VOLUME 01

FEBRUARY 28, 2025

Sri
SAI RAM ENGINEERING COLLEGE
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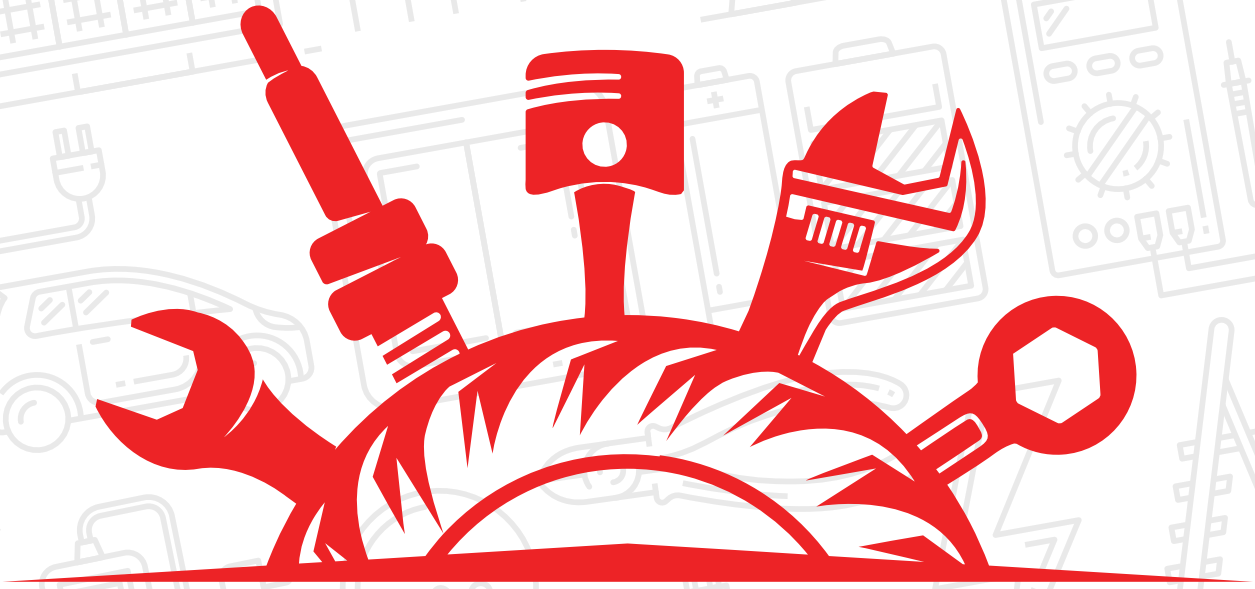
Sai Leo Nagar, West Tambaram, Chennai - 600 044. www.sairam.edu.in

MAGAZINE

TORQUE

SHIFTING GEARS TOWARD EXCELLENCE...



DEPARTMENT OF MECHANICAL ENGINEERING

sairam_mech

Sairam INSTITUTIONS

Dr VIJAYARAMNATH B

Professor and Head,
Department of Mechanical Engineering

HOD'S DESK

Dear Students, Faculty, and Readers,

It is with great enthusiasm that we present the February edition of TORQUE, our department's monthly magazine, highlighting the achievements, insights, and contributions of our students, faculty, and alumni.

The Mechanical Engineering Department at Sri Sairam Engineering College remains steadfast in its mission to deliver excellence in technical education, research, and innovation. This year, we made remarkable strides in fostering an intellectually stimulating and technologically advanced learning environment. The International Conference on Innovations in Mechanical and Manufacturing Engineering (ICIMME), held on January 28th and 29th, brought together experts to discuss advancements in robotics, 3D printing, AI in manufacturing, and sustainable engineering. Workshops on automation and advanced manufacturing further enriched our students' practical knowledge.

We also hosted an IEEE Guest Lecture by Dr. J. Emerson Raja on AI-driven Tool Condition Monitoring in Turning Machines and a Boot Camp on 3D Printing & Additive Manufacturing, providing hands-on exposure to emerging technologies. Our students' excellence is reflected in successful placements at JSW, Valeo, and Infosys, while our faculty continues to contribute to research through journal publications and patents.

Beyond academics, our student-driven clubs, including NCC, NSS, and Scouts, play a vital role in leadership and social responsibility. Congratulations to our SEC Motors teams E-BAJA, H-BAJA, and Go-Kart, for their outstanding performances at national competitions, exemplifying innovation and technical expertise.

As we move forward, we remain committed to fostering a culture of creativity, research, and professional growth. Let us continue striving for engineering excellence.

Wishing all our students and faculty continued success !

Dr. B. VIJAYARAMNATH
Professor & Head, Department of Mechanical Engineering
Sri Sairam Engineering College

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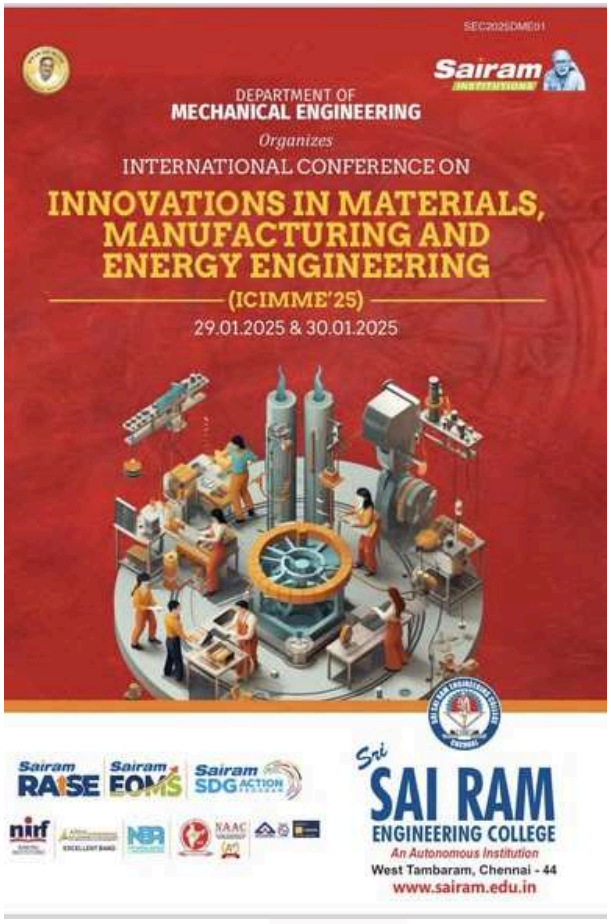
DEPARTMENT VISION

To develop a department that commands respect for its technological and engineering depth while maintaining Indian Individuality and assimilating global diversity and meeting eternal challenges.

DEPARTMENT MISSION

We dedicate and commit ourselves to achieve, sustain and foster unmatched excellence in Technical Education. To this end, we will pursue continuous development of infra-structure and enhance state-of-the-art equipment to provide our students a technologically up-to date and intellectually inspiring environment of learning, research, creativity, innovation and professional activity and inculcate in them ethical and moral values.

