

MAY 2024

IGNITION

NEWSLETTER

Issue 05



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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”

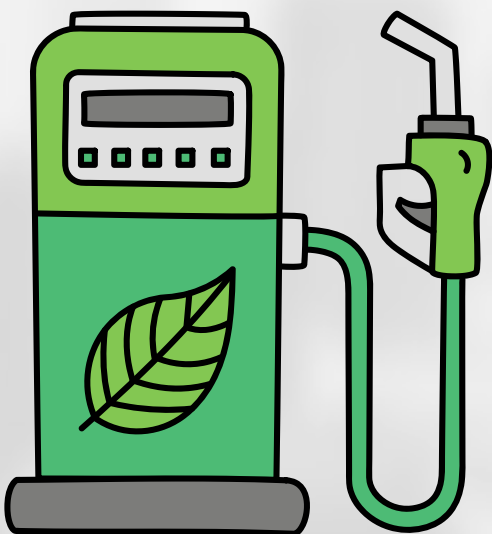
Dewatering of biomass

Biomass energy offers a renewable, carbon-neutral, and versatile alternative to fossil fuels, with the potential to reduce waste, promote local economic development, and mitigate environmental impacts. Biomass stands out from other renewable resources as it can be produced from organic waste materials such as agricultural residues, cattle stock manure, forestry waste, and organic municipal solid waste.



Dr. V. Sridharan
ASP/MECH

In this digest we can have a peek on producing biogas from cow dung in an efficient manner.



Biomass is made into a slurry and fed in a digester where microorganisms break down the organic matter into biogas and digestate in the absence of oxygen. The process helps in waste management by converting organic waste into valuable energy and fertilizer, reducing greenhouse gas emissions and odors from decomposing waste. Biogas is primarily methane (CH₄) and carbon dioxide (CO₂) and can be used as a renewable energy source.

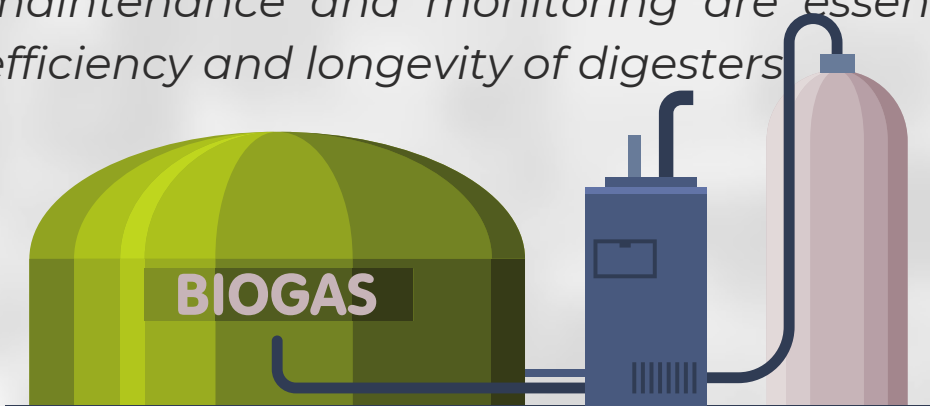
DISCOVERY DIGEST

“Navigating the Frontiers”



A new technique is emerging in dewatering the cow dung before feeding it to the digester. Dewatering is the process of removing excess water from cow dung through mechanical means such as filtration, pressing, or centrifugation. Dewatering enhances the efficiency of subsequent processes like composting or anaerobic digestion by reducing the volume and improving the quality of the dung. The solid matter obtained after dewatering is used for making vermi-compost, which is widely used as a natural fertilizer in organic farming and roof top gardens. The liquid matter is fed into digester for fermentation. Biogas is tapped from the digester and used as fuel in kitchen, integrated small scale industries including dyeing, paper manufacturing and food packaging. The digestate, a byproduct of anaerobic digestion, is rich in nutrients and is also used as a fertilizer.

Dewatering and anaerobic digestion of cow dung are now being practiced in integrated, self-sustaining farm settings and centralized waste treatment facilities. Dewatering may require additional equipment and operational costs. Proper maintenance and monitoring are essential to ensure the efficiency and longevity of digesters.



