# SRI VENKATESWARA COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous)

RVS Knowledge District, Chittoor-517127, A.P


ISSUE 07 | VOLUME 01 | JULY 2025

# SYNERGY

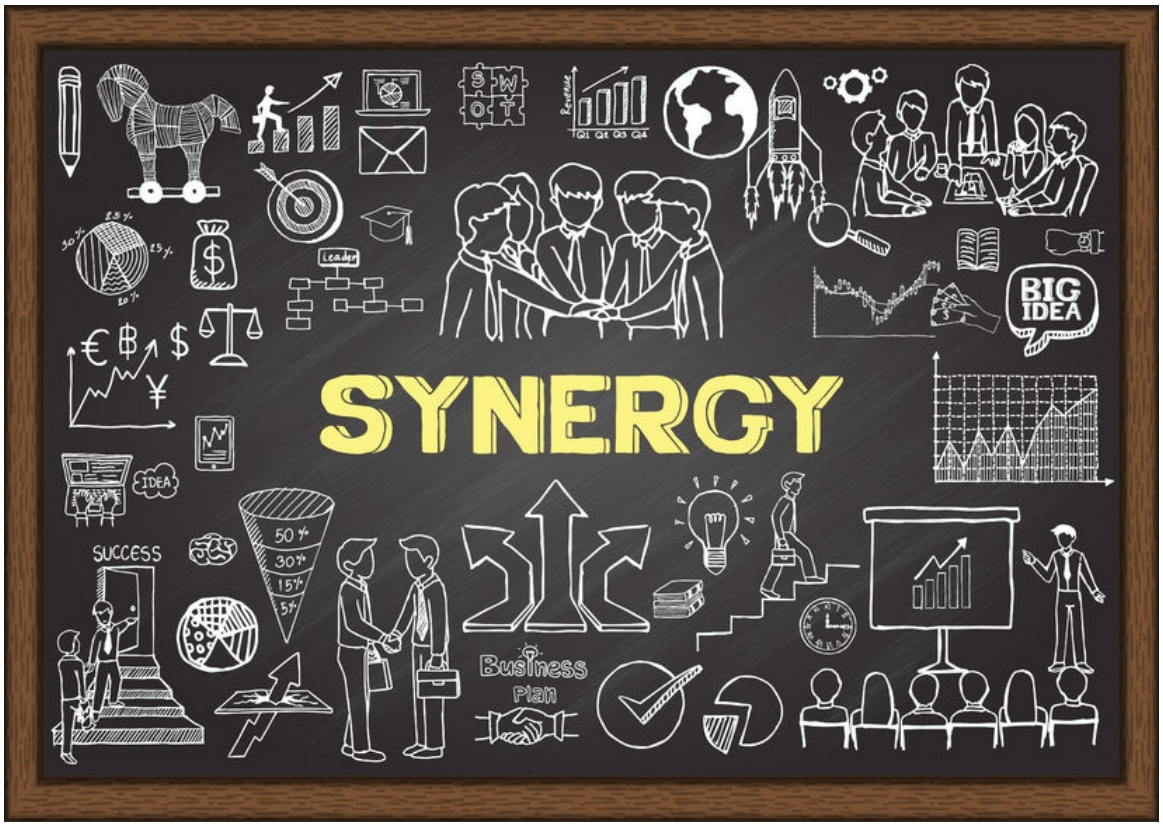
ACHIEVEMENTS IN PROJECTS, PLACEMENTS, RESEARCH AND EDUCATION

## DEPARTMENT OF MECHANICAL ENGINEERING

Synergy – The Essence of Collaboration and InnovationThe name Synergy embodies the spirit of teamwork and collective growth, where the combined efforts of individuals create results far greater than what can be achieved alone. In the realm of Mechanical Engineering, synergy represents the seamless integration of knowledge, innovation, and technical expertise to drive progress. This department magazine serves as a platform to unite students, faculty, and industry professionals, fostering a culture of learning, creativity, and collaboration.

The primary aim of Synergy is to showcase the achievements, research contributions, and technical advancements of students and faculty. It provides insights into emerging trends, industry developments, and real-world engineering applications, bridging the gap between academia and industry. Through expert articles, project highlights, and alumni interactions, the magazine encourages knowledge sharing and intellectual growth.

