



SRI VENKATESWARA COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous)

RVS Knowledge District, Chittoor-517127, A.P



ISSUE 06 | VOLUME 01 | JUNE 2025

SYNERGY

ACHIEVEMENTS IN PROJECTS, PLACEMENTS, RESEARCH AND EDUCATION

DEPARTMENT OF MECHANICAL ENGINEERING



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 be part 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



Dr.S. Arunsaco

Associate Professor

Head of the Department – Mechanical Engineering
Sri Venkateswara College of Engineering & Technology
(Autonomous)

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.

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!



Recent Development in Mechanical Engineering:

Feather-Inspired Wing Flaps: A New Flight Frontier in Mechanical Engineering Passive Control for Smarter, Safer, and Greener Aircraft

In a groundbreaking advance merging biology and aerospace engineering, a research team at **Princeton University**, led by Professor **Aimy Wissa**, has developed innovative **feather-like flaps** for aircraft wings—marking a major leap forward in passive aerodynamic control.

These **flexible structures**, modelled after the covert feathers found on birds' wings, respond automatically to changes in airflow. Unlike conventional systems that rely on electronic actuators or sensors, these flaps adjust passively and instantaneously—optimizing wing performance in real time.

Key Highlights of the Discovery:

- **+45% lift enhancement** during take-off and low-speed flight
- **-31% drag reduction** during cruising conditions
- **Delayed stall**, increasing flight safety margins
- **No electronics** required—purely mechanical and energy-efficient

The research, published in *Nature* (June 2024), demonstrates how bioinspired passive mechanisms can reduce complexity, cut energy use, and improve performance—especially relevant for next-generation **eVTOL (electric vertical take-off and landing)** vehicles and **urban air mobility**.

“Birds have evolved elegant solutions over millions of years. By mimicking their covert feathers, we've found a way to control airflow passively without requiring sensors, motors, or computers.”

Prof. Aimy Wissa, Lead Researcher, Princeton University

Future Applications:

- Urban Air Mobility (UAM)
- Unmanned Aerial Vehicles (UAVs)
- Energy-efficient commercial aircraft
- Quiet and stable drone flight

This innovation reinforces how **mechanical engineers are embracing nature-inspired designs** to develop lighter, smarter, and more adaptive systems for the aviation industry.

Reference:

Wissa, A. et al. (2024). *Feather-inspired passive flaps for aircraft wings enhance lift and delay stall*. **Nature**. <https://www.nature.com/articles/d41586-024-01701-5>



Faculty Development Highlights

1. The Department of Polymer Engineering at B.S. Abdur Rahman Crescent Institute of Science and Technology, Chennai, successfully organized a One Week Online Faculty Development Program (FDP) on “Advanced Polymer Composites for Aerospace and Mechanical Applications” from 23rd to 28th June 2025.

A key highlight of the program was the session held on 26th June 2025, where Dr. A. Mahamani, Dean (R&D) and Professor, delivered an insightful and engaging talk on “Research Proposal Writing and Funding Opportunities in the Area of Materials Development.” His expert guidance provided valuable direction to faculty members and researchers aiming to pursue funded research in cutting-edge materials science.

The FDP served as a dynamic platform for knowledge sharing and skill enhancement, fostering academic growth and innovation in the field of advanced polymer composites.

2. Exploring Mindfulness: Dr. A. Mahamani Joins ReTalk Webinar

Dr. A. Mahamani, Dean (R&D) and Professor, recently participated in the ReTalk Webinar titled "Brain Gym Mode: ON", held on 21st June 2025. The session was organized by the R&D Cell of Ramaiah Institute of Management, as part of their ongoing efforts to promote mental wellness and personal development among academic professionals.

The webinar featured Dr. Namrata Pathak, a renowned Mindfulness Coach from Kaizen Mantra, Saudi Arabia. Her talk offered deep insights into mindfulness practices, encouraging participants to incorporate mental fitness techniques into their daily lives for improved focus, emotional balance, and productivity.

Dr. Mahamani's active participation in such initiatives highlights his dedication to continuous learning and holistic development, contributing not only to research excellence but also to personal well-being.

3. Gratitude Extended to Dr. A. Mahamani for Enlightening Session at FDP – APCAMA 2025

The Department of Polymer Engineering, B.S. Abdur Rahman Crescent Institute of Science and Technology, Chennai, proudly acknowledges the esteemed contribution of Dr. A. Mahamani for his impactful session during the Faculty Development Programme (FDP) on “Advanced Polymer Composites for Aerospace and Mechanical Applications (APCAMA - 2025)”, held from 23rd to 28th June 2025.

Dr. Mahamani's session provided valuable insights and guidance to participants, enriching the academic experience with practical knowledge and research direction in the field of advanced composites. His expertise greatly enhanced the quality of the program and inspired faculty members and researchers to explore new frontiers in polymer and aerospace applications.

The department sincerely appreciates his contribution and looks forward to future collaborations in the pursuit of academic and research excellence.



