



Sri Venkateswara
College of
Engineering

Department of Mechanical Engineering

FEBRUARY 2025

IGNITION NEWSLETTER

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About the Department

The department of Mechanical Engineering started its successful journey in 1985 and has been accredited by the NBA since 1998. It is recognized as a research center approved by Anna University, as well. The UG/PG courses offered by the department cover the thrust areas such as Thermal, Design, Manufacturing and Industrial Engineering and is supplemented by well - equipped laboratories, reputed research supervisors and dedicated faculty members. The department has the privilege of housing research cells- namely the Fibre Reinforced Composite (FRP) Cell, Engine Testing and Bio - Fuel Research cell, Tribology research cell, Welding research cell which are used extensively for research and consultancy projects. The department has completed sponsored research projects for a worth of more than 1.5 crore and consultancy projects for more than 75 lakhs. The department has established a center of excellence in Additive Manufacturing and Computer Integrated Manufacturing, which houses the facilities such as Digital Manufacturing, Robotics and HMI based Automation and 3D printers. The department has published more than 150 papers in peer reviewed journals during the last 4 years.

The following programs are offered by the department

1. B.E. Mechanical Engineering
2. B.E. Mechanical and Automation Engineering
3. M.E. Industrial Automation and Robotics

Vision

To be a leader in Higher Technical Education and Research by providing the state of the art facilities to transform the learners into global contributors and achievers.

Mission

1. To be renowned for offering Programs in the field of Mechanical Engineering that imparts competent technical knowledge along with skill, research & innovation, leadership and life skills needed for the students to contribute and achieve at global level.
2. To provide quality education encompassing recent technological developments by continuously upgrading the academic infrastructure thereby enhancing the technical knowledge of students, teachers and supporting staff which facilitates technical assistance to industrial and societal needs.
3. To offer need based training to the students in tools relevant to mechanical engineering.
4. To continuously upgrade the research facility and provide a conducive environment leading to continuous learning, development and transfer of knowledge.
5. To inculcate in students minds about Professional ethics, Human Values and Environmental issues in Engineering.

DISCOVERY DIGEST

“Navigating the Frontiers”

EARTHCARE MISSION: ENGINEERING THE FUTURE OF CLIMATE SCIENCE

- By Dr. SUSEEL JAI KRISHNAN S



Imagine standing beneath a vast sky, watching clouds drift effortlessly, their shapes ever-changing. Now, picture a satellite soaring above, decoding the mysteries hidden within those clouds—revealing how they shape our climate.

This is the EarthCARE Mission, a groundbreaking collaboration between the European Space Agency (ESA) and Japan Aerospace Exploration Agency (JAXA) that seeks to illuminate the intricate dance between clouds, aerosols, and radiation.

While EarthCARE is primarily a climate science mission, mechanical engineering plays a silent yet powerful role in making it a reality. From the satellite's structural integrity to its thermal regulation systems, mechanical engineers ensure that EarthCARE withstands the extreme conditions of space. The precision behind its Cloud Profiling Radar, Backscatter Lidar, and Broadband Radiometer is a testament to high-precision instrumentation design and control mechanisms.

DISCOVERY DIGEST

“Navigating the Frontiers”

Beyond space technology, EarthCARE’s findings have direct implications for mechanical engineers working in aerospace, renewable energy, and environmental sustainability. The mission’s analysis of radiation balance helps optimize solar panel efficiency and HVAC systems, while its insights into aerosols and air currents contribute to advancements in wind turbine technology and aerodynamics. Understanding infrared radiation absorption can also improve heat management in everything from buildings to industrial machinery.

More than just a satellite, EarthCARE bridges the gap between scientific discovery and engineering innovation. It’s not just about studying the skies—it’s about shaping the future of technology, energy, and sustainability. Because when engineers and scientists come together, they don’t just observe the world—they change it.

And the sky is just the beginning.