CONFERENCE



சென்னை★★03–02–2025

மேற்கு தாம்பரம்

ஸ்ரீ சாய்ராம் பொறியியல் கல்லூரியில் சர்வதேச மாநாடு!

200 ஆய்வுக் கட்டுரைகள் சமர்ப்பிப்பு!!

சென்னை,பிப்.3

சென்னை மேற்கு தாம்பரம்,ஸ்ரீசாய்ராம்பொறியியல் கல்லூரியின்இயந்திரபொறியியல்துறைசார்பில்இரண்டுநாள்சர்வதேசமாநாடுநடைபெற்றது.

மாநாட்டில்பொருட்கள், உற்பத்தி, ஆற்றல் மற்றும் தொழில் ஆகியவற்றில் ஏற்பட்டுள்ள சமீபத்திய முன்னேற்றங்கள்குறித்த200ஆய்வுக் கட்டுரைகளை மாணவர்கள்மற்றும்ஆய்வாளர்கள்சமர்ப்பித்தனர்.

மாநாட்டில் தென்னாப்பிரிக்கா மேற்கு கேப் பல்கலைக்கழக நானோ தொழில் நுட்பஇயக்குர்பேராசிரியர் அஜய் குமார்மிஸ்ரா நானோ தொழில்நுட்பம் மற்றும் ஸ்மார்ட் பொருட்களின் பயன்பாடுகள் குறித்து பேசினார்.

ரஷ்யா நிஸ்னி நோவ்கோரோட் மாநில பல்கலைக்கழக தேசிய ஆராய்ச்சி விஞ்ஞானி டிமிட்ரி ஏ. வோரோன்ட்சோவ், ஆராய்ச்சியின் முக்கியத்துவம் குறித்துப் பேசிய அவர் உலகளவில் நவீன ஆராய்ச்சி தரம் மேம்பாடு ஆய்வகங்களின் அவசியத்தை வலியுறுத்தினார்.

அமெரிக்கா போல்டரில் உள்ள கொலராடோ பல்கலைக்கழகப் பேராசிரியர் யு. பாலச்சந்திரன், கல்வித் துறை, தொழில்துறையில் உள்ள ஆராய்ச்சி இடைவெளி குறித்து விவரித்தார்.

மருத்துவ பயன்பாடுகளுக்கானதுண்முலக்கூறுகள் மற்றும் உயிரி பொருட்கள் மேம்பாடு குறித்து ஜப்பான் நுண் மூலக்கூறுகள் மற்றும் உயிரிபொருட்கள்ஆராய்ச்சிமைய முதன்மை ஆராய்ச்சியாளர் பேராசிரியர்தஷிரோ கென்டாரோ விளக்கினார். மாநாட்டின் போது எயிந்திர பொறியியல் துறை குறித்து புத்தகத்தைவெளியிட்டனர்.

மாநாட்டில் ஸ்ரீசாய்ராம் பொறியியல் கல்லூரி மாணவர் விவகார புல தலைவர் ஏ.ராஜேந்திரபிரசாத், முதல்வர்கள் ஜெ.ராஜா,கே.பழனிகுமார்,எந்திரமவியல்துறைத் தலைவரும்,மாநாடுஒருங்கிணைப்பாளருமானபி.விஜயராம்நாத், இணை ஒருங்கிணைப்பாளர் தமிழரசன் உள்ளிட்டோர்பங்கேற்றனர்.

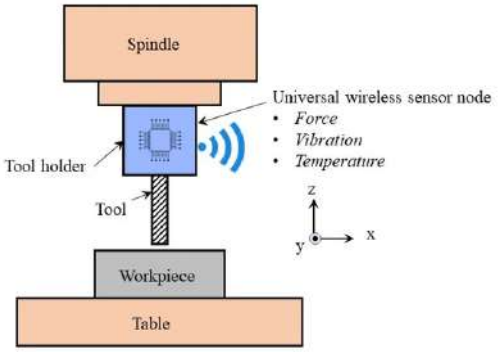
The Department of Mechanical Engineering proudly organized the International Conference on Innovations in Mechanical and Manufacturing Engineering (ICIMME) on January 28th and 29th. This prestigious event brought together academic and industry experts to exchange knowledge on emerging trends, challenges, and advancements in mechanical and manufacturing engineering. The conference featured keynote addresses from renowned professionals, technical paper presentations, and panel discussions on cutting-edge topics such as robotics, 3D printing, AI in manufacturing, and sustainable engineering practices. Workshops on automation and advanced manufacturing techniques provided participants with hands-on learning experiences.

ICIMME attracted a diverse audience of researchers, students, and professionals from across the country and abroad, fostering collaboration and knowledge-sharing. The event served as a platform for networking between academia and industry, promoting innovation and future partnerships. By successfully hosting this conference, the department reaffirmed its commitment to advancing research and technological development, inspiring participants to contribute to the evolution of mechanical and manufacturing engineering. The success of the event reinforced the department's position as a leader in advancing the field of mechanical and manufacturing engineering, leaving participants inspired and eager to contribute to the evolution of these critical industries.

3 GOOD HEALTH AND WELL-BEING

IEEE GUEST LECTURE

GUEST LECTURE ON TOOL CONDITION MONITORING IN TURNING MACHINES USING AI



Date	03rd February 2025 (Monday)
Time	12:00 Noon – 01:00 PM
Venue	Mechanical Conference Hall
Resource Person	Dr. J. Emerson Raja, Professor, Faculty of Engineering and Technology, MMU, Malaysia

The Department of Mechanical Engineering, Sri Sairam Engineering College, in collaboration with the IEEE Electronics and Packaging Society, is set to host an insightful Guest Lecture on "Tool Condition Monitoring in Turning Machines Using AI." This event aims to provide students and professionals with valuable knowledge about the role of Artificial Intelligence in modern manufacturing.

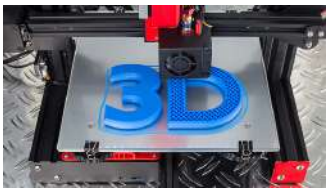
Tool condition monitoring is a crucial aspect of manufacturing, especially in machining operations like turning. With the integration of AI-driven predictive maintenance techniques, industries can significantly improve tool life, optimize machining parameters, and minimize production downtime. AI-based monitoring systems analyze real-time data to detect wear, breakage, and anomalies in cutting tools, ensuring precision and efficiency.

This session will be conducted by Dr. J. Emerson Raja, an esteemed Professor at the Faculty of Engineering and Technology, Multi Media University (MMU), Melaka Campus, Malaysia. With his extensive expertise in AI applications in manufacturing, Dr. Raja will shed light on advanced methodologies and practical implementations of AI in tool condition monitoring.

This event presents an excellent opportunity for students, researchers, and industry professionals to explore the latest advancements in AI and its impact on modern machining processes. Don't miss this chance to gain first-hand insights from an international expert!