The outcome of Synergy is a vibrant community of aspiring engineers who are well-informed, inspired, and equipped with the necessary skills to excel in the field. It not only enhances technical knowledge but also promotes innovation, effective communication, and professional networking. By recognizing talent and providing a platform for expression, Synergy strengthens the identity of the Mechanical Engineering department and serves as a beacon of excellence for future generations.



# Message from the Chairman.....

**Bharat Jyoti**

## Dr.Ravuri Venkata swamy Garu

**Founder Chairman,**
**SV Group of Educational Institutions.**

Education Is The Foundation Of Progress, And I Have Always Believed That Quality Education Can Transform Lives And Communities. With A Vision To Uplift The Backward Rayalaseema Region, I Established Srinivasa Educational Academy In 1998 With Like-minded Philanthropists And Educationists. Since Then, We Have Expanded Our Institutions To Provide Excellence In Nursing, Law, Engineering, And Medical Education.

Sri Venkateswara College of Engineering & Technology (Autonomous) stands as a testament to our commitment to technical education, consistently achieving outstanding results and national recognition. Our mission is not just to impart knowledge but to empower students with skills that lead to self-reliance and success

Beyond education, we have taken steps to serve society through RVS Hospitals and the proposed RVS Institute of Medical Sciences, ensuring accessible healthcare for the people of Chittoor and neighboring districts.

It is my firm belief that education, when combined with values and innovation, paves the way for a brighter future. I invite students to bepart of this journey and strive for excellence in their chosen fields.

# Message from the Vice Chairman.....

## Sri. Ravuri .V. Srinivas Garu

**Vice Chairman,**
**SV Group of Educational Institutions.**

At Sri Venkateswara College of Engineering & Technology (Autonomous), our mission is to provide world-class education while fostering innovation, leadership, and social responsibility. Under the banner of Srinivasa Educational Academy, we have been committed to excellence, ensuring that our students receive not just academic knowledge but also the skills and values necessary for success in a rapidly evolving world.

With a strong foundation in engineering and management education, we have created an ecosystem where students from across the globe, including countries like Malaysia, Sudan, UAE, and Bhutan, come to pursue their dreams. Our relentless pursuit of quality has earned our institutions national recognition, NBA and NAAC accreditations, and a reputation as a preferred destination for top recruiters.

Beyond academics, our commitment to social responsibility remains unwavering. Through initiatives like Smt. Haarika Memorial Literary and Cultural Association and Helping Hands, we continue to support education, healthcare, and community welfare programs. It is our belief that education should not only empower individuals but also contribute to the betterment of society.

I welcome students to join our journey of excellence, innovation, and service to society. Together, we can build a brighter future.

# Message from the Principal.....


## Dr. Matam Mohan Babu, Ph.D.,MISTE, MISH

**Principal,**
**Sri Venkateswara College of Engineering & Technology**
**(Autonomous)**

We are committed to transforming our campus into a center of engineering excellence, where research, innovative pedagogy, and strong values come together to meet the demands of today's world. Our goal is to ensure that our students emerge as technologically skilled and ethically responsible leaders who can contribute meaningfully to the global community

I encourage each of you to embrace this journey with passion and dedication. May you soar high, explore new horizons, and make a lasting impact—both through your profession and the power of education

# Message from the Head of the Department
## Mechanical Engineering

At The Department Of Mechanical Engineering, Sri Venkateswara College Of Engineering & Technology (autonomous), We Are Committed To Nurturing Innovative Thinkers, Problem Solvers, And Industry-ready Professionals. Mechanical Engineering Is The Foundation Of Technological Advancements, And Our Curriculum Is Designed To Blend Theoretical Knowledge With Practical Applications, Research, And Industry Exposure.

**Dr.S. Arunsaco**
**Associate Professor**
Head of the Department – Mechanical Engineering
Sri Venkateswara College of Engineering & Technology
(Autonomous)

## Vision

To be recognized as a center for quality education in Mechanical Engineering and allied areas and to train young students to solve the problems of tomorrow.

## Mission

**M1 :** Provide excellent foundation through Teaching-Learning and train the students based on research to help them progress for Higher education.