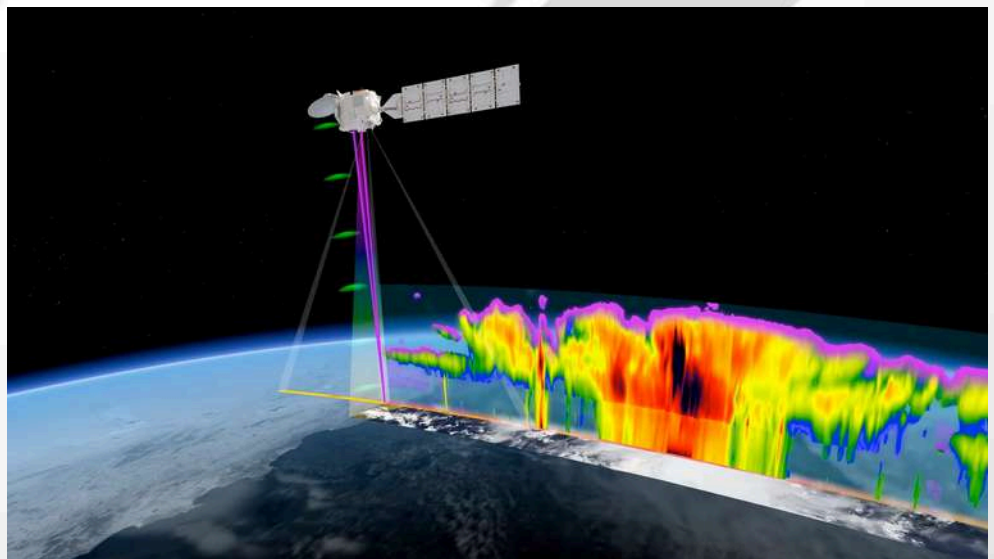


Image Source: <https://spacenews.com/falcon-9-launches-esas-earthcare-mission/>

FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"



Paper Presented: Dr. M. Prem Ananth and Mr. J. Sivaramapandian participated and presented their research paper titled **"Evaluation of Corrosion Behaviour of AZ31 Magnesium Alloys Using Laser"** at the International Conference on Innovation of Materials, Science, and Engineering Technology (ICIMSET - 2025) on 28th February 2025. The conference was organized by the Department of Research and Development, in association with ICT Academy, MIT Square (London), IETE Student Forum, and Dambi Dollo University (Ethiopia).



FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"



Internships Attended: Dr. M. Mohandass successfully completed the following programs at NoviTech R&D Private Limited from 2nd January to 17th February 2025:

- One-Month Internship in **Data Analytics**
- One-Month Internship in **Machine Learning**
- 30-Day MasterClass in **Artificial Intelligence**

Congratulations on these significant accomplishments in advanced technologies!



FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"



FDP Attended: Mr. M. Balakumar, successfully completed the AICTE Training and Learning (ATAL) Academy Faculty Development Program on "AI-Driven Predictive Analytics and Decision Making in Manufacturing Supply Chain" at Rajalakshmi Engineering College from 27th January to 2nd February 2025.



FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"



FDP Attended: Dr. M. Gajendiran and Dr. C Senthamaraikannan, successfully completed the AICTE Training and Learning (ATAL) Academy Faculty Development Program on "Energy Conservation and Storage Technologies for Global Sustainable Developments" at St. Peter's College of Engineering and Technology from 3rd to 8th February 2025.



FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"



FDP Attended: Mr. Aravindan M, successfully completed the AICTE Training and Learning (ATAL) Academy Faculty Development Program on "Hydrogen (H₂) Generation from Renewable Energy Technologies" at Anna University from 3rd to 8th February 2025.