BOOT CAMPS

BOOT CAMP ON 3D PRINTING & ADDITIVE MANUFACTURING



Date	03rd – 08th February 2025
Venue	Smart Class - I
Organized by	Department of Mechanical Engineering, Sri Sairam Engineering College
In Association With	Ministry of Electronics and IT, FutureSkills Prime, NIELIT, CDAC
Resource Persons	Mr. P. L. Leonard Ignatius, Mr. R. Karthikeyan, Mr. D. Mariyappan

The Department of Mechanical Engineering, Sri Sairam Engineering College, in association with the Ministry of Electronics and IT, FutureSkills Prime, NIELIT, and CDAC, proudly presents an exclusive Boot Camp on "3D Printing & Additive Manufacturing."

This intensive training program aims to provide participants with a comprehensive understanding of additive manufacturing, covering cutting-edge 3D printing technologies, industry applications, and hands-on experience in digital fabrication. From prototyping to production, this boot camp will explore the latest advancements shaping the future of smart manufacturing and design innovation.

The sessions will be led by industry experts with extensive knowledge and practical expertise in 3D printing and additive manufacturing:

- Mr. P. L. Leonard Ignatius – Project Engineer, 3D Printing, NIELIT Chennai
- Mr. R. Karthikeyan – Project Engineer, 3D Printing, NIELIT Chennai
- Mr. D. Mariyappan – Team Lead, CL Technologies, Chennai

Participants will get the opportunity to learn from industry leaders, engage in practical demonstrations, and develop hands-on skills essential for the future of manufacturing and product development.

EXPERT TALK

PROCESS OF INNOVATION DEVELOPMENT & TECHNOLOGY READINESS LEVEL

Date	28.02.2025
Venue	Mechatronics Hall, K-Block
Organized by	Department of Mechanical Engineering, Sri Sairam Engineering College
Resource Persons	Dr .K. Venkatraman Dr. N. Vasudevan

The Department of Mechanical Engineering, Sri Sairam Engineering College, successfully hosted an Expert Talk on "The Process of Innovation Development & Technology Readiness Level" in association with the Ministry of Education (MoE) 's Institutions Innovation Council (IIC).

Innovation has always been a driving force behind technological advancements, and understanding the structured approach to innovation development is crucial for transforming ideas into real-world applications. This expert session provided deep insights into the stages of innovation, technology maturation, and the significance of Technology Readiness Levels (TRL) in research and industry.

The talk was delivered by distinguished experts in the field of technology and innovation:

- Dr. K. Venkatraman – A renowned expert in engineering innovation
- Dr. N. Vasudevan – A leading researcher in technology development

The session covered key topics, including:

- Understanding the innovation development process
- Exploring the Technology Readiness Level (TRL) framework
- Bridging the gap between research and commercialization

Strategies to accelerate technology adoption in industries

This knowledge-packed session proved highly beneficial for students, researchers, and faculty members, helping them explore the dynamics of innovation and gain a competitive edge in technological advancements.

SIDP JURY PANEL

DR. N. VASUDEVAN SERVED AS A JURY MEMBER AT THE CHENGALPATTU DISTRICT SIDP 2025.

Dr. N. Vasudevan
Professor,
Department Of Mechanical Engineering

Date	01.02.2025
Venue	Valliammai Engineering College
Organized by	TN-EDII & UNICEF
Jury Member	Dr N Vasudevan
Hosted by	(TN-EDII) & UNICEF

We are delighted to share that Dr. N. Vasudevan had the prestigious opportunity to serve as a Jury Member for the Chengalpattu District School Innovation Development Programme (SIDP) 2025, organized by the Tamil Nadu Entrepreneurship Development and Innovation Institute (TN-EDII) in collaboration with UNICEF.

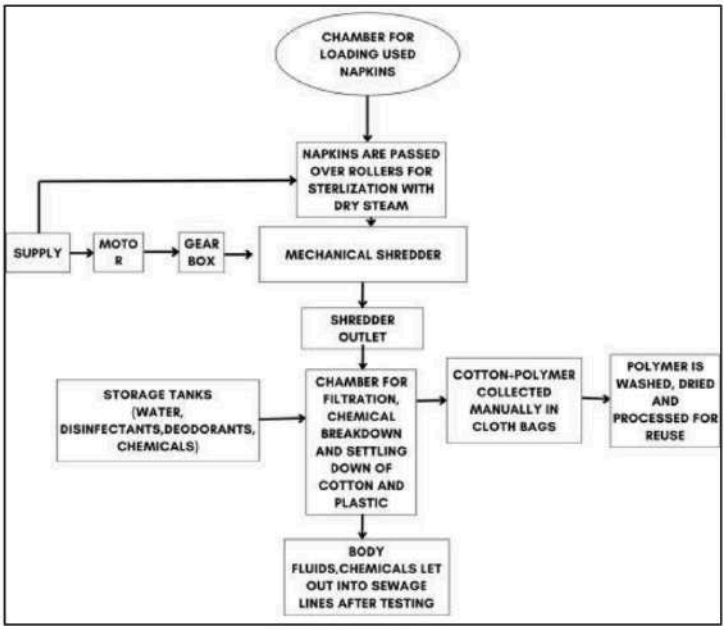
The event highlighted outstanding student innovations, showcasing their creativity and problem-solving skills. Evaluating these remarkable projects was both a challenging and inspiring experience, as young minds demonstrated their ingenuity in addressing real-world issues. The session was highly engaging, fostering meaningful discussions on entrepreneurial thinking and technological progress.

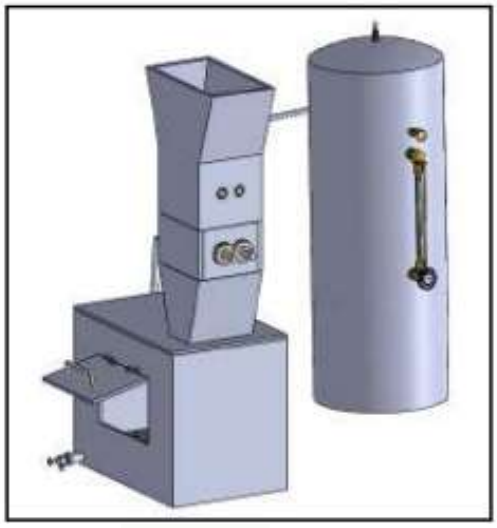
The main motto of TN-EDII, Government of Tamil Nadu,to organize this program in association with UNICEF is to create a unique platform for nurturing future innovators.

Sairam Institutions consistently support programs like these, which play a vital role in shaping the next generation of entrepreneurs and change makers.

ECOFLOW FEMMECARE - SANITARY NAPKIN DISPOSAL VIA CHEMICAL BREAKDOWN

Mentored by **Dr. N. Vasudevan (MECH)** and **Dr. Sharmila P (EEE)**, a team of 4th-year students—Nivedhitha M (EEE), Yoghamithra R (MECH), Aravindh M (MECH), Divya D (CSE), Sahana L (CSE), and Niranjana Devy S J (ECE)—made significant contributions to ICPECTS 2024, focusing on Power, Energy, Control, and Transmission Systems.





The disposal of sanitary napkins presents a significant environmental challenge due to their non-biodegradable composition. Conventional disposal techniques, such as incineration and deep burial, contribute to air, soil, and water pollution, necessitating the development of sustainable alternatives.

