



## 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.

## BAJA SAE INDIA 2022

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*Assistant Professor*

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, 2022. 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 extend 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

- Sled Pull Winner
- 2nd Runner up in Overall virtual dynamics
- 2nd Runner up in virtual Gradability
- 2nd Runner up in Tech innovation
- 2nd Runner up in Raftar Award
- Over all 2nd Runner up
- Runner up in Design Evaluation
- Cost Evaluation winner
- Runner up in Virtual acceleration
- Runner up in Physical Acceleration
- Runner up in Durability



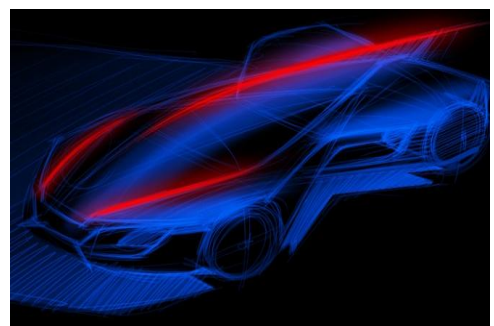
## Student Workshops and Webinars Conducted

Webinar on Automotive & New Mobility Design by Boris Fabris, Automotive designer and consultant on 18/Mar/2022

Automotive design is the profession involved in the development of the appearance, and to some extent the ergonomics, of motor vehicles or more specifically road vehicles. Automotive design in this context is primarily concerned with developing the visual appearance or aesthetics of the vehicle, though it is also involved in the creation of the product concept.

"Boris is actively working in the automotive design industry, consulting with advanced vehicle design teams around the world," Balliett added. "His level of sketching, concepting and model making is so rare to be able to bring to the classroom.

Fabris shared his strategies for designing a functional, attractive and successful vehicle in the guest lecture that includes not only instruction in the automotive design process. Students will gain a basic understanding of the design and development processes of a vehicle. The knowledge of arts and ergonomics in design is clearly understandable in this session.



A One Week Student Workshop on “Python For Mechanical Engineering Problems” by, from 21<sup>st</sup> Mar 2022 to 26<sup>th</sup> Mar 2022

The common myth is that Mechanical Engineering is not connected with any coding type of platform. Generally, Mechanical Engineers tend to have an aversion to computer programming and end up not understanding the opportunities that they miss out on. As we move into a future that is tied up intrinsically with electric cars, autonomous transportation, and automation, the next era of mechanical, aerospace & automotive engineers need to understand how they can integrate mechanical engineering concepts with a computer language in order to simulate concepts or automate them at a faster pace.



In this workshop Dr.Ch.Hari Krishna HOD Mechanical Engineering meticulously delivered the content regarding that how python programming is useful to mechanical engineer.

Topics:

- Introduction to python
- Programming for development of Mohr’s circles
- Programming for development of shear force and bending moment diagrams
- Programming for Design of riser in casting.
- Programming to decide the capacity of AC required for lab.
- Programming for the design of helical springs
- Programming for evaluating stresses in thick and thin cylinders

Representation of SVECW @ Imtex exhibition, Bangalore

Mr. B N MalleswaraRao, Assistant Professor, Mechanical Engineering, SVECW, and K Kusuma, 3rd Year Mechanical Student have participated in **i2 Academia Pavilion at IMTEX 2022 Exhibition, 16 - 21 June 2022**. National wise, a total of 20 teams participated in the competition. The theme of the presentation is FORMING.

The scope of tailor-welded blanks in automobile engineering provides an opportunity for researchers to work on the deep drawing of the sheet metal made out of AA6061 and AA2017. Design alternatives by adopting the right pin profile, optimum process parameters, and punch/die assembly enhance the formability. Improved mechanical properties of the tailor welded blanks and microstructure were examined after the deep drawing of the tailor welded blanks.

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



## Faculty Publications

➤ Mr.B.N.Malleswara Rao and Dr.Ch.Hari Krishna, published a paper on Effect of friction stir welding process parameters on mechanical and metallurgical behavior of AA6061-T6 and AA2017-T6 tailored blanks, in the Engineering Research Express



## Faculty attended Workshops/ Conferences

➤ N Malleswararao Battina, Attended International Conference On Advances In Mechanical Engineering (Icame 2022) Department Of Mechanical Engineering, Srm Institute Of Science And Technology, Kattankulathur, Tamil Nadu, India During 24/03/2022-26/03/2022

➤ V. Lakshmi Narayana Attended International Conference on Contemporary Innovations In Engineering & Management In Data Sciences Iot & Computational Techniques, Department Of Mechanical Engineering, RGM College of Engineering And Technology, Nandyal, Andhrapradesh, India, During 22/04/2022-23/04/2022

➤ Mr. P Surya Prakash Varma attended 5-day Faculty Development Program on “Advanced Materials Sciences” during 01-03-2022 to 05-03-2022

➤ Mr. P Surya Prakash Varma attended Faculty Development Program on Hybrid Vehicles and Battery Management System during 07-03-2022 to 16-03-2022

➤ Mr. N Srinivasa Rao attended Progressive Trends in Mechanical Engineering during 28-03-2022 to 01-04-2022

➤ Mr. K Raghavendra Sai attended One Week Faculty Development Program on Artificial Intelligence/Machine Learning for Mechanical Engineering Problems during 21-03-2022 to 26-03-2022



## Student Certifications

➤ Ruchitha Satya Sri has done a certificate course on Material processing during the period 07.02.2022 to 27.02.2022 offered by Georgia institute of technology in collaboration with coursera.

➤ Ruchitha Satya Sri Madasu has done a certificate course on Introduction to mechanical engineering design during the period 28-01-2022 to 07.02.2022 offered by Autodesk in collaboration with Coursera.

➤ A.Divya Jyothi has done a certificate course on Six Sigma tools for analyze during the period 01-02-2022 to 06/02/2022 offered by University system of Georgia in collaboration with Coursera.