**M2 :** Fostering student development with special focus on domain and soft skills for a prospective career placement.

**M3 :** Developing students with skills in entrepreneurship contributing to job creation and societal development.

**M4 :** Creating an ecosystem for continuous development of faculty and students by providing relevant infrastructure and resources.

We emphasize hands-on learning, interdisciplinary research, and skill development to equip our students with the ability to tackle real-world engineering challenges. Our well-equipped laboratories, dedicated faculty, and strong industry collaborations ensure that students gain a competitive edge in the ever-evolving engineering landscape.

I encourage our students to think critically, innovate fearlessly, and uphold ethical values in their professional journey. With determination and dedication, I am confident that each of you will contribute significantly to the field of mechanical engineering and make a meaningful impact on society.

**Wishing you all a rewarding and successful journey ahead!**

## Air-Water Hybrid Drone: Bridging Aerospace and Marine Engineering

**A recent breakthrough from Aalborg University, Denmark, has demonstrated the potential of cross-disciplinary design in mechanical engineering — the development of a 3D-printed amphibious drone capable of seamless transition between aerial flight and underwater navigation.**

**The drone's key innovation lies in its dual-mode propeller system. Instead of using complex mechanical transformations, the propeller blades are designed to function efficiently in both mediums by adjusting their pitch. This minimizes moving parts, thereby improving reliability and simplifying maintenance. The airframe and propeller components were manufactured using additive manufacturing (3D printing), enabling rapid prototyping and lightweight yet strong structures.**

**The design was developed as part of a final-year project in applied industrial electronics under the guidance of Associate Professor Petar Durdevic. Its applications extend to search-and-rescue missions, marine environmental monitoring, coastal infrastructure inspection, and military reconnaissance. The ability to operate in both air and water without manual reconfiguration presents significant time and cost advantages over traditional unmanned vehicle systems.**
**This innovation highlights the evolving role of mechanical engineers in integrating knowledge from aerodynamics, fluid dynamics, control systems, and manufacturing technologies to create versatile, real-world solutions. Such advancements reinforce the importance of interdisciplinary collaboration in addressing complex engineering challenges of the 21st century.**