Sanitary Napkin Breakdown is an innovative methodology designed to decompose sanitary napkins into their fundamental components, enabling effective waste management while minimizing ecological impact. This process facilitates material recovery, allowing for recycling and repurposing, thereby reducing landfill accumulation and mitigating environmental harm.

By integrating such advanced waste treatment techniques, this approach offers a scalable and environmentally responsible solution to the global issue of sanitary napkin disposal, aligning with sustainable development goals and circular economy principles.

By adopting innovative decomposition techniques, this approach not only mitigates environmental degradation but also promotes a cleaner and safer living environment. Additionally, the recovered materials, such as cellulose fibers and superabsorbent polymers, can be repurposed for industrial applications, fostering a circular economy that minimizes resource wastage. Encouraging widespread adoption of such sustainable waste management solutions can drive policy reforms, inspire eco-conscious consumer behavior, and ultimately contribute to a greener future.

HOW QUANTUM COMPUTING WILL REVOLUTIONIZE MECHANICAL ENGINEERING

Dr. M. Arul Prakash
Associate Professor
Department of Mechanical Engineering
Sri Sairam Engineering College

Among the various fast-growing futuristic technologies, one that is set to shape the next decade and beyond is quantum computing. This game-changing technology exploits the principles of quantum mechanics to unlock new opportunities in computing and engineering. Recognizing its significance, UNESCO has declared 2025 as the International Year of Quantum. Quantum mechanics studies matter at atomic and subatomic scales, where particles exhibit unexpected and paradoxical behaviors such as the uncertainty principle and quantum entanglement. As Matt Himsworth, Chief Scientific Officer at Aquark Technologies, states:

"While the 'why' behind the theory of quantum mechanics has yet to be fully explained, the 'how' is very well understood."

From an engineering perspective, understanding the how is sufficient to integrate quantum mechanics as a powerful tool for problem-solving.

The Power of Quantum Computing

The core advantage of quantum computing lies in its ability to leverage superposition and entanglement. Unlike classical bits, which are either 0 or 1, qubits can exist in multiple states simultaneously. This parallel processing capability allows quantum computers to solve complex problems at an unprecedented scale, far beyond the reach of even the most powerful supercomputers.

Applications of Quantum Computing in Mechanical Engineering

Mechanical engineering, traditionally rooted in classical physics, stands to be transformed by quantum computing. This advancement will enable engineers to design, test, and optimize machines faster and more efficiently. Key areas where quantum computing will make a significant impact include:

1. Materials Science

Designing new materials with specific properties requires extensive computational power to simulate atomic interactions. Quantum simulations can accurately model electronic structures, predicting material behavior under various conditions. This will enable:

- Discovery of novel alloys with enhanced strength and lightweight properties.
- Design of advanced nanomaterials with tailored functionalities.
- Prediction of material degradation under extreme environments

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2. Enhanced Manufacturing Processes

Quantum computing can optimize production schedules, minimize waste, and improve quality control by:

- Optimizing complex manufacturing schedules to reduce time and cost.
- Utilizing quantum sensors for highly accurate measurements, ensuring improved quality control and defect detection.
- Enhancing additive manufacturing (3D printing) processes to minimize material waste and improve part quality.

3. Robotics and Automation

Quantum computing will enhance robotic control systems and automation through:

- More efficient and robust robot control algorithms for precision and adaptability.
- Quantum sensors providing accurate environmental data for better decision-making and navigation.
- Quantum machine learning enabling intelligent automation that adapts to changing conditions.

4. Computational Fluid Dynamics (CFD)

Simulating fluid flow around complex geometries, such as aircraft wings or turbines, demands immense computational power. Quantum algorithms will accelerate CFD simulations, allowing:

- More accurate predictions of aerodynamic performance for aircraft and vehicles.

Optimization of turbine designs for improved efficiency.

- Simulation of complex fluid flows in biomedical devices.

5. Finite Element Analysis (FEA)

Analyzing structural integrity under complex loads requires intricate calculations. Quantum computing will enhance FEA by:

- Enabling more accurate simulations of material deformation and fracture.
- Optimizing structural designs for greater strength and durability.
- Analyzing the behavior of composite materials under complex loads.

6. Optimization of Complex Systems

Optimizing designs for engines, robots, or manufacturing processes involves navigating vast design spaces. Quantum algorithms can efficiently search vast design spaces, enabling:

- Optimization of engine designs for improved fuel efficiency and reduced emissions.
- Development of more efficient and robust control algorithms for robots.
- Optimization of manufacturing processes for improved efficiency and reduced waste.
- Optimizing the placement and operation of wind farms for maximum energy capture.

Conclusion

Quantum computing offers a pathway to solving some of mechanical engineering's most pressing computational challenges. By overcoming computational barriers, it will empower engineers to design and build more advanced and efficient systems, transforming the field in profound ways. Although the field is still evolving, the potential benefits for materials discovery, simulation, and optimization are undeniable. Ultimately, quantum computing represents a paradigm shift for mechanical engineering. The continued development and integration of quantum computing will profoundly reshape the tools and capabilities of mechanical engineers in the years to come.

DESIGN PATENT FOR OIL SPILL REMOVING MACHINE IN SEA

Name : Ajay Kumar A
SEC ID: SEC21ME068
Team Mates: Prem J S, Sri Arvind Krishnan V, Balamurugan R, Vijay Athithya S, Sabarish P
Mentor: Mr. S. Sivachandran

पेटेंट कार्यालय, भारत सरकार The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं./ Design No. : 438433-001

तारीख/ Date : 25/11/2024

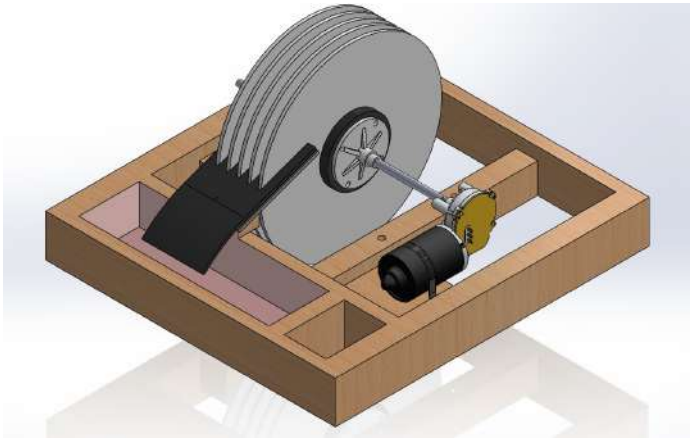
परस्परिकता तारीख/ Reciprocity Date :