Dr. V. Sridharan

STUDENT SPOTLIGHT

"From Students, For Students"

6 Tips to Engineer Your Break

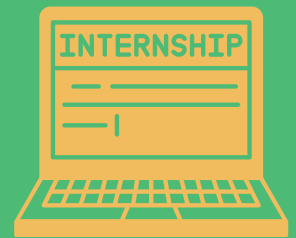


- By Pratul V S

The semester break is here! That magical time when exams are a distant memory, and you can finally unwind and enjoy life. But why not make it even more meaningful? Here's an exciting guide on how to spend your holidays productively.

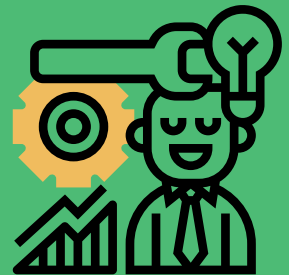
1. INTERNSHIPS AND INDUSTRIAL TRAINING

Chennai is home to numerous automotive, manufacturing, and IT companies. Seek internships at renowned firms like Ashok Leyland, Hyundai, or Tata Consultancy Services. These opportunities offer practical experience and insights into industry operations.



2. SKILL DEVELOPMENT COURSES

Enroll in short-term courses on CAD/CAM, 3D printing, or robotics. Platforms like Coursera and Udemy provide online certifications, while local institutes offer hands-on workshops.



3. PROJECTS AND COMPETITIONS

Participate in engineering competitions such as SAE Baja or ASME's design challenges. Collaborating on projects not only enhances your resume but also hones problem-solving skills.



STUDENT SPOTLIGHT

"From Students, For Students"

4. NETWORKING

Join professional bodies like IICE, ISTE, SAE India or the Institution of Engineers (India). Attend their events to network with industry professionals and stay updated on the latest technological trends.



5. RESEARCH AND PUBLICATIONS

Engage in research under your professors or collaborate on papers. Publishing your work in journals or conferences can significantly boost your academic profile.



6. COMMUNITY SERVICE

Volunteer for engineering outreach programs or NGOs. It's a great way to give back to the community while applying your technical knowledge.



By balancing practical experience, learning, and community involvement, you can make your summer both productive and enriching.

V.S. Pratul
Pratul V S, II year MN

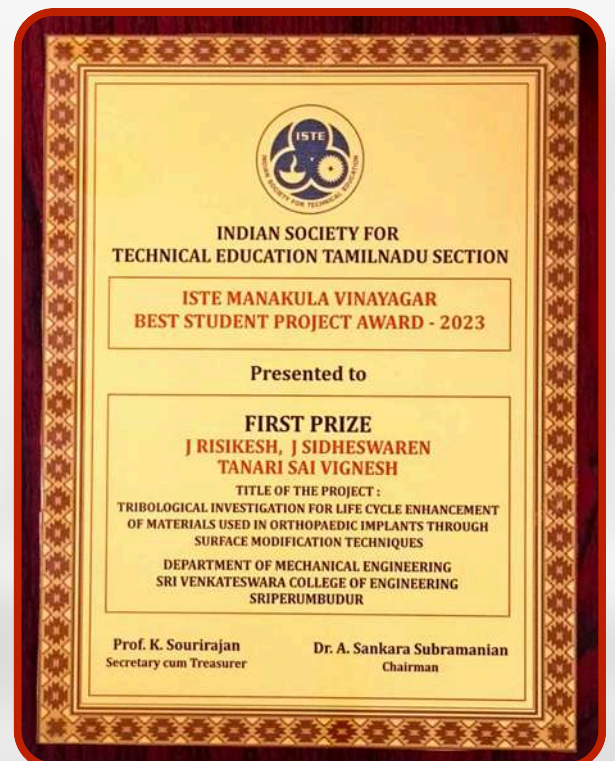
FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"

Research Grant: Congratulations to **Dr. S. Gopinath**, from Mechanical Engineering Department and **IQAC Coordinator**, for receiving a grant of **Rs. 8,35,000** along with faculty members from the IT Department.



Best Paper Award: The project, guided by **Dr. M. Premananth**, involved 2023 passed out students **Mr. Rishikesh, Tanari Sai Vignesh, and J. Sidheswaren**, who were awarded the **ISTE Best Project Award** at a state-level student convention held today.



FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"



Paper Published: Dr. Sridharan Veerapuram published a paper titled '**Weighted Optimization of Drilling Parameters in Jute/Epoxy Graphene Nanocomposite**' in the Proceedings of the **International Conference on Recent Innovations in Production Engineering (RIPE-2024)**, held on **May 30-31, 2024**, at **MIT Campus, Anna University, Chennai, India. ISBN:978-93-95856-95-9.**

Paper Published: Dr. Senthamarai Kannan C, Kowsik K.V., and Raviram R. published a paper titled "**Mechanical and Vibration Properties of Epoxy Composites Reinforced with Sisal, Areca, and Hemp Fibers, Enhanced by Sugarcane Bagasse and Coconut Husk Fillers**" in **Materials Circular Economy**, Volume 6(1), pages 1-9.



Paper Published: Dr. Raghu P presented a paper titled "**Optimizing on Biofuel in Dual Fuel Mode Operation by Using MRSN Technique**" at the 15th International Conference on **Recent Engineering and Technology**, held on **May 30th and 31st, 2024**, at **Sri Venkateshwara College of Engineering, Bangalore, India**, in association with the Organization of Science & Innovative Engineering Technology.

FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"

FDP Attended: Dr. Senthamaraikannan C and Mr. Arulkumar Muniyappan participated in an ISTE-sponsored 6-day online Faculty Development Program (FDP) on **Robotic Process Automation**, held from **May 6, 2024, to May 11, 2024**. The program was conducted by the Department of Mechanical and Automation Engineering at **Sri Sairam Engineering College, Chennai**.



FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"

FDP Attended: Mr. A. Kumaraswamy participated in a one-week online national-level Faculty Development Program titled "**ChatGPT Plus: Exploring the Educational Potential of Premium Version.**" The program was organized by the Career Development Cell (CDC) at **Gokul Global University, Siddhpur, Gujarat**, in collaboration with the Nucleus of Learning and Development (NLD), Vadodara, from May 23 to 29, 2024.

FDP Attended: Mr. A. Kumaraswamy participated in a **one-week virtual Faculty Development Program** on "**Current Trends in Mechanical Engineering - Case Studies from Industries & Academia to Promote Innovation, Design Thinking, and Startups.**" The program was held from **May 20 to 25, 2024**, and was organized by the Department of Mechanical Engineering at **Shri Vishnu Engineering College for Women, Bhimavaram.**



FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"



Program Attended: Dr. S. Muniraj, participated in the Mentor-Mentee Two Days Training & Exposure Visit on "**Innovation & Entrepreneurship**," organized by the **Institution Innovation Council** (IC201810371 - IIC SVCE Sriperumbudur) at Sri Venkateswara College of Engineering. The event, sponsored by the Ministry of Education's Innovation Cell, AICTE, Govt. of India, took place on **May 21 and 22, 2024**.

FDP Attended: Dr. P. Raghu participated in a **5 day** online Faculty Development Program titled "**The Road Ahead: Challenges and Trends in Automotive Technologies**."

The program was organized by the Department of Automobile Engineering at Sri Venkateswara College of Engineering and was held from **May 27 to 31, 2024**.



FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"

Dr. S. Natarajan, ISTE Coordinator, represented our college and accompanied students to the **State-level ISTE Students Convention** held at **P.S.R. Engineering College, Sivakasi, on May 3, 2024.**



FDP Attended: Dr. S. Gopinath participated in a **5 day** online Faculty Development Program titled "**The Road Ahead: Challenges and Trends in Automotive Technologies.**" The program was organized by the Department of Automobile Engineering at Sri Venkateswara College of Engineering and was held from **May 27 to 31, 2024.**

STUDENTS ACCOLADES

“Diverse Talents, One Campus Spirit”

Best Paper Award: Our final year students **Mr. Shashank G.** and **Mr. Raviram** received the **First Prize Certificate** and shield in **Paper Presentation** at the State-level **ISTE Students Convention** held today at **P.S.R. Engineering College, Sivakasi**. Their project was guided by **Mr. A. Ranjith Raj. Dr. S. Natrajan**, ISTE college-level coordinator, accompanied the students to the event.