**Keywords:** Amphibious Drone, Additive Manufacturing, Propeller Design, Mechanical Engineering Innovation.

## Reference:

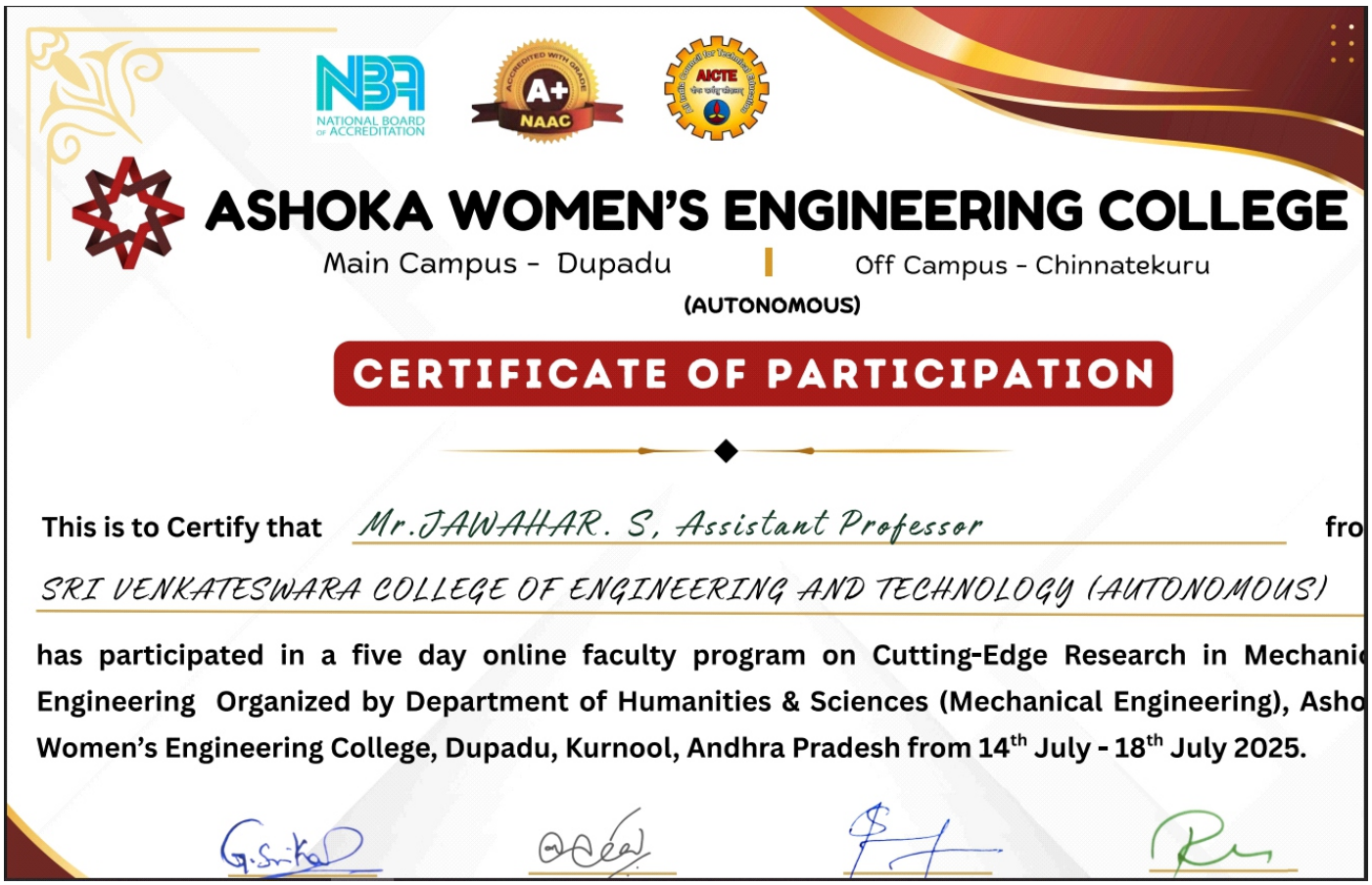
Durdevic, P., & Aalborg University Student Team. (2025, August 1). Fly, dive, repeat: Students' amphibious 3D-printed drone goes viral. New York Post. Retrieved from https://nypost.com/2025/08/01/business/fly-dive-repeat-students-amphibious-3d-printed-drone-goes-viral

## Faculty Development Highlights

**1. Mr. Jawahar S., Assistant Professor from Sri Venkateswara College of Engineering and Technology (Autonomous), successfully participated in a five-day online Faculty Development Program (FDP) on "Cutting-Edge Research in Mechanical Engineering." The program was organized by the Department of Humanities & Sciences (Mechanical Engineering) at Ashoka Women's Engineering College, Dupadu, Kurnool, Andhra Pradesh.**

**Held from 14th July to 18th July 2025, the FDP provided a robust platform for faculty to engage with emerging research trends, advanced methodologies, and interdisciplinary collaboration within the field of mechanical engineering. The initiative reflects the institution's commitment to academic excellence and continuous professional development.**

**This event also highlighted Ashoka Women's Engineering College's proactive role in promoting high-quality academic exchange, empowering educators to inspire innovation in both teaching and research.**



ASHOKA WOMEN'S ENGINEERING COLLEGE

Main Campus - Dupadu | Off Campus - Chinnatekuru

(AUTONOMOUS)

CERTIFICATE OF PARTICIPATION

This is to Certify that Mr.JAWAHAR. S, Assistant Professor fro

SRI VENKATESWARA COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS)

has participated in a five day online faculty program on Cutting-Edge Research in Mechanic Engineering Organized by Department of Humanities & Sciences (Mechanical Engineering), Asho Women's Engineering College, Dupadu, Kurnool, Andhra Pradesh from 14th July - 18th July 2025.