देश/ Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *OIL SPILL REMOVING MACHINE IN SEA WATER* से संबंधित है, का पंजीकरण, वर्ग 29-02 में 1.Mr. P. Anbarasu 2. Mr. Prem J S 3.Mr. Ajay Kumar A 4.Mr. Sri Arvind Krishnan V 5.Mr. Balamurugan R 6.Mr. Sabarish P 7.Mr. Vijay Athithya S के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 29-02 in respect of the application of such design to *OIL SPILL REMOVING MACHINE IN SEA WATER* in the name of 1.Mr. P. Anbarasu 2. Mr. Prem J S 3.Mr. Ajay Kumar A 4.Mr. Sri Arvind Krishnan V 5.Mr. Balamurugan R 6.Mr. Sabarish P 7.Mr. Vijay Athithya S.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

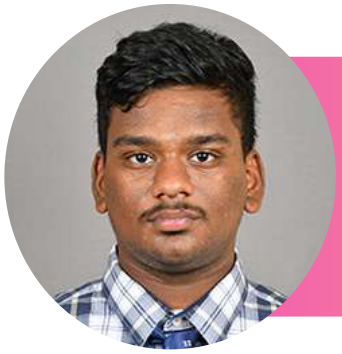


Oil spills pose a serious environmental threat to marine ecosystems, affecting aquatic life, coastal habitats, and human livelihoods. Our project focuses on designing an efficient and sustainable oil spill removal machine that can effectively separate and collect oil from seawater, minimizing ecological damage. This paper outlines the design methodology, working principle, and potential applications of the proposed system.

The proposed oil spill removal machine integrates multiple technologies to maximize efficiency. A floating barrier system is employed to control and contain the spread of oil, preventing further contamination. A rotating drum skimmer, coated with oleophilic (oil-attracting) material, efficiently collects oil from the water surface. The collected oil is then extracted using a vacuum suction mechanism, which transfers it to storage tanks for further processing. A multi-stage filtration unit ensures the removal of residual water, thereby improving the purity and recovery efficiency of the oil. Additionally, an autonomous navigation system, guided by GPS and AI-based technology, enables efficient coverage and real-time response to oil spills.

This machine can be deployed for emergency response in marine oil spills, providing an immediate and effective solution to minimize environmental damage. It is also useful in maintaining cleanliness in harbors and ports, preventing oil contamination in coastal waters. Offshore drilling sites can benefit from this technology by incorporating it into their maintenance systems. Furthermore, it can be employed in industrial wastewater treatment processes where oil contamination is a concern.

6 CLEAN WATER AND SANITATION



Karthik Raj A
Mech II yr
Intern Company: APS CNC.

To Whomsoever it may concern. 25.01.2025

APS CNC

This is to confirm that Mr.A.Karthik Raj Roll.No-SEC23ME044,studying 2nd year mechanical engineering in Sairam Engineering College upon reference by the college has completed internship in our Cnc machine shop on Non Pay basis from 06.01.2025 to 25.01.2025.

He was trained in inspection and tooling activities.

We wish him well .

With Regards,

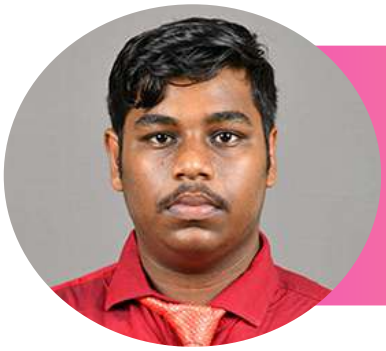
J.Pravinkumar.- APSCNC
ED-Operations

COMPANY NAME	APS CNC.
INTERN PERIOD	06.01.25 TO 25.01.25
AREA OF INTERN IN THE COMPANY	Inspection and Tooling Activities.

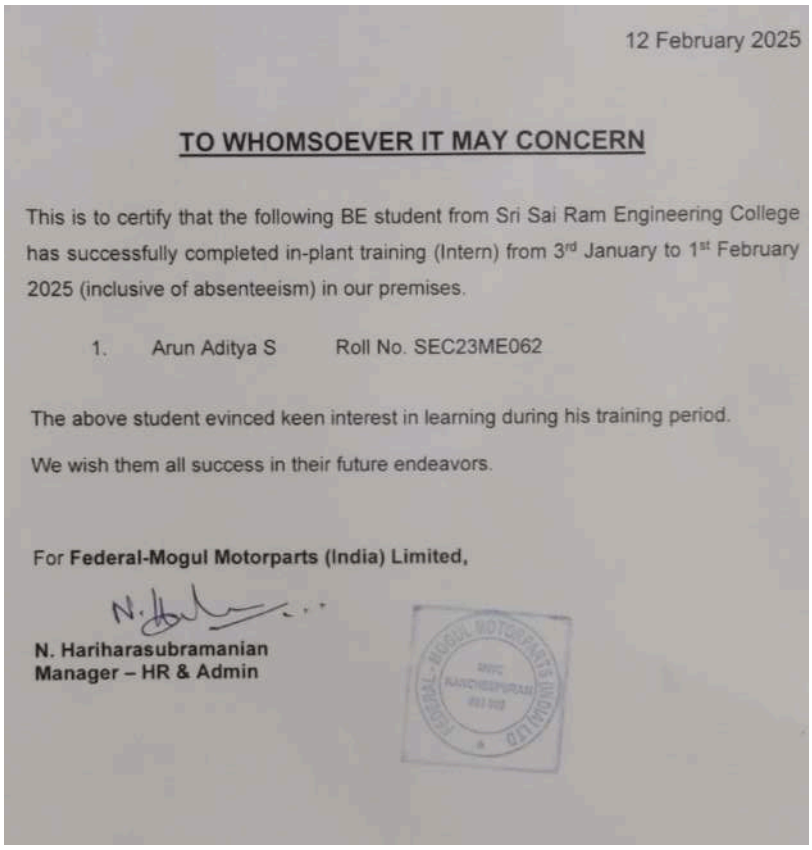
My Contrbution and achivement:

During my internship, I played a key role in the inspection and tooling processes, ensuring that all tools and products met quality standards. My primary responsibilities included: Conducted detailed inspections of materials and components to verify adherence to specifications and industry standards. Identified potential defects, inconsistencies, or non-compliance with design requirements, ensuring that quality control protocols were strictly followed. Collaborated with senior engineers to assess products and recommend necessary improvements to maintain high-quality standards. Supported the team in preparing inspection reports and documentation for quality assurance purposes. Assisted in the setup and maintenance of tooling equipment, ensuring that tools were properly calibrated and maintained for optimal performance. Supported the development and testing of new tooling methods, contributing to enhanced production efficiency and reduced downtime. Helped troubleshoot tooling issues, ensuring minimal disruptions in production while adhering to safety protocols.

STUDENT'S INTERNSHIP INSIGHTS AND LEARNINGS



Arun Aditya S
Mech II yr
Intern Company: DRiV.



12 February 2025

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the following BE student from Sri Sai Ram Engineering College has successfully completed in-plant training (Intern) from 3rd January to 1st February 2025 (inclusive of absenteeism) in our premises.

1. Arun Aditya S Roll No. SEC23ME062

The above student evinced keen interest in learning during his training period.

We wish them all success in their future endeavors.