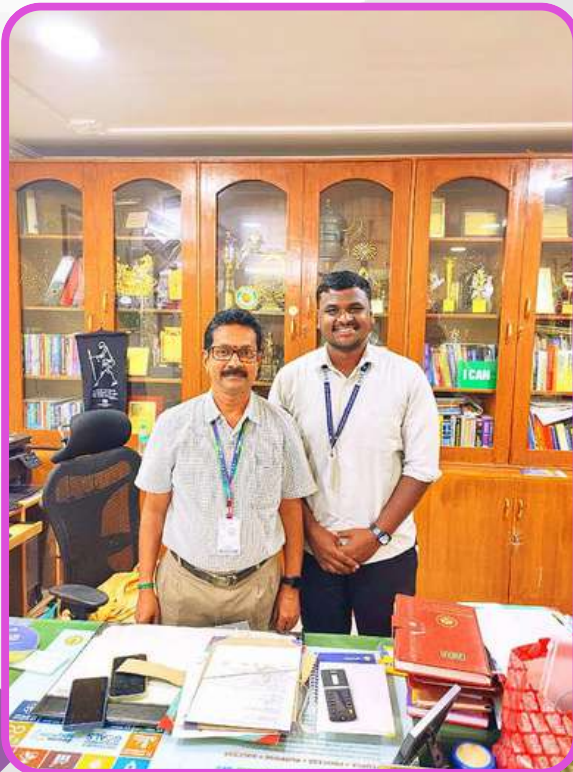
FACULTY ACHIEVEMENT

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Academic Contribution - BoS Committee

Meeting: *Dr. Aravindan M* attended the **9th Board of Studies (BoS) Committee Meeting** of the Department of Mechanical Engineering at **Sri Sairam Institute of Technology** for the academic year 2024-2025. He contributed as a distinguished panel member, providing valuable insights for curriculum development and academic advancements.



FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"



FDP Attended: Mr. Arulkumar M and Mr. J SIVARAMAPANDIAN, successfully completed the AICTE Training and Learning (ATAL) Academy Faculty Development Program on "**Recent Trends in AI-Empowered 3D Bio-Printing Technologies Towards Fabrication of Smarter Biomedical Implants**" at **S.A. Engineering College** from **10th to 15th February 2025**.

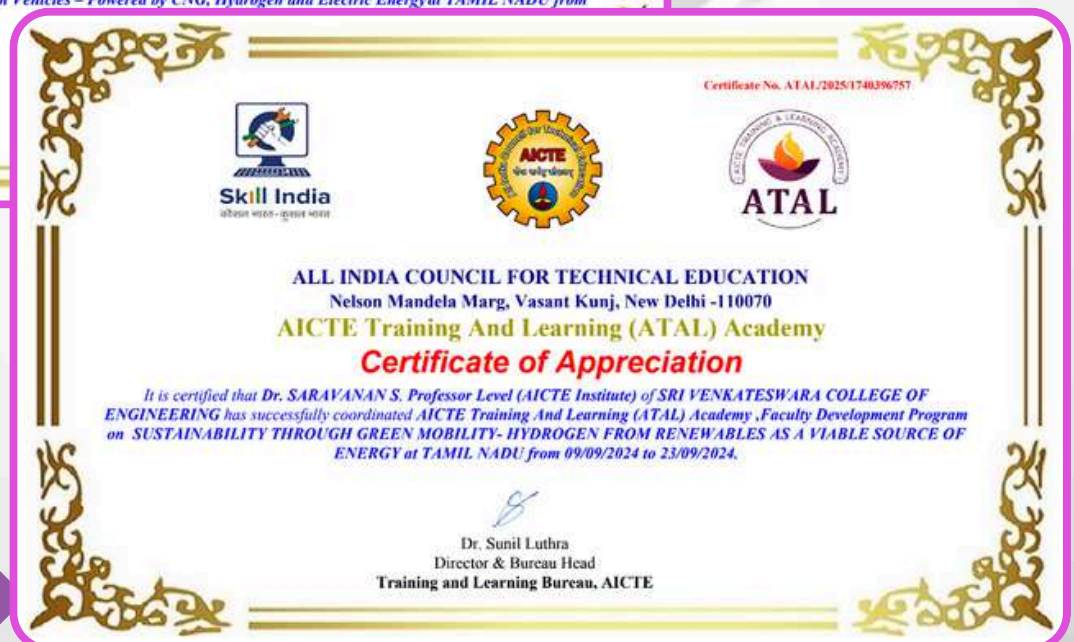


FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"