**2. Mr. SIVALINGAM C ,** **Assistant Professor from Sri Venkateswara College of Engineering and Technology (Autonomous), successfully participated in a five-day online Faculty Development Program (FDP) on "Cutting-Edge Research in Mechanical Engineering." The program was organized by the Department of Humanities & Sciences (Mechanical Engineering) at Ashoka Women's Engineering College, Dupadu, Kurnool, Andhra Pradesh.**

**Held from 14th July to 18th July 2025, the FDP provided a robust platform for faculty to engage with emerging research trends, advanced methodologies, and interdisciplinary collaboration within the field of mechanical engineering. The initiative reflects the institution's commitment to academic excellence and continuous professional development.**

**This event also highlighted Ashoka Women's Engineering College's proactive role in promoting high-quality academic exchange, empowering educators to inspire innovation in both teaching and research.**

ASHOKA WOMEN'S ENGINEERING COLLEGE

Main Campus - Dupadu | Off Campus - Chinnatekuru

(AUTONOMOUS)

CERTIFICATE OF PARTICIPATION

This is to Certify that Mr.Sivalingam , Assistant Professor fro

SRI VENKATESWARA COLLEGE OF ENGINEERING AND TECHNOLOGY

has participated in a five day online faculty program on Cutting-Edge Research in Mechanic Engineering Organized by Department of Humanities & Sciences (Mechanical Engineering), Asho Women's Engineering College, Dupadu, Kurnool, Andhra Pradesh from 14th July - 18th July 2025.

DR. G SRIKRR
COORDINATOR

A SRINIVAS
CO COORDINATOR

S JAVEED
HOD

DR. R NAVEEN
PRINCIPAL

**3.Dr. AHILAN C , Professor from Sri Venkateswara College of Engineering and Technology (Autonomous), successfully participated in a five-day online Faculty Development Program (FDP) on "Cutting-Edge Research in Mechanical Engineering." The program was organized by the Department of Humanities & Sciences (Mechanical Engineering) at Ashoka Women's Engineering College, Dupadu, Kurnool, Andhra Pradesh.**

**Held from 14th July to 18th July 2025, the FDP provided a robust platform for faculty to engage with emerging research trends, advanced methodologies, and interdisciplinary collaboration within the field of mechanical engineering. The initiative reflects the institution's commitment to academic excellence and continuous professional development.**

**This event also highlighted Ashoka Women's Engineering College's proactive role in promoting high-quality academic exchange, empowering educators to inspire innovation in both teaching and research.**

ASHOKA WOMEN'S ENGINEERING COLLEGE

Main Campus - Dupadu | Off Campus - Chinnatekuru

(AUTONOMOUS)

CERTIFICATE OF PARTICIPATION

This is to Certify that Dr.Ahilan C , Professor fro

SRI VENKATESWARA COLLEGE OF ENGINEERING AND TECHNOLOGY

has participated in a five day online faculty program on Cutting-Edge Research in Mechani Engineering Organized by Department of Humanities & Sciences (Mechanical Engineering), Asho Women's Engineering College, Dupadu, Kurnool, Andhra Pradesh from 14th July - 18th July 2025.

DR. G SRIKRR A SRINIVAS S JAVEED DR. R NAVEEN

**4.Guest Lecture on "Engineering Projects in Community Service (EPICS)" at SVCET**

**The Department of Mechanical Engineering at Sri Venkateswara College of Engineering and Technology (Autonomous), Chittoor, organized an insightful guest lecture on the theme "Engineering Projects in Community Service (EPICS)" on 26th July 2025. The event aimed to inspire innovation among budding engineers by linking academic knowledge with community-oriented applications.**

The session was led by the esteemed Dr. A. Mahamani, Professor and Dean of R&D, Department of Mechanical Engineering, SVCET (A), who served as the resource person. Dr. Mahamani shared valuable insights into how engineering solutions can address real-world societal problems and emphasized the significance of involving students in impactful community service through project-based learning.

The lecture was specially arranged for III B.Tech I Semester Mechanical Engineering students, and took place from 2:15 PM to 3:30 PM in Room R-208. His talk covered various successful EPICS models and encouraged students to explore interdisciplinary approaches for solving community challenges.

The event was coordinated by faculty members Mr. C. Sivalingam, Mr. S. Jawahar, Dr. K. Baskaran, Dr. P. Venkataramana, and Mr. G. Vikas Reddy, with overall guidance from Dr. S. Arunsaco, Head of the Department, and Dr. M. Mohan Babu, Principal, SVCET.

This guest lecture was part of SVCET's continued efforts to cultivate socially responsible engineers by integrating classroom learning with community engagement.