For **Federal-Mogul Motorparts (India) Limited,**

N. Hariharasubramanian
Manager – HR & Admin

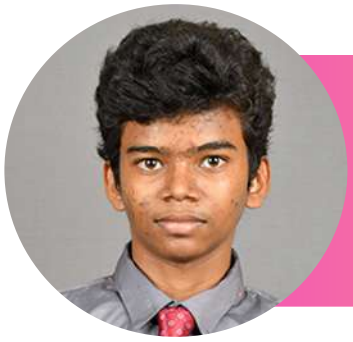
COMPANY NAME	DRiV.
INTERN PERIOD	03.01.25 TO 01.02.25
AREA OF INTERN IN THE COMPANY	PRODUCTION

MY CONTRIBUTIONS AND ACHEIVEMENTS :

During my in-plant training at DRiV (Federal Mogul Motorparts India Limited) from 3rd January to 1st February 2025, I gained hands-on experience in automotive component manufacturing, quality control, and production processes. Working alongside industry professionals, I developed a deeper understanding of real-world engineering applications and problem-solving techniques. The exposure to advanced manufacturing technologies and workflow optimization enhanced my technical knowledge. This internship provided me with practical insights that strengthened my skills and broadened my perspective on the industry. Overall, it was a valuable learning experience that has prepared me for future challenges in the automotive sector.

INTERNSHIP

8 DECENT WORK AND ECONOMIC GROWTH



Chilaka Surya
Mech II yr
Intern Company: Sivakami Enterprise.

GSTIN : 33AINPB4842Q1ZW
PAN No. : AINPB4842Q
State Code : 0 3 3

SIVAKAMI ENTERPRISE

(HONING OF : HYDRAULIC, PNEUMATIC & ALL TYPE OF CYLINDERS)

SP-46, 8th Cross Street, 3rd Main Road, Ambattur Industrial Estate, (Near Ambattur Telephone Exchange),
Chennai - 600 058. Email : sivakami_68@rediffmail.com, sivakamienterprise@yahoo.com
☎ : 044-2624 4358, Cell : 94441 25936, 93451 99811

Date. 22.01.25

TO WHOM IT MAY CONCERN

THIS IS TO CERTIFY THAT MR.CHILAKA SURYA (ID.NO.SEC23ME061) OF SRI SAI RAM ENGINEERING COLLEGE. HAS SUCCESSFULLY COMPLETED 15 DAYS (07.01.25 TO 21.01.25) INTERSHIP TRAININGPROGRAMME WITH US WE APPRECIATE FOR HIM DEDICATION, PUNCTUAL, HARDWORKING.

WE WISH HIM ALL SUCCESS FOR FUTURE

SIVAKAMI ENTERPRISE CHENNAI 600 058

COMPANY NAME	Sivakami Enterprise.
INTERN PERIOD	07.01.25 TO 21.01.25
AREA OF INTERN IN THE COMPANY	Manufacturing of Hydraulics and pneumatic

My Contrbution and achivement:

During my internship at Sivakami Enterprise from 7th January to 21st January 2025, I gained hands-on experience in the manufacturing of hydraulics and pneumatics. I had the opportunity to work closely with industry professionals, understanding the design, assembly, and testing of hydraulic and pneumatic systems. This experience enhanced my technical knowledge, problem-solving skills, and practical understanding of fluid power applications. Observing real-time industrial processes and troubleshooting challenges deepened my learning. Overall, this internship provided me with valuable insights into the field, helping me develop a strong foundation for my future in mechanical engineering.

INTERNSHIP

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

STUDENT'S INTERNSHIP INSIGHTS AND LEARNINGS

Keerthikumar V
Mech II yr
Intern Company: DRiV.

12 February 2025

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the following BE student from Sri Sai Ram Engineering College has successfully completed in-plant training (Intern) from 3rd January to 31st January 2025 (inclusive of absenteeism) in our premises.

1. Keerthikumar V Roll No. SEC23ME007

The above student evinced keen interest in learning during his training period.

We wish them all success in their future endeavors.

For **Federal-Mogul Motorparts (India) Limited,**

N. Hariharasubramanian
Manager – HR & Admin

COMPANY NAME	DRiV.
INTERN PERIOD	03.01.25 TO 31.01.25
AREA OF INTERN IN THE COMPANY	PRODUCTION

My Contrbution and achivement:

My internship at DRiV from 3rd January to 31st January 2025 was an enriching experience that provided me with deep insights into production processes in the automotive industry. I had the opportunity to observe and understand workflow optimization, quality control, and assembly line operations. Engaging with skilled professionals helped me grasp the intricacies of efficient manufacturing techniques and the importance of precision in production. This hands-on exposure not only enhanced my technical knowledge but also strengthened my problem-solving and analytical skills. The experience was both challenging and rewarding, shaping my perspective on industrial production and future career aspirations.

INTERNSHIP

10 REDUCED INEQUALITIES

Sudhakar M
Assistant Professor
Faculty Coordinator

Mr Siva Chandran S
Assistant Professor
Faculty Coordinator

TEAM LUASKART

GKDC 2025

19th February - 23rd February **Coimbatore, Tamil Nadu**

Go Kart Design Challenge (GKDC) is an yearly national level student competition where teams design, build, and race karts, applying engineering principles to optimize performance, innovation, and teamwork. These events are commonly held at universities and involve various teams competing to create the best-performing kart, focusing on engineering design, innovation, static events and teamwork.

Our Drivers

Ilamparithi M
Team Captain

Sanchan Kumar

Vignesh D

Sharmila S

ACHIEVEMENTS

- OVERALL RUNNER UP
- AIR 1 - ENDURANCE
- AIR 1 - CAE
- BEST DRIVER AWARD
- AIR 2 - ACCELERATION
- AIR 2 - SKIDPAD

At this year's GKDC conducted at Kari Motor Speedway, Coimbatore, Team Luaskart delivered an outstanding performance, securing the Overall Runner-Up position among 128 participating teams nationwide. Their relentless dedication and engineering excellence earned them multiple accolades, along with a cash prize of ₹42,000. Led by faculty coordinator, Mr. Sudhakar M, whose exceptional support played a crucial role in the team's growth and success, this achievement stands as a testament to their technical proficiency, strategic planning, and collaborative effort, further strengthening the department's legacy in SEC Motorsports.

TEAM EVEGA RACING

Mr Ravi Kumar L
Asst. Prof
Faculty Coordinator
(E Baja)

Mr Babu T
Asst. Prof
Faculty Coordinator
(E Baja)

TEAM EVEGA RACING : The passionate student-led team dedicated to designing and building high-performance electric off-road vehicles. Driven by innovation and engineering excellence, we focus on optimizing every subsystem to achieve peak durability, efficiency, and performance. Our team actively participates in prestigious national-level competitions such as **SAE BAJA, ATVC,** and **MEGA ATV**, which held in various states of India, constantly pushing the boundaries of electric off-road racing. Through teamwork, rigorous testing, and a commitment to continuous improvement, we strive to set new benchmarks in the competition.