FDP Attended: Dr. S. Saravanan, successfully coordinated the AICTE Training and Learning (ATAL) Academy Faculty Development Program on "**Sustainability Through Green Vehicles - Powered by CNG, Hydrogen, and Electric Energy**" held in Tamil Nadu from **12th to 17th February 2024** and "**Sustainability Through Green Mobility - Hydrogen from Renewables as a Viable Source of Energy**" from **9th to 23rd September 2024**.



STUDENTS ACCOLADES

"Diverse Talents, One Campus Spirit"

Harshith B and Sanjay Charan S successfully completed Level 1 & Level 2 of the MADE 2.0 Program on CODE Design Thinking Framework, themed **"Pivoting at the Right Moment" to Ideate Solutions Towards Business Value** from **22nd to 28th January 2025**. Congratulations to both for their achievement in design thinking and innovation!

CERTIFICATE


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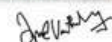
This certificate is presented to


HARSHITH B

for successfully completing the MADE 2.0 programme on CODE Design Thinking Framework themed "Pivoting at the right moment" to ideate solution towards business value.

22 JAN- 28 JAN 2025


Dr. Manee Sangaran
Program Director


Prof. Dr. Aravind CV
Project Director


Prof. Dr. Sim Yee Wai
Executive Dean



CERTIFICATE

of Completion

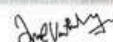
This certificate is presented to


SANJAY CHARAN S

for successfully completing the MADE 2.0 programme on CODE Design Thinking Framework themed "Pivoting at the right moment" to ideate solution towards business value.

22 JAN- 28 JAN 2025


Dr. Manee Sangaran
Program Director


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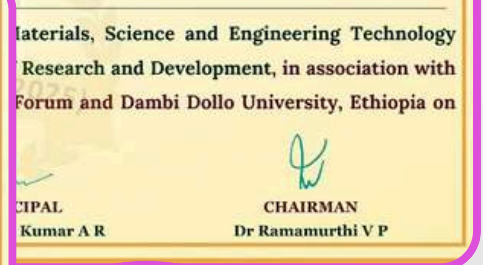

Prof. Dr. Sim Yee Wai
Executive Dean



STUDENTS ACCOLADES

"Diverse Talents, One Campus Spirit"

Puthraganesh V and **Tamilarasan R**, participated and presented their research paper titled **"Evaluation of Corrosion Behaviour of AZ31 Magnesium Alloy Using Laser Texturing"** at the International Conference on Innovation of Materials, Science, and Engineering Technology (ICIMSET - 2025) on **28th February 2025**. The research was conducted under the guidance of **Dr. M. Prem Ananth** and **Mr. J. Sivaramapandiyan**. The conference was organized by the Department of Research and Development in association with ICT Academy, MIT Square (London), IETE Student Forum, and Dambi Dollo University (Ethiopia). Congratulations to the team on this remarkable achievement!



STUDENTS ACCOLADES

"Diverse Talents, One Campus Spirit"

SVCE Teams Shine at TAFE Innovista'25:

Two teams from SVCE participated in TAFE Innovista'25, demonstrating their research and innovation in both paper presentations and project expos. The first team, comprising **Jagdeesh S. K.** and **Dhaya Shankar S.** from **II-year Mechanical Engineering**, presented their paper titled **"Evaluating Moringa and Rubber Seed Oil Methyl Ester Against Conventional Diesel: A Comparative Analysis of Engine Performance and Emission."** Competing against over 30 teams, they advanced through two intense rounds and secured **First Place** in the **Tech Champs Paper Presentation event**. Their performance highlighted exceptional problem-solving skills, technical expertise, and teamwork.



