



AICTE Approved | Affiliated to Anna University

An Autonomous Institution



### DEPARTMENT OF MECHANICAL ENGINEERING

# MECHANICA



NEWSLETTER

# **EDITORIAL BOARD**

# CHIEF PATRONS

Mr.M.Harihara Sudhan correspondent,MCET Dr.C.Ramasamy Secretary,NIA

# **ADVISORY COMMITTEE**

Dr.P.Govindasamy
principal
Dr.Rama Thirumurugan
Head of the Department

# FACULTY COORDINATORS

Mr.S.GnanaKumar,AP/Mech,MCET Mr.K.Maniraj,AP/Mech.MCET

## **EDITORS**

Selva Natheya R(21BME027) Pragadeesh.P(22BME043)

## DEPARTMENT OF MECHANICAL ENGINEERING

### VISION AND MISSION OF THE DEPARTMENT

### **Vision**

To transform students from rural background into professional leaders of ton field of Mechanical Engineering with a strong sense of social commitment.

### Mission

- \* To impart quality engineering education leading to specialization in he emerging areas of CAD/CAM/CAE, Energy Engineering and Materials Technology.
  - \* To provide continually updated and intellectually stimulating environment to pursue research and consultancy activities.

# **Programm Educational Objectives (PEOs)**

### The graduates will:

- PEO1.Technical Expertise: Actively apply technical and professional skills in engineering practices towards the progress of the organization or the entrepreneurial venture competitive and dynamic environment.
  - PEO2.Lifelong Learning: Own their professional and personal development by continue learning and apply the learning at work to create new knowledge.
    - PEO3.Ethical Knowledge: Conduct themselves in a responsible, professional and ethic manner supporting sustainable economic development which enhances the quality of life.

### **Program Outcomes (POs)**

- POI. Apply knowledge of basic sciences and engineering concepts to solve comp mechanical engineering problems.
  - PO2. Identify, formulate, and analyze engineering problems using scientific principles a concepts.
- PO3. Design products, manufacturing processes and facilities that deliver the requirement of the target customers and desired quality functions.
  - PO4. Conduct experiments, analyze and interpret data to provide solutions for engineering

## PO5. Use appropriate tools and techniques to solve engineering probler

PO6. Apply contextual knowledge to make informed decisions in societal, hea. safety, legal, entrepreneurial and cultural issues

P07. Demonstrate the knowledge of need for sustainable development in providing engineering solutions in global, environmental and societal contexts

PO8. Practice Ethical responsibility.

PO9. Work effectively in teams and build/manage interpersonal relationships.

P010. Communicate effectively through oral, non-verbal and written means.

PO11. Apply management principles to manage individual and team work for executing projects in a multidisciplinary environment.

P012. Articulate and engage in pursuit of career and life goals through continuous Learning.

Program Specific Outcomes (PSOs) - Regulations 2019

PSO 1: Demonstrate functional competencies for roles in design, manufacturing and service by learning through centers of excellence and industrial exposure.

PSO 2: Demonstrate behavioral competencies required for roles in design, manufacturing and service by learning through structured professional skills training.





ON **FEBRUARY** 2024. 17TH, MECHANICA ORCHESTRATED ΑN ILLUMINATING WORKSHOP ON 3D PRINTING TAILORED FOR SECOND-THIS YEAR STUDENTS. **ENGAGING** SESSION DELVED DEEP INTO THE INTRICACIES OF 3D PRINTING. PROVIDING NOT ONLY THEORETICAL KNOWLEDGE BUT ALSO HANDS-ON DEMONSTRATIONS OF ITS PRACTICAL APPLICATIONS. FACILITATED BY ESTEEMED **ACADEMICS** DR. HARIHARAN AND MR. **GIDEON** GANESH, THE WORKSHOP NOT ONLY IMPARTED **TECHNICAL KNOW-HOW** BUT ALSO INSTILLED A NEWFOUND PERSPECTIVE, ETHICAL INSPIRING **STUDENTS** TO **APPROACH TECHNOLOGY** WITH **BROADER** SENSE OF RESPONSIBILITY AND INNOVATION.







