the Department, Dr.Ch.Harikrishna Sir. He has introduced and welcomed Mr.K.N.Balaji Sir who has resource person to deliver the lecture

The session was then continued by Mr.K.N.Balaji sir who began with an introduction to "VUCA" and how important it is going to be in the near future. Following which he shed light on the various employability skills that are to be adopted by the students during the course work, being a eminent industrial expert he has shared a good knowledge on the present trends and future trends in the automobile industry and also suggested & encouraged to students to choose their career in the automobile sector.

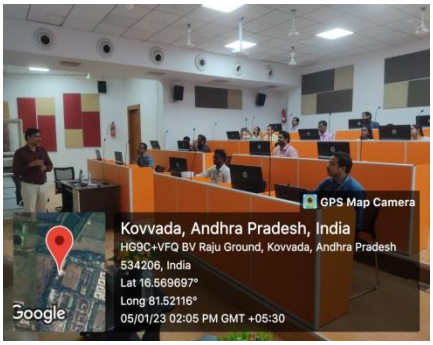


Second Day Guest talk on "Title- Engineering & Technology With a Focus on Rural Engineering & Farm Technologies"

Mr.K.Rajeswar sir who began with an introduction to "Rural Engineering & Farm Technologies" and how important it is going to be in the near future. Following which he shed light on the various technological advancements that are to currently followed by the industries, being a eminent industrial expert he has shared a good knowledge on the present trends and future trends in the farming

3-Day FDP on "Next Generation Research in Mechanical Engineering with Hands on Experience"

With an objective to trigger out new research areas and enriching ongoing research with artificial intelligence, machine learning and computational fluid dynamics to faculty members from various organizations of Mechanical Engineering, Shri Vishnu Engineering College for Women organized a three-day FDP for Mechanical faculty members in the Student Hub and CAD/CAM lab of ME SVECW from 5th to 7th January, 2023.



The program was inaugurated by Dr. Ch. Hari Krishna, HOD-ME along with an inaugural speech highlighting the importance of these topics. The resource persons were the faculty members of Mechanical Engineering department and senior technical lead in R & D. They were Dr. M Krishna Kishore, (Assistant Professor-SVNIT-Surat), Mr. B. Sainath (senior technical lead- R&D-Mercedes Benz), Dr. D. Jaya Krishna (Professor- NITW).

•Dr M Krishna Kishore explained the importance of artificial intelligence, machine learning and Friction stir welding concepts and some case studies with Weka software.
•Mr B. Sainath explained the importance of artificial intelligence, python programming, deep learning concepts and some case studies with Scikit-Learn software.
•Dr. D. Jaya Krishna explained the importance of hydrogen generation with solar power, computational fluid dynamics concepts and some case studies with ANSYS software.

The event was a successful one. The workshop was relevant to the title and were well-appreciated by the faculties.

Representation of SVECW @ Imtex exhibition, Bangalore

Mr. B N Malleswara Rao, Assistant Professor, Mechanical Engineering, SVECW, J.E.Manikanta Assistant Professor, Mechanical Engineering, SVECW presented project related to Machine Tools in Indian Machine Tool Manufacturers' Association (IMTMA) for the i2 Academia Pavilion, conducted during IMTEX 2023 exhibition, from 19th-25th January 2023 at BIEC, Bangalore. The theme of the presentation is Eco Friendly machining process.

Eco-friendly and economical machining processes are essential in any metal-cutting industry. Usually, conventional cutting fluids help enhance machining characteristics, but they also create negative impacts, such has 1) Pollution of the land and water during disposal. 2) Exposure to hazardous gases causes lung and skin cancer in workers. 3) The cost of handling cutting fluids is also enhancing the total machining cost in the machining area. Solutions to the above problems are machining with a minimum quantity lubrication method by using green oils (vegetables, seeds, and trees).

Our team was shortlisted for the top 10 teams and got a participation and merit certificate from **Bangalore International Exhibition Center (BIEC), Bangalore.**

Guest talk on "Mining activities and research activities" carried out in Thriveni Earth Movers Pvt.Ltd

Guest Lecture was conducted by the department of ME, on 03-04-2023 from 10.30 am to 12.30 pm. Chief guest Mr.Aripaka Sasidhar, Deputy Manager, Thriveni Earthmovers Private Limited, has meticulously explained about the company description work culture, various sectors present, and its ongoing research to second year mechanical engineering students

He then elaborated the topic that We specialize in mining Natural Resource Commodities like Iron Ore, Copper, Coal, Bauxite, Graphite, Lime Stone, Granite, and Baryte. At Thriveni, we have never had hints of stereotypical model, conceptually and in practice. We are credited for owning the Biggest Fleet of HEMM Assets and State of the Art Mining Operation Infrastructure. This, combined with Innovative Thinking, has made us emerge as the most preferred solution provider in the Mining Industry.

Finally he also encouraged the students to utilize the excavator which has been present in the campus so they will get a better idea on the machine and also he offered internship at their work sites.

Faculty Publications:

- Mr. J.V. Narasimaha Raju published a paper on Bi-objective Optimization of Process Parameters in Electric Discharge Machining of SS630 Using Grey Relation Analysis in the Journal of Nanomaterials.
- Dr.B.N.Malleswara Rao Dr.Ch.Hari Krishna, and Mr J E Manikanta published a paper on Experimental and finite element investigations on formability of friction stir welded tailor welded blanks of AA6061 and AA2017 in the Materials Today: Proceedings
- Mr J E Manikanta published a paper on Hybrid polymer nano fillers on mechanical properties for current applications: An overview in the Materials Today: Proceedings
- Mr J E Manikanta published a paper on investigational study on influencing parameters for flexural strength and hardness of nitinol-based aluminum matrix composites in the European Chemical Bulletin.
- Dr.B.N.Malleswara Rao published a paper on Study on Free Vibration Analysis of a Rotating Fibre-Graphene-Reinforced Hybrid Polymer Composites Pre-Twist ShellMaterials in the incas bulletin
- Mr J E Manikanta published a paper on A review on mechanical properties of hybrid polymer composites in the Materials Today: Proceedings.
- Mr. Srinivasa Rao Nidamanuri Published a Patent with the Title of invention : "QR Code-based Water Bottle Vending Machine".

Patent Application Number: 379059-001
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