RAMAIAH
Institute of Management

ReTalk
R&D Cell

Certificate of Participation

PRESENTED TO

Dr. A Mahamani

has successfully participated in the ReTalk Webinar on 'Brain Gym Mode: ON' organized by the R&D Cell, Ramaiah Institute of Management on 21 June 2025. This session, featuring , Dr. Namrata Pathak Mindfulness Coach, Kaizen Mantra, Saudi Arabia, provided valuable insights on mindfulness. We appreciate your active participation and commitment to learning.

Prof. (Dr.) Bikash Debata
Head, R&D Cell, MSRIM

Prof. (Dr.) Arunkumar A V
Dean, MSRIM

4. UGC-DAE Collaborative Research Opportunities Showcased at Faculty Development Program

As part of the One Week Online Faculty Development Program (FDP) on “Advanced Polymer Composites for Aerospace and Mechanical Applications” held from 23rd to 28th June 2025, a highly informative session was conducted by Dr. A. Mahamani, highlighting funding and research opportunities through the UGC-DAE Consortium for Scientific Research (CSR).

The session focused on the Call for Collaborative Research Scheme (CRS) for the utilization of in-house and DAE Mega Science Facilities, which include advanced research infrastructure such as Synchrotrons at RRCAT, Cyclotron at VECC, Dhruva Reactor at BARC, and Accelerator at IGCAR. These facilities are located across major centers including Indore, Mumbai, Kolkata, and Kalpakkam, and are accessible to researchers through approved projects.

Key areas of research under this scheme include Physical, Chemical, Biological, and Engineering sciences, with a clear emphasis on high-end experimental research. Dr. Mahamani encouraged faculty and researchers to submit proposals under this initiative to leverage cutting-edge tools for material science and composite development.

DEPARTMENT OF POLYMER ENGINEERING

Appreciation Letter

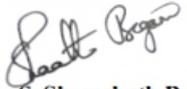
On behalf of the Department of Polymer Engineering, B. S. Abdur Rahman Crescent Institute of Science and Technology, I would like to extend our sincere appreciation to **Dr. A. Mahamani** for the valuable contribution as a speaker in the Faculty Development Programme on “**Advanced Polymer Composites for Aerospace and Mechanical Applications - APCAMA - 2025**”, held from **23rd - 28th June 2025**.

Your insightful sessions (two sessions) on “*Research Proposal Writing & Funding Opportunities (DST, DRDO, SERB, etc.)*” were both engaging and highly informative. The depth of your knowledge, clarity of presentation, and ability to convey the message on how to prepare for proposal greatly helped the faculty participants across India.

Your expertise has added immense value to the programme, and the feedback from attendees reflects how impactful and thought-provoking your session was. It has certainly inspired many faculty members to write funded proposals from various funding agencies.

We truly appreciate the time and effort you dedicated for making the FDP a success. We look forward to more such opportunities for collaboration and knowledge exchange in the future. Wishing you continued success in all your professional endeavours.

With warm regards,



Dr. S. Shamsath Begum
Head of the Department
Department of Polymer Engineering
B. S. Abdur Rahman Crescent Institute of Science and Technology Chennai,
India

*Dr. S. Shamsath Begum
Associate Professor & Head
Department of Polymer Engineering
B. S. Abdur Rahman Crescent
Institute of Science & Technology
Vandalur, Chennai - 600 044*

Research Spotlight: Optimization of Machining Parameters for ECAP-Processed Aluminum

We are pleased to highlight the recent publication by Dr. C. Ahilan in the prestigious journal International Journal on Interactive Design and Manufacturing (IJIDeM), titled “Machining Parameters Optimization for ECAP Processed Aluminum Using Grey-Fuzzy Approach.” The article was published in June 2025.

This research presents a novel integration of the Grey-Fuzzy decision-making approach to optimize machining parameters for Equal Channel Angular Pressing (ECAP) processed aluminum, a technique known for significantly enhancing the mechanical properties of materials. The study effectively demonstrates how intelligent computational tools can be used to improve surface finish, tool life, and machining efficiency in advanced manufacturing processes.

Dr. Ahilan's contribution offers valuable insights into the intersection of material science, manufacturing optimization, and artificial intelligence techniques, and stands as a testament to the growing relevance of hybrid methodologies in modern engineering research.

We congratulate Dr. Ahilan for this significant academic achievement and his continued contributions to the field of manufacturing engineering.

Intenship Offers

No. of Student	Company Name	Stipend Package Per Month
21	Delphi - TVS Technologies 	14,000 /-
07	 ABI-SHOWATECH	15,800 /-
01	 ELEATION	10,000 /-
01	 GATEMAAN™ A TRADEMARK OF NSMTE LLP	10,000 /-
01	RAAM GROUP	07,000 /-



Placement offers

No. of Student	Company Name	Salary Package Per Month
01	RINEX REST ABOVE THE BEST	83,000 /-
01	RAAM GROUP	45,000 /-
01	 Spiders	45,000 /-
01	 ELEATION	25,000 /-
01	 GATEMAAN™ A TRADEMARK OF NSMTE LLP	25,000 /-
07	 ABI-SHOWATECH	19,200 /-

Top Company Recruiters



Students Achievements

Academic Insights

Faculty Members