ACHIEVEMENTS

- **AIR 1 – VALIDATION EVENT**
- **AIR 7 – SUSTAINABILITY EVENT (41 TEAMS)**
- **AIR 9 – VDE EVENT (85 TEAMS)**
- **AIR 12 – SALES EVENT (85 TEAMS)**
- **AIR 20 – DESIGN EVENT (86 TEAMS)**

Team EVEGA Racing secured **AIR 1** in the **SAE 2025** Validation Event, showcasing our engineering excellence. We remain committed to innovation and continuous improvement for future competitions

AIR 1 VALIDATION EVENT
SAE BAJA 2025

HAWK

Sureshmani G, Captain Backbone of Team EVEGA Racing, leads with excellence and determination

Team EVEGA Racing's finest drivers, **Gananathji Naveen Kishore S** and **Akash V**, showcase exceptional skill and precision on the track.

The Rocketeer Racing

Dr. Parswajinan C
Associate Professor
Faculty Coordinator
(H Baja and M baja)

Team captain
GOVARDHANAN S

The Rocketeer Racing is a student-led motorsports team founded in 2009, originally competing as an m-BAJA team before expanding into sustainable vehicle technologies. The team actively participates in BAJA SAE India, FMAE, Mega ATV, and ATVC, demonstrating excellence in engineering, endurance, and innovation. With a commitment to advancing eco-friendly mobility,The Rocketeer Racing has developed **Hydrogen-CNG (H-CNG)** BAJA buggy, marking a significant step toward sustainability in motorsports.

- AIR-1 – SALES EVENT
- AIR-2 – OVERALL STATICS
- AIR-3 – SUSTAINABILITY EVENT
- AIR-3 –VIRTUAL DYNAMICS
- AIR-4 – COST EVENT
- AIR-7 – DESIGN EVENT
- AIR-10 – OVERALL RANKING

ALPHA V4

The Rocketeer Racing participated in **BAJA SAEINDIA H-CNG 2025-26**, held at **NATRAX**, Indore, delivering an outstanding performance across multiple categories. Competing with a **Hydrogen-CNG (H-CNG) BAJA buggy**, the team demonstrated excellence in technical innovation, strategic execution and market viability. The event provided a platform to highlight advancements in sustainable motorsports, with Rocketeer Racing setting new benchmarks in engineering, research, and business strategy.

AIR 1 SALES AWARD

13 CLIMATE ACTION

Scouts

GLOBAL DEVELOPMENT VILLAGE AT BSG DIAMOND JUBILEE & MUTHAMIZH ARIGNAR KALAIGNAR CENTENARY SPECIAL JAMBOREE

The Global Development Village, held on January 28, 2025, in Trichy, as part of the BSG Diamond Jubilee & Muthamizh Arignar Kalaignar Centenary Special Jamboree, was a hub of innovation, sustainability, and collaboration. It provided a platform for thought leaders, visionaries, and young minds to present transformative solutions for a better future.

The event was graced by the Honourable Minister for Finance and Environment Climate Change of Tamil Nadu, Thiru Thangam Thenarasu, who was felicitated by Dr. Sai Prakash Leo Muthu, Chairman & CEO of Sairam Institutions, recognizing his contributions to the state's development. Faculty members and students from the Department of Mechanical Engineering, Sri Sairam Engineering College, actively participated in technical exhibitions, panel discussions, and knowledge-sharing sessions, showcasing innovative engineering solutions aligned with sustainable development.

NATIONAL SERVICE SCHEME

MARCHING FOR THE NATION: THEEP VIVIN JA'S PRESTIGIOUS JOURNEY AT THE NSS REPUBLIC DAY PARADE CAMP

THEEP VIVIN J A
II - YEAR MECH

The NSS Republic Day Parade Camp (NSS RDC) is one of the most esteemed platforms for young volunteers, fostering leadership, discipline, and national integration. Managed by the Ministry of Youth Affairs & Sports, Government of India, this month-long camp in New Delhi provides intensive training in march-past, leadership, community service, and cultural exchange. Volunteers from across India come together, symbolizing a Mini India in the heart of the nation's capital.

Among the 16 NSS volunteers from Tamil Nadu, Theep Vivin JA, a 2nd-year Mechanical Engineering student at Sri Sairam Engineering College, achieved an incredible feat. Out of these 16, only six were selected to march on Kartavya Path on Republic Day, January 26, 2025, and Theep Vivin proudly secured his place. From a total of 200 NSS volunteers, only 148 had the honor of marching in the grand parade.

The camp included physical training, academic sessions, and interactions with dignitaries. Theep Vivin had the privilege of visiting the Prime Minister's House, Rashtrapati Bhavan, and the Vice President's Enclave. On returning, he met the Governor of Tamil Nadu and Deputy CM Udhayanidhi Stalin.

His participation highlights his dedication, leadership, and commitment to service, inspiring future NSS volunteers.

NATIONAL CADET CORPS

Lt. DINESH KUMAR S K
Associate NCC Officer
1 (TN) BTY NCC

SUB. Lt. PRABHU V
Associate NCC Officer
4 (TN) NAVAL (TECH) NCC

Soaring High: NCC Cadet Take Flight at AFS Tambaram

venue	Airforce Station Tambaram
NCC Unit	1 (TN) AIR SQN NCC
Date & Sortie time	07.02.2025 & Evening 15:00 hrs to 18:00 hrs

NCC Air Wing Cadets recently experienced the thrill of flight at **Air Force Station Tambaram**, advancing their aviation training aboard the Pipistrel Virus SW aircraft. Among them, **Shriram R**, a 3rd-year **Mechanical Engineering** student at Sri Sairam Engineering College, completed his second sortie on **February 7, 2025,** under Group Captain JR Thiyagarajan.

NCC COMBINED ANNUAL TRAINING CAMP (CATC) 2025 AT SRI SAIRAM ENGINEERING COLLEGE

NC II VETRIVENDHAN D
TN23SDN92916,
SEC23ME083
II MECH - A

NC II Vetrivendhan, a 2nd-year **Mechanical Engineering** student at Sri Sairam Engineering College, participated in the **Combined Annual Training Camp (CATC) 2025** from January 4 to 13. Guided by **Sub-Lt. Prabhu V**, ANO of the NCC Naval Wing, and supported by Mechanical Department faculty, he underwent intensive training in military drills, weapon handling, and disaster management. The camp's obstacle courses, adventure activities, and defense officer lectures enhanced his leadership and teamwork, marking a milestone in his NCC journey.

NCC 'B' - CERTIFICATE HOLDERS (II-Year)

L/CPL PRAVEEN KUMAR
ARMY - WING

L/CPL VEERENDIRAKUMAR
ARMY - WING

NC II JENISH
NAVY - WING

NC II VETRIVENDHAN
NAVY - WING

NC II HEMACHANDAR
NAVY - WING

NC II PRIYANKA
NAVY - WING

FC KANGEYAN
AIR - WING

"The 2nd-year Mechanical Engineering students have once again demonstrated their dedication and perseverance by successfully appearing for the **NCC 'B' Certificate Exam** on **22nd and 23rd February 2025**. This milestone reflects their commitment to discipline, leadership, and service to the nation, key values instilled by the National Cadet Corps (NCC)."