# in POWER HOUR WORKSHOP

# NEWS LETTER MECHANICA



ON THE 28TH OF MARCH, 2024, AN ENRICHING AND ENLIGHTENING "LINKEDIN POWER HOUR" SEMINAR TOOK PLACE, ENGAGING WITH THE SECOND-YEAR MECHANICAL ENGINEERING COHORT, CULMINATING IN A JUBILANT RECOGNITION OF THEIR BRIGHT HORIZONS. THIS SESSION, FOCUSED ON LEVERAGING THE PROWESS OF LINKEDIN FOR CAREER PROGRESSION, IMPARTED INVALUABLE WISDOM AND ACTIONABLE ADVICE, EMPOWERING STUDENTS TO CRAFT CAPTIVATING PROFILES AND CULTIVATE MEANINGFUL PROFESSIONAL NETWORKS.



# 







ON FEBRUARY 22ND. 2024. MECHANICA HOSTED A THOUGHT-PROVOKING EXPERT TALK **TITLED** "How to Plan for a Startup and NAVIGATE LEGAL & **ETHICAL** CONSIDERATIONS." THIS INSIGHTFUL SESSION. DESIGNED SPECIFICALLY SECOND AND THIRD-YEAR FOR STUDENTS, EXPLORED THE CRITICAL STEPS INVOLVED IN LAUNCHING A STARTUP AND TRANSLATING AN IDEA INTO A SUCCESSFUL VENTURE.

DR. K. MUTHU KUMAR (Ph.D.), A DISTINGUISHED **GUEST SPEAKER** AFFILIATED WITH IITM. LED THE ENGAGING DISCUSSION. DR. KUMAR'S EXPERTISE PROVIDED **VALUABLE** KNOWLEDGE ON THE FUNDAMENTALS OF ESTABLISHING A STARTUP. HE INSPIRED STUDENTS BY OUTLINING ESSENTIAL CRITERIA THE **SUCCESSFUL** EMBARKING ON ENTREPRENEURIAL JOURNEY.



# PRESENTATION



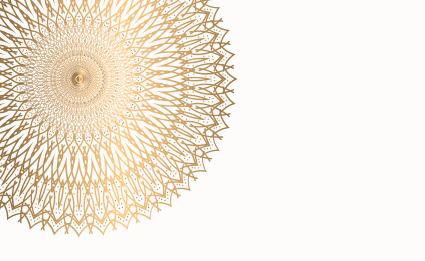


On February 24th, 2024, Mechanica facilitated an inspiring poster presentation session titled "PLM, NPD & MBSE." This engaging event, aimed at second, third, and fourth-year students, provided a platform for them to explore the critical steps involved in bringing their project ideas to life. Students showcased their exceptional presentation skills and effectively communicated their project concepts through well-structured and informative posters











# STUDENT PARTICIPATIONS AND ACHIEF ENTS



# Event NAME: Battery Pack Design and Challenges in Two wheelers EV-**Technical Workshop**

# Date:30.01.2024 &31.01.2024

students from second year participated in Workshop Conducted by AVERA ,MCET



KISHORF S MANJANIKA N SWFTHA K BALAASWIN S SUVAN SURYA M KABILESH M PRAGADEESH P DHARNEFSH R RATHEFSH M CHANDRA KUMAR E SHARVESH AJ KARTHIK T





BADRI V GOKUL SARAVANAN M SIVASANKAR R PRAVIN KUMAR T ARUN KARTHIK T KAVIN E KAVINATH R PRAVIN KUMAR A VIGNESH K SRIDHAR RAJ S MANIMATHAN KUMAR VIGNESH M