STUDENTS ACCOLADES

“Diverse Talents, One Campus Spirit”

Award: Our Final year student **Mr.Raviram** (2020-24 batch) received **ISTE Best Student award**, Tamil Nadu section at the state-level students convention held at **P.S.R Engineering college**, Sivakasi on **3/05/2024**. Our special thanks to the ISTE coordinators **Mr. G. Kirubakaran, Dr. S. Ilaiyavel** and **Dr. S. Natrajan**



EVENTS

“Recapping the Buzzworthy Happenings”

Ph.D. Public Viva-Voce Examination of **Mr. Rameshkannan G** (Register No. **1514299835**) was held on **May 2, 2024**, at **QMC Seminar Hall**, Department of Mechanical Engineering. His research, titled '**Studies on Mechanical Properties of Ficus Amplissima Natural Fiber Reinforced Polymer Composites**,' was guided by **Dr. S. Ramesh Babu**, Professor and Head of the Department of Mechanical Engineering.



Dr. S. Ilaiyavel and **Mr. M. Maheswaran** took two teams from SVCE to receive certificates from **PALs Executive Members**. The teams were given the opportunity to pre-incubate at the IITM Incubation Center.



EVENTS

“Recapping the Buzzworthy Happenings”

In preparation for the upcoming campus recruitment by **SEW EURODRIVE** on May 31, 2024, training sessions on **Factory Simulation Software - Visual Components** were conducted over the weekend of **May 25-26, 2024**. **Dr. M. Mohandass, Dr. A. Saravanan, and Dr. U. Magarajan** imparted training to the final year students of the 2020-2024 batch.



EVENTS

“Recapping the Buzzworthy Happenings”

Dr. S. Muniraj and **Dr. S. Natrajan** attended an industry visit exposure conducted by **IIC-SVCE** on **May 21 and 22, 2024**, at **Anna University, Chennai**. The event was organized by the Department of Applied Science and Technology and the Center for Entrepreneurship Development for collaboration and startup initiation.



EVENTS

“Recapping the Buzzworthy Happenings”

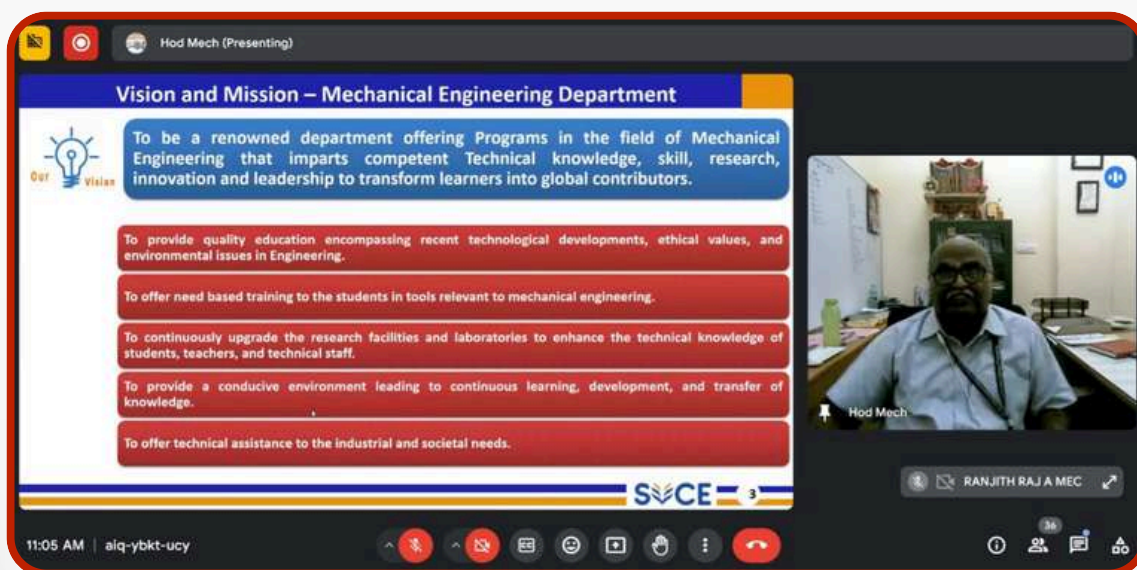
On **May 31, 2024**, **Professor Peter Madindwa Mashinini, HOD of Mechanical and Industrial Engineering Technology at the University of Johannesburg, South Africa**, delivered a guest lecture on **Additive manufacturing and laser processing**. The lecture focused on advancements and applications of additive manufacturing techniques, especially laser processing methods. Following the lecture, Professor Mashinini conducted a lab visit, offering hands-on experience and deeper insights into additive manufacturing processes. Discussions about potential collaborative work and research projects followed, laying the groundwork for future endeavors in the field.