STUDENTS ACCOLADES

"Diverse Talents, One Campus Spirit"

SVCE Teams Shine at TAFE Innovista'25:

The second team, consisting of **Rakshita M., Yashwanth H. G., Dhaneswar S. B., and Sheik Mohamed Fareeth A.** from **II-year Mechanical and Automation Engineering**, participated in both the paper presentation session and the project expo. Their research focused on **"Adoption of IoT in Agriculture,"** and they also showcased their **Pesticide Spray Control Robot prototype** as part of the project exhibition. The event provided a platform for students to gain industry exposure and apply their technical knowledge to real-world challenges. Congratulations to both teams for their commendable achievements at TAFE Innovista'25!



STUDENTS ACCOLADES

"Diverse Talents, One Campus Spirit"

Academic Achievement – Batch Rank Holders

Congratulations to the **2024 passed-out** students for their outstanding academic performance:

- **Rank 1: Varatharajan C. N.** (Reg. No: 2127201001077)
- **Rank 2: Justin Kiran Kumar S.** (Reg. No: 2127201001027)

Their dedication and excellence have earned them the top ranks in their batch. Wishing them continued success in their future endeavors!



EVENTS

“Recapping the Buzzworthy Happenings”

Workshop Conducted: On **4th February 2025**, the Department of Mechanical Engineering successfully organized a **one-day workshop on MATLAB** for Mechanical Engineers. The session offered hands-on experience and valuable insights into MATLAB's applications in mechanical engineering. Resource persons **Afsal S** (Senior Application Engineer – MATLAB) and Er. **Gowtham Rajmohan** (Technical Manager – MATLAB) shared their expertise, while the event was coordinated by **Dr. S. Ramesh Babu** (Professor & Head) and **Dr. M. Mohandass** (Assistant Head). The workshop was designed for third-year students from Mechanical Engineering (15 participants), Mechanical and Automation Engineering (29 participants), and Automobile Engineering (participants), making it a focused and enriching experience for all.



EVENTS

“Recapping the Buzzworthy Happenings”

TAFE Innovista'25 – Project Display:

Second-year Mechanical and Automation Engineering students participated in **TAFE Innovista'25**, held at TAFE, Sembiam, on **25th February 2025**, showcasing their innovative projects. **Dr. M. Mohandass** and **Mr. J. Sivaramapandiyan** attended the event as judges, evaluating projects and encouraging students to excel in their technical pursuits.



EVENTS

"Recapping the Buzzworthy Happenings"

BIS Guest Lecture Series – Two-Day Technical Session on Metallurgical Engineering:

The Bureau of Indian Standards (BIS), in coordination with the Society of Mechanical Engineers and the Standards Club of Mechanical Engineering, organized a two-day technical session on "**Metallurgical Engineering**" on **18th and 19th February 2025** at QMC Hall, SVCE.

The session was delivered by **Shri. R. Tirumala Rao**, Scientist-I, HMO (S-II), Bureau of Indian Standards, CNBO. The event was coordinated by **Mr. K. Ram Prasad** and **Mr. M. Nishal**, providing students with valuable insights into metallurgical advancements and industry standards.



EVENTS

“Recapping the Buzzworthy Happenings”

PALS Industry Visit to TIDC-India:

Dr. C. SenthamaraiKannan and **Dr. A. Saravanan** attended the PALS Industry Visit to **TIDC-India** on **18th February 2025**. The visit provided insights into chain manufacturing processes, including press tool stamping, heat treatment, surface treatment, sprocket pin machining, and automated assembly & testing in 12 stages.

The faculty members also explored the Design, Tool Room, R&D, Assembly, and Heat Treatment Line, where innovations such as maintenance-free chains and self-lubricating chains are being developed. The visit enhanced their understanding of advanced manufacturing and automation in chain production.