# Congrats!





Roll Nos	Name	Vear I	Name of the Event	Nature of the program	Organizer	Date	Position s.
727622BME044	RATHEESH M	II	Idea Presentation	Technical Event	Karpagam Academy of Higher Education, Coimbatore	07.02.2024	lst
727622BME044	RATHEESH M	II	Paper Presentation	Technical Event	Karpagam Academy of Higher Education, Coimbatore	07.02.2024	2nd
727622BME044	RATHEESH M	II	Project Pitch	Technical Event	P.A. College of Engineering and Technology, Pollachi	24.02.2024	2nd
727622BME044	RATHEESH M	II	Techie Talky	Non - Technical Event	P.A. College of Engineering and Technology, Pollachi	24.02.2024	3rd
727621BME044	BHARANIDHARA M	111	Technical Quiz	Technical Event	kalaignarkarunanidhi Institute of Technology, Coimbatore	01.03.2024	lst
727622BME003	ABDUL KALAM M	II	Treasure Hunt	Non - Technical Event	Sri Krishna College of Engineering and Technology	12.03.2024 to 13.03.2024	lst
727622BME019	Abdul Rahman S	II	Treasure Hunt	Non - Technical Event	Sri Krishna College of Engineering and Technology	12.03.2024 to 13.03.2024	lst
727621BME044 727622BME003	BHARANIDHARA M ABDUL KALAM M	III II	Technical Quiz  Treasure Hunt  Treasure	Technical Event  Non - Technical Event  Non	Technology, Pollachi  kalaignarkarunanidhi Institute of Technology, Coimbatore  Sri Krishna College of Engineering and Technology  Sri Krishna College of Engineering	01.03.2024 12.03.2024 to 13.03.2024 12.03.2024 to	1st

# **EVENT NAME:**

BUILDING A SUSTAINABLE INNOVATION ECOSYSTEM: INTERGRATING, IDEA GENERATION, PATENTING AND COMMERCIALIZATON





Abdul Rahman S
Abdul Kalam M
Kishore S
Sridhar Raj S
Swetha K
Vignesh M
Gunanidhi PC
Meiyarasu S
Praneshkumar R
Vishnu C
Manimadhan Kumar A



# Congratulations!

# STUDENT ACHIVEMENTS 2023-24

# **BAJA SAEINDIA**







Congratulations

kaarthik Methun LM	E- Baja SAE India	Participation	06-03-2024 to 09-03-2024
Rajat Ramesh Kumar	E- Baja SAE India	Participation	06-03-2024 to 09-03-2024
Rahul Joy D	E- Baja SAE India	Participation	06-03-2024 to 09-03-2024
Karthick Kumar S	E- Baja SAE India	Participation	06-03-2024 to 09-03-2024





# ACHIEVEMENTS





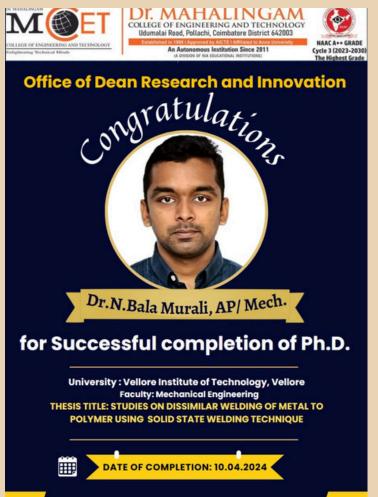






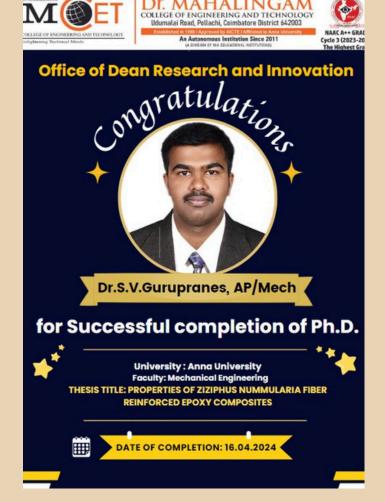






"AFTER ALL THE HARD WORK YOU PUT IN, YOU SURE DESERVE WHAT YOU HAVE"

"CONGRATULATIONS ON YOUR WELL-DESERVED SUCCESS."







"CONGRATULATIONS
ON YOUR
ACHIEVEMENT

"YOU'VE ACHIEVED SOMETHING REMARKABLE. KEEP UP THE GREAT WORK!"