5.Expert Lecture on "Integrated Capstone Project Delivery Program" Enlightens Final-Year Mechanical Students

On 28th July 2025, the Department of Mechanical Engineering at Sri Venkateswara College of Engineering and Technology (Autonomous), Chittoor, organized a thought-provoking guest lecture on the "Integrated Capstone Project Delivery Program." This session was exclusively designed for IV B.Tech I Semester Mechanical Engineering students to enhance their understanding of project integration, real-time execution, and multidisciplinary collaboration.

The event featured two distinguished resource persons:

Dr. C. Ahilan, Professor, Department of Mechanical Engineering, SVCET(A)

Dr. G. Balaji, Professor, Department of Mechanical Engineering, SVCET(A)

Both speakers provided in-depth insights into the significance of capstone projects as a bridge between academic learning and industry expectations. They emphasized effective strategies for project planning, team coordination, and delivery, helping students better align their academic outcomes with professional goals.

The session was held from 09:25 AM to 11:00 AM in Room R-211, and was well-received by the students, who appreciated the practical perspectives and examples shared by the speakers.

6.The event was coordinated by Mr. C. Sivalingam, Assistant Professor, and guided by Dr. S. Arunsaco, Head of the Department, under the leadership of Dr. M. Mohan Babu, Principal, SVCET.

This initiative is part of the department's ongoing efforts to equip students with the skills and mindset required for successful engineering practice and innovation in a competitive global environment.


7.A domain-specific training session on the Basics of Grammar was successfully conducted for mechanical engineering students at SVCET, Chittoor, on 28th July 2025. The session aimed to strengthen students' foundational grammar and communication skills essential for academic and professional success. Enthusiastic participation was witnessed, reflecting students' keen interest in enhancing their language proficiency.



**8. A Sentence Competition and Domain Training Program was successfully conducted at R.V.S. Nagar, Tirupati Road, Chittoor, Andhra Pradesh on 29th July 2025 at 10:41 AM.**

**The program was designed to enhance students' language proficiency, grammar skills, and technical communication abilities. The faculty guided participants through structured exercises, where students actively engaged in forming meaningful sentences and applying domain-related vocabulary in context.**

**Students participated with enthusiasm, demonstrating creativity, confidence, and clarity in expression. The interactive session also encouraged peer learning and fostered teamwork, making the competition both educational and enjoyable.**

**The initiative reflected the institution's continuous efforts to strengthen academic learning with practical language skills, preparing students for professional and competitive environments.**

**Location: R.V.S. Nagar, Tirupati Road, Chittoor, Andhra Pradesh**
**Date & Time: 29 July 2025, 10:41 AM**


**9.Participation in 3D India Additive Manufacturing Symposium & Exhibition**

**Dr. A. Mahamani has successfully participated in the 3rd 3D India Additive Manufacturing Symposium & Exhibition, organized by the Indian Institute of Technology, Madras, on 2nd July 2025.**

**The symposium brought together experts, researchers, and industry leaders in the field of Additive Manufacturing (3D Printing) to discuss the latest advancements, challenges, and applications in the domain. Sponsored by leading organizations such as Super Auto Forge, Wipro 3D, Intech Additive Solutions, Monotech Systems, IM Gears, and others, the event highlighted India's growing presence in the global additive manufacturing sector.**

**Dr. Mahamani's participation in this prestigious symposium reflects a strong commitment to advancing knowledge in modern manufacturing technologies and contributing to the nation's vision of Aatma Nirbhar Bharat through innovation and research.**