EVENTS

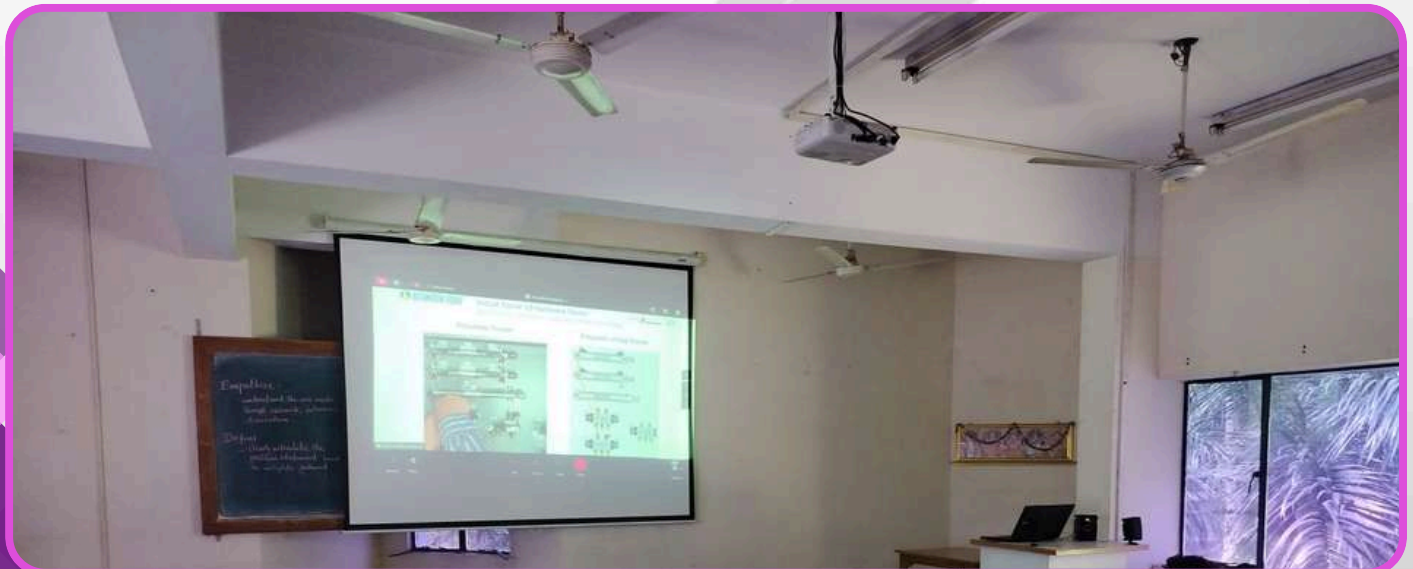
“Recapping the Buzzworthy Happenings”

Webinar on Hydraulic Circuit Design Using Automation Studio:

A webinar on **Hydraulic Circuit Design using Automation Studio™** by Famic Technologies Inc. was conducted on **6th February 2025 from 11:00 AM to 12:00 PM at QMC Hall for II-year Mechanical and Automation Engineering students**. The session covered key topics, including:

- *Mastering Hydraulics with Automation Studio™, Electro-Hydraulic Circuit Design, PLC Control, Hydraulics Virtual Trainer Kit*

The webinar provided students with of hydraulic automation and control systems, enhancing their understanding of industrial applications.



INDUSTRIAL VISIT

"Factory Chronicles: Where Learning Takes Shape"

Industrial Visit to National Agro Foundation:

11-year Mechanical Engineering students, accompanied by **Dr. S. Natarajan**, visited **National Agro Foundation, Chengalpattu**, on **19th and 20th February 2025**. During the field trip, students observed check dams, water irrigation systems, and water management techniques, including transportation from hills. The visit provided valuable practical insights into agro-based engineering technologies and sustainable agricultural practices.



INDUSTRIAL VISIT

"Factory Chronicles: Where Learning Takes Shape"

Industrial Visit to Indwel Precision Gears Ltd.:

III-year Mechanical Engineering (ME) and Mechanical and Automation Engineering (MN) students, accompanied by Dr. A. Saravanan and Dr. M. Aravindan, visited Indwel Precision Gears Ltd. on 19th February 2025.

The visit provided students with industry exposure to precision gear manufacturing and advanced machining processes.



GO KART DESIGN CHALLENGE

No.	Name
1	Adithya N Kumar
2	Bharath
3	Jensen Silva
4	Pratul.VS
5	J. Sai Santhosh
6	Sanjiv Raaj (C)
7	Sharn Britto
8	Harish Shrenath
9	Harish Raghavendra
10	Sri Vishnu M
11	Akash
12	Jeshwanth
13	Mohan
14	SriVarthini
15	Gokul
16	Yukendren
17	Mukesh Maran (D)
18	Sujin
19	Vishwanathan
20	Chealoka
21	Kishore
22	Senthil
23	Barath Sriram
24	Gayathri
25	Kusthub

A team of **25 students** from Mechanical Engineering and Mechanical and Automation Engineering participated in the **GOKART 12th Design Challenge 2025**, held from **19th to 23rd February 2025** at **Kari Motorsports, Coimbatore, Tamil Nadu**. Under the guidance of **Mr. J. Sivaramapandiyan**, the students showcased their engineering and design skills in this prestigious motorsport competition, gaining hands-on experience in vehicle dynamics and performance optimization.



PLACEMENTS

"Opening Doors to Career Opportunities"

Congratulations to **Kishorekumar R** for securing placement at M/s **Worley India Pvt. Ltd.** as a **Graduate Engineer Trainee (GET)**. He received his offer on **24th December 2024**. Wishing him success in his professional journey!



Kishorekumar R
(2127211001309)



MUKUNDRAJ Y
(2127211001051)

Congratulations to **Mukundraj Y** for securing placement at M/s. **ISGEC Heavy Engineering Ltd.** as a **Graduate Engineer Trainee (GET)**. He received the offer on **26th February 2025**. Wishing him great success in his career!

Congratulations to **V Gowtham** for securing positions as **Graduate Engineer Trainees** at M/s. **Emerson Electric,.** on **22th Feb, 2025**.



V Gowtham
(2127211001305)

PLACEMENTS

"Opening Doors to Career Opportunities"



Avinash S. M
(2127211001009)



Expedit Joe L
(2127211001017)



Mukilan R
(2127211001050)



Mukundraj Y
(2127211001051)



Syed Abyan Bahaauddin S
(2127211001073)

Placement & Internship Achievement - Sundram Fasteners Limited

Congratulations to the following students for securing placement at Sundram Fasteners Limited:

- **Avinash S. M**
- **Expedit Joe L**
- **Mukilan R**
- **Mukundraj Y**
- **Syed Abyan Bahaauddin S**

They will be joining an internship at Sundram Fasteners Limited from **15th March to 15th June 2025**, with their onboarding for the Young Leaders Program (YLP) tentatively scheduled from 1st July 2025 onwards. Wishing them great success in their careers!

EDITORIAL TEAM



Dr. S. RAMESH BABU
Professor & Head
Mechanical Engineering



Dr. M. Mohandass
Associate Professor
Mechanical Engineering



Dr. S. MUNIRAJ
Assistant Professor
Mechanical Engineering



Mr. A. Ranjith Raj
Assistant Professor
Mechanical Engineering

STUDENT EDITORIAL TEAM



Mr. Kiran Kumar D P
IV Year
Mechanical Engineering



Mr. Mithun Aravind O
IV Year
Mechanical Engineering



Mr. G Bharath Kumar
III Year
Mechanical Engineering



Mr. Lokesh P
III Year - Mechanical and
Automation Engineering



Mr. M Sanjay
II Year
Mechanical Engineering



Mr. Lithesh C
II Year - Mechanical and
Automation Engineering