NCC 'C' - CERTIFICATE HOLDERS (III - Year)

SGT PADMA C
ARMY - WING

CQMS SARDAR VALLABHAI PATEL
ARMY - WING

C/SGT SHRIRAM
AIR - WING

"Our Mechanical Engineering students have once again showcased their dedication, discipline, and leadership by successfully completing the **NCC 'C' Certificate Exam** on **14th and 15th February 2025**. This achievement stands as a testament to their relentless hard work, commitment to service, and unwavering perseverance in upholding the core values of the National Cadet Corps (NCC) and also embraced this challenge with exceptional dedication, balancing their academic responsibilities with intense NCC ."

STUDENTS PLACED IN JSW, Valeo, Infosys

8 LPA PACKAGE

JSW

SURESHMANI G
MENTOR - Dr. A. Manivannan

SANTHOSH CHAKRAVARTHY E
MENTOR: Dr. C. Parswajinan

SRI VARI BALAJI G
MENTOR: Dr. K. Venkataraman

KIRAN V
MENTOR: Mr. M. Sudhakar

NITHISH ANAND A
MENTOR: Mr. M. Sudhakar

ANUSUYA A
MENTOR - Dr.M.Arul Prakash

IYAPPAN R
MENTOR - MR. Ranjith Kumar V

Valeo

ASMATHI JS
Mentor :
Mr.V. PRABHU

4.2 LPA

Infosys®

MADAN K
Mentor :
Dr.PARSWAJINAN C

3.6 LPA

RECENT PLACEMENTS

17 PARTNERSHIPS FOR THE GOALS

Happy BIRTHDAY

BIRTHDAY STARS

DINO J C
MECH II YR

RAHUL J
MECH III YR

SIVARAMAN M
MECH III YR

ANBUSELVAN K
MECH III YR

MONESH S
MECH III YR

NARESH KUMAR J
MECH III YR

SHYAM S
MECH III YR

SURYA B
MECH III YR

RAHUL M
MECH IV YR

GOKUL SHANMUGA S
MECH IV YR

ARAVIND C
MECH IV YR

SANCHAN KUMAR S
MECH IV YR

KISHORE S
MECH IV YR

BDAY
CORNER

"Best wishes on your birthday! May your journey ahead be filled with knowledge, wisdom, and success!"

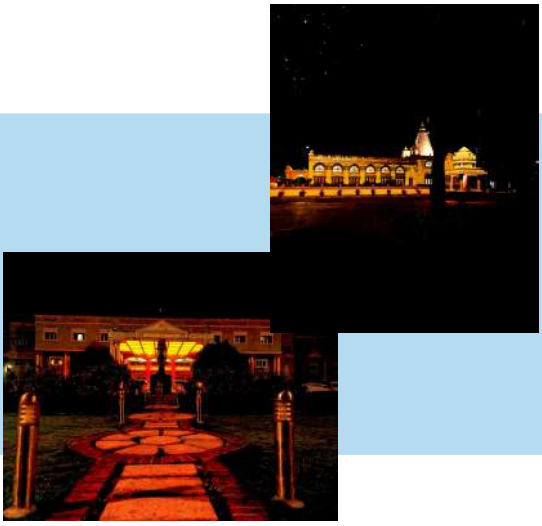
FEB 2025

The craftmanship

Create a Welcoming Environment for Everyone

YOGHAMITHRA R
4TH YEAR MECH-A

LAKSHMAN.G
4TH YEAR MECH-A



Showcase Your Creativity in Our Exclusive Department Magazine! (photography, fashion design, art & craft, trash to treasure, Drawing & Painting etc...) 🎨✨

https://forms.gle/6dnJKbjU4atJDgzk9

SUMMARY

Lt. Dinesh Kumar S K
Assistant Professor
Department of Mechanical Engineering

SHRIRAM R
III - YR, MECH

Here's a concise and idiomatic editorial note:

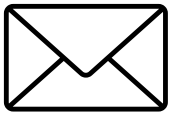
Editorial Team

Your feedback is the compass that guides us—help us navigate toward excellence! Share your thoughts, and let's grow together.

Let me know if you need further refinements!

KANGEYAN H
II - YR, MECH

PRIYANKA S
II - YR, MECH



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newsletter.mech@sairam.edu.in

Sairam RAISE | Sairam EOMS | ARIIA ATAL RANKING OF INSTITUTIONS ON INNOVATION ACHIEVEMENTS TOP 25 RANKING INSTITUTION | nirf | IQAC | INSTITUTION'S INNOVATION COUNCIL | SUSTAINABLE DEVELOPMENT GOALS

SRI SAI RAM ENGINEERING COLLEGE CHENNAI

TORQUE MAGAZINE

SHIFTING GEARS TOWARD EXCELLENCE

DEPARTMENT OF MECHANICAL ENGINEERING

SYMPOSIUM, WORKSHOPS, SEMINAR, PAPER PRESENTATION, HANDS ON TRAINING

SHARE YOUR EVENTS AND PAPER PUBLISHED DETAILS

https://forms.gle/jwykHaHZL3Zrtjmr7

STUDENT INTERNSHIPS AND ONLINE COURSES

Share your INTERNSHIP INSIGHTS EXPERIENZE

https://forms.gle/vZ2DWdmNch669kzi6zK7qh1e

CRAFTMANSHIP

The Art of Living

(Photography , Art & Craft , Trash to Treasure , Fashion Design , Drawing & Painting)

https://forms.gle/psPvFynopfAxferr9

ART DESIGN

Journals, DESIGN patterns, Conferences, Paper PUBLISHED

SCAN AND FILL YOUR DETAILS https://forms.gle/ouXPWGRm895Pqjmb9

Concern & Feedback

https://forms.gle/W9dJe1rFe6DMkZwz5

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Student Coordinator
R. Shriram - +91 91502 12503
Priyanka - +91 80727 27218

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sairam_mech

17 PARTNERSHIPS FOR THE GOALS

Together let's build a better world where there is NO POVERTY and ZERO HUNGER. We have GOOD HEALTH AND WELL BEING QUALITY EDUCATION and full GENDER EQUALITY everywhere. There is CLEAN WATER AND SANITATION for everyone. AFFORDABLE AND CLEAN ENERGY which will help to create DECENT WORK AND ECONOMIC GROWTH. Our prosperity shall be fuelled by investments in INDUSTRY, INNOVATION AND INFRASTRUCTURE that will help us to REDUCE INEQUALITIES by all means. We will live in SUSTAINABLE CITIES AND COMMUNITIES. RESPONSIBLE CONSUMPTION AND PRODUCTION will help in healing our planet. CLIMATE ACTION will reduce global warming and we will have abundant, flourishing LIFE BELOW WATER, rich and diverse LIFE ON LAND. We will enjoy PEACE AND JUSTICE through STRONG INSTITUTIONS and will build long term PARTNERSHIPS FOR THE GOALS.

For the goals to be reached, everyone needs to do their part: governments, the private sector, civil society and **People like you.**

Together we can...

Sai Prakash Leo Muthu

Chairman & CEO – Sairam Institutions

Sairam INSTITUTIONS