EVENTS

“Recapping the Buzzworthy Happenings”

SVCE Pathways, organized by the Department of Mechanical Engineering on **May 3, 2024**, featured enriching guest lectures. **Mr. Hariganesh Radakrishnan** from Reliance Industries highlighted the scope in Mechanical Engineering. **Mr. Palaniappan T** shared his alumni success story from Iyappan Engineering Industries Pvt Ltd, and **Mr. Nirup Philip** discussed his journey as Product Operations Manager at Meta Platforms, emphasizing global opportunities. **Dr. S. Ramesh Babu** underscored the **uniqueness of Mechanical Engineering at SVCE**, inspiring future engineers.



EVENTS

“Recapping the Buzzworthy Happenings”

On May 10, 2024, the **Society of Mechanical Engineering (SME)** conducted its Valedictory along with a guest lecture titled '**Mechanical Engineering: An Uprising Phoenix**'. Our honorable Chief Guest, **M. Manoharan**, General Manager of Product Development at **Ashok Leyland Limited**, interacted with students and shared profound insights into the Mechanical Industry.



EVENTS

“Recapping the Buzzworthy Happenings”

Dr. S. Natarajan, representing **IIC SVCE**, met with founding partners **Mr. Guru Shankar** and **Mr. Karthikeyan** from **Spheruler Solutions (Deep Tech)** at **IITM Research Park**. They discussed points including internships for students, engaging as resource persons for training sessions, and the potential for signing an **MoU** in the future.



Dr. S. Ilaiyavel, **Mr. M. Maheswaran**, and **9 final-year Mechanical Engineering students** visited **IITM Research Park** on **May 10, 2024**. During their visit, they met with **Mr. Vivek Saminathan** from **Plug ZMart**, gaining valuable insights into cutting-edge research and industry practices.



PLACEMENTS

"Opening Doors to Career Opportunities"

Congratulations



Pooja S

(2127201001008)

The Department of Mechanical Engineering is delighted to announce that **Ms. Pooja S** has secured an internship at **Technip Energies India Limited**. Her internship will take place from **July 1, 2024, to August 27, 2024**.

ALUMNI WRITE-UP

"Stories of Success, Growth, and Impact"



Pradeep S

(Batch: 2014-18)

Working as **Research Engineer (Design, R&D), Hyundai Motor India Engineering Pvt. Ltd**

"SVCE" the name is loaded with lots of emotions. Right from Technical Knowledge to Personality Development, SVCE has made me a better person from where I started. My Journey to SVCE Started in 2014. The bridge between my School to College life was firmly built by my mentors at SVCE.

We were provided with best Laboratory Facilities, Friendly Lab Staffs as well as best Professors to guide us into right Path. They have helped me develop a positive attitude towards my studies and discover more about myself. The Laboratory facility which was provided to us were extraordinary. Comparing other colleges, we were given freedom to choose our desired elective subjects to pursue our career as our wish. Next comes the best Part of SVCE, Placement. Today I am working in one of the Top Automobile Industry in India, is because of my College SVCE. I was given the best placement training, personality development and confidence to attend my interviews. SVCE not only encourages students for placements but also to Higher studies also. Apart from Academics, we were also encouraged to develop our extra-curricular activities, sports, etc. SVCE is a place with divine Emotion.

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. Lohesh M V
IV Year
Mechanical Engineering



Mr. Raviram R
IV Year
Mechanical Engineering



Mr. Kiran Kumar D P
III Year
Mechanical Engineering



Mr. Mithun Aravind O
III Year
Mechanical Engineering



Mr. G Bharath Kumar
II Year
Mechanical Engineering



Mr. Bharath Vigneshwar R
II Year - Mechanical and
Automation Engineering



Mr. M Sanjay
I Year
Mechanical Engineering



Mr. Lithesh C
I Year - Mechanical and
Automation Engineering