**Event: 3rd 3D India Additive Manufacturing Symposium & Exhibition**

**Organizer: IIT Madras**

**Date: 2nd July 2025**


## 10.Faculty Publication on Advanced Heat Transfer

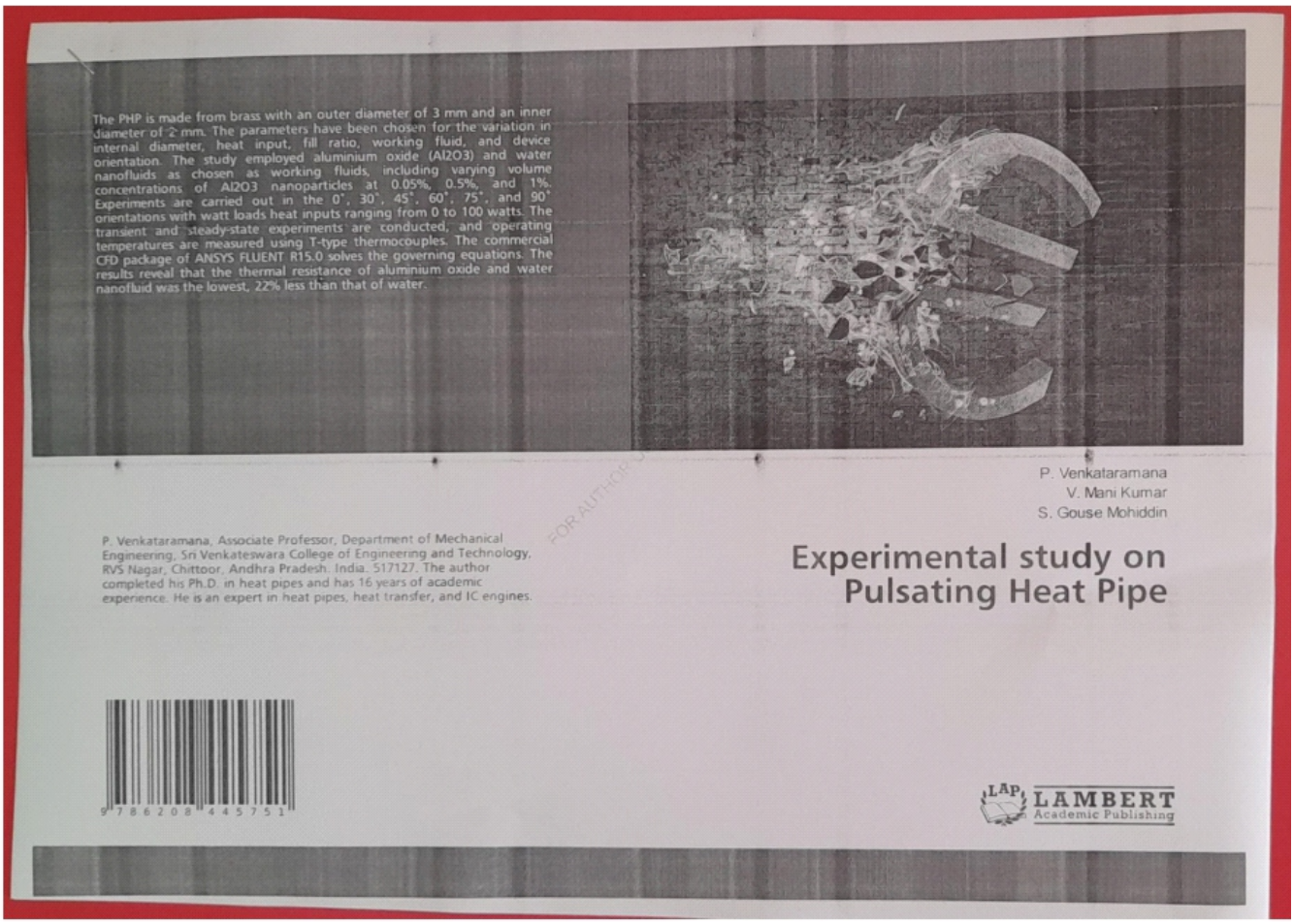
**Dr. P. Venkataramana, Associate Professor, Department of Mechanical Engineering, Sri Venkateswara College of Engineering and Technology, Chittoor, along with co-authors V. Mani Kumar and S. Gouse Mohiddin, has published a scholarly work titled "Experimental Study on Pulsating Heat Pipe" with Lambert Academic Publishing.**

**The book presents an in-depth experimental investigation on Pulsating Heat Pipes (PHPs), focusing on variations in heat input, fill ratio, working fluids, and device orientation. The study utilized aluminium oxide ($Al_2O_3$) nanoparticles mixed with water nanofluids at different concentrations (0.05%, 0.5%, and 1%) to evaluate their thermal performance.**

**Key findings of the research revealed that the thermal resistance of aluminium oxide-water nanofluid was significantly lower—about 22% less than water alone, demonstrating higher efficiency in heat transfer applications. Advanced computational analysis was performed using ANSYS FLUENT R15.0, validating the experimental results.**

**With over 16 years of academic expertise in heat transfer, heat pipes, and IC engines, Dr. Venkataramana continues to contribute extensively to cutting-edge thermal engineering research.**