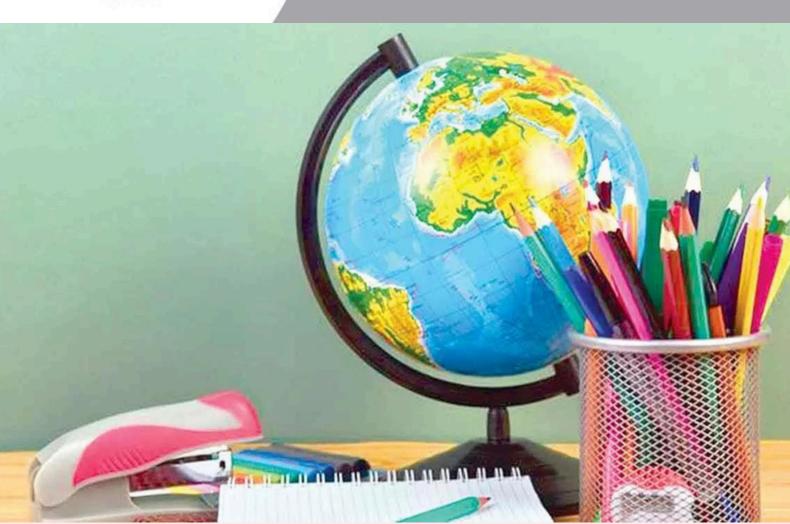




Name & affiliation of the author	Title of the Paper	Name of the	Name of the	Month & Year of Publication (MM/YYYY)	Indexing (Scopus/ SCIE/ QI/UGC)	Impact Factor
Venkatesh J.	Biodiesel blends for eco- friendly CRDI-VCR engines: enhancing exhaust emissions and engine performance to minimize pollutant emissions	Global NEST	Elsevier's	26.02.2024	Scopus	1.4
J Dinesh Kumar	Mechanical properties and fracture behaviour of varying filler rod composition in TIG welding of 5083 alloys	Materials Today: Proceedings	Elsevier's	03.03.2024	Scopus	3.2
J.Venkatesh	3D Design and prediction of temperature distribution of a partially ceramic coated piston	Engineering Proceedings used HCCI Engine	MDPI	01.02.2024	Scopus	O.5
	Cell Viability and Bioactive Coating on Additive Manufactured Polycaprolactone Substrate for Osteointegration Applications	Chemical Physics Impact	Elsevier's	Jan-24	SCIE	2.5
J.Venkatesh	Effects of Water Based Nano- Fluid Emulsions on Pollutant Emissions using an Internet of Things Based Emissions Monitoring System	Engineering Proceedings	MDPI	26.01.2024	Scopus	0.5
n, Mr.M. Padmanaban, Dr.	Investigation of mechanical and tribological behavior of AL- NI CO-MWCNT composite prepared by powder metallurgy		sage publicati ons	08.01.2024	SCIE	2.3
G Selvakumar, T Ramkumar, M	Experimental Investigation on the Microstructure and Mechanical Properties of DSS2205 and SS304L Dissimilar Weldments	Surface Review and Letters	World Scientific		SCIE	1.24



# FACULTY DEVELOPMENT PROGRAMS



SI.NO	NAME	DESIGNATION	TITLE OF PROGRAM	DATE	NATURE OF THE PROGRAM	VENUE
1	Dr.S.Ayyappan	Associate Professor	Waste to Energy Conversion	Jan to Mar 2024	FDP	NPTEL
2	Dr.M.Jayaraj	Assistant Professor (SS)	AI Tools in Scientific Writing	02.02.2024 & 03.02.2024	Workshop	KPR Institute of Engineering and Technology, Coimbatore
3	Dr.M.Jayaraj	Assistant Professor (SS)	Introduction on Intellectual Property to Engineers and Technologists	Jan to March 2024	Online Course	NPTEL
4	Dr.M.Jayaraj	Assistant Professor (SS)	Introduction on Intellectual Property to Engineers and Technologists	Jan to March 2024	FDP	NPTEL
5	Dr.M.Jayaraj	Assistant Professor (SS)	Industry 4.0:Technological Evolution	01/04/2024 to 05/04/2024	FDP	Techno college of Engineering
6	Mr.K.Vijayakkannan	Assistant Professor (SS)	Precision Manufacturing	8/1/2024 - 13/01/2024	ATAL FDP	PSG COLLEGE OF TECHNOLOGY
7	Mr.K.Vijayakkannan	Assistant Professor (SS)	Industry 4.0:Technological Evolution	01/04/2024 to 05/04/2024	FDP	Techno college of Engineering
8	Mr.K.Sasi Kumar	Assistant Professor	BIOMECHANICS AND BIOMATERIALS FOR POTENTIAL DENTAL APPLICATIONS	26.02.2024 & 27.02.2024	WORKSHOP	SRM Institue of Science and Technology, Kattankulathur
9	Mr.K.Sasi Kumar	Assistant Professor	Process Simulate and Plant Simulation	29.01.2024 to 03.02.2024	Faculty Training Programe	SIEMENS
10	Mr.SV.Gurupranes	Assistant Professor	Precision Manufacturing	8/1/2024 - 13/01/2024	ATAL FDP	PSG COLLEGE OF TECHNOLOGY

SI.NO	NAME	DESIGNATION	TITLE OF PROGRAM	DATE	NATURE OF THE PROGRAM	VENUE
11	Mr.J.Venkatesh	Assistant Professor	MCDM Techniques Using R	Jan to Feb 2024	Online Course	NPTEL
12	Mr.R.Gunasekara n	Assistant Professor	Multiple Attribute Decision Making Using Analytic Hierarchy Process	26.02.2024 to 01.03.2024	Workshop	National Institute of Technology, Mizoram
13	Mr.R.Gunasekara n	Assistant Professor	Global Conversations in Mechanical Engineering: Bridging Innovation and Sustainability	19.02.2024 to 23.02.2024	FDP	Madanapalle Institute of Technology and Science
14	Mr.R.Gunasekara n	Assistant Professor	Design-Led Innovation for Startups	19.02.2024	Webinar	Vel Tech TBI & Institution's Innovation Council
15	Mr.S.Nachimuthu	Assistant Professor	Advancements in material processing and additive manufacturing	8/1/2024 - 12/01/2024	FDP	Sant Longowal Institute of Engineering and Technology
16	Mr.S.Nachimuthu	Assistant Professor	RECENT TRENDS IN INDUSTRIAL ENGINEERING	16.03.2024 & 17.03.2024	Workshop	Indian Institution of Industrial Engineering, Surat Chapter
17	Mr.N.Bala Murali	Assistant Professor	Advanced Welding Technologies in National Mission Programs	11.01.2024 - 12.01.2024	Workshop	DRDL, Hyderadad
18	Mr.N.Bala Murali	Assistant Professor	Defect-Free Welds: Process Control is the Key	03-Feb-24	Workshop	
19	Mr.N.Bala Murali	Assistant Professor	ENHANCEMENT OF JOINT STRENGTH OF DISSIMILAR ALUMINUM/ POLYMER HYBRID JOINTS BY FRICTION STIR SPOT WELDING BY SURFACE TEXTURES	15.02.2024 & 16.02.2024	International Conference	National Institute of Technology Puducherry

# CONSULTANCY



S.No	Date	Description	No of Cycles/Test Type	Qty	Amount in Rs.
1	24.11.2023 to 06.01.2024	Renault PY1B Steering Knuckle	Multi axle force test: Phase 1, Phase 2, Phase 3 (Total Cycles 3614400/Running Hrs: 502	06 Nos	702800
2	18.01.2024 to 08.02.2024	Renault PY1B Steering Knuckle	Brake Mounting Fatigue test(Total Cycles 9,00,000/Running Hrs: 250	06 Nos	350000
3	08.01.2024	MSIL YFG Steering Knuckle	Strut bracket arm static strength test	02 Nos	4800
4	20.01.2024 to 21.01.2024	MSIL YFG Steering Knuckle	Strut bracket arm static strength test	14 Nos	33600

# BATCH 2020-2024