**This publication marks another milestone for the institution, showcasing its commitment to innovative research and academic excellence in mechanical engineering.**




## 11.Students Participate in EPICS Workshop at SVCET

**The Department of Engineering at Sri Venkateswara College of Engineering and Technology (Autonomous), Chittoor, successfully organized an EPICS Workshop on 30th July 2025 at the Conference Hall.**

**The workshop featured Prof. William Oakes, Director of EPICS and Professor of Engineering Education at Purdue University, USA, as the keynote speaker. Prof. Oakes delivered two impactful sessions:**

**Session 1: Understanding EPICS – Key Components and Best Practices**

**Session 2: Enhancing Student Learning and Community Outcomes through EPICS Initiatives**

**The program focused on how Engineering Projects in Community Service (EPICS) can transform education by integrating real-world problem solving with social responsibility. Students actively participated in the interactive sessions, gaining valuable insights into innovation, teamwork, and community engagement.**

**The event was coordinated under the guidance of Dr. T. Raja Reddy (Dean – IGE), Dr. A. Mahamani (Dean – R&D), and Dr. M. Mohan Babu (Principal).**

**This initiative reinforced SVCE's commitment to nurturing socially responsible engineers while promoting global collaborations with reputed institutions like Purdue University.**



## 12. Successful Campus Drive – NCR Recruitment at SVCET

**Sri Venkateswara College of Engineering and Technology (Autonomous), Chittoor, hosted a Campus Placement Drive by NCR Corporation on 25th July 2025 at Smt. Lakshmi Devi Memorial Auditorium for the 2026 graduating batch.**

**The drive began with a motivational message from the Management, Principal, and Faculty members, encouraging students to give their best and reminding them that "hard work pays off and efforts will always be rewarded."**

## Highlights of the Drive

**Sri Venkateswara College of Engineering and Technology (Autonomous), Chittoor, hosted a Campus Placement Drive by NCR Corporation on 25th July 2025 at Smt. Lakshmi Devi Memorial Auditorium for the 2026 graduating batch.**

**The drive began with a motivational message from the Management, Principal, and Faculty members, encouraging students to give their best and reminding them that "hard work pays off and efforts will always be rewarded."**

**The recruitment process included written assessments, technical rounds, and interviews, where students showcased their skills and knowledge.**

**A large number of students participated enthusiastically, reflecting their dedication and preparation for entering the corporate world.**

**The event concluded with the felicitation of the NCR recruitment team by the college management, appreciating their collaboration and support in shaping student careers.**

## Outcome

**Several students successfully cleared the selection rounds and secured placement opportunities with NCR, marking a proud moment for the institution.**

**This achievement reinforces SVCET's strong commitment to academic excellence, career development, and industry collaboration, ensuring its students are well-prepared for global opportunities.**

**Date: 25th July 2025**
**Company: NCR Corporation**
**Venue: Smt. Lakshmi Devi Memorial Auditorium, SVCET**


## Internship Opportunity with NCR Corporation India Pvt. Ltd.

**On 25th July 2025, Sri Venkateswara College of Engineering and Technology (Autonomous), Chittoor, hosted an Internship Program in collaboration with NCR Corporation India Pvt. Ltd.**

**A team of bright students – O. Vardhan Reddy, B. Vasanth Kumar, G. Dileep Kumar, T. Nagendra, and Vikram Kumar – were successfully selected for this prestigious opportunity.**

**The internship aims to provide students with practical industry exposure, hands-on learning, and professional skill development, enabling them to connect classroom knowledge with real-world applications**

**The management and faculty members congratulated the selected students and expressed confidence that this internship would serve as a strong foundation for their future careers in technology and innovation.**

## Program: Internship

**Company: NCR Corporation India Pvt. Ltd.**
**Venue: Sri Venkateswara College of Engineering and Technology, Chittoor**
**Date: 25th July 2025**

## EDITORIAL TEAM

**Mr. C. Sivalingam**
Assistant Professor

**Mr.S. Jawahar**
Assistant Professor

**Dr. S. Arunsaco**
Associate Professor & HOD

**Mr.C. Satheesh**
Graphic Designer
SVCET

**Mr.T. Venkatesh**
23785A0313
Student

# SRI VENKATESWARA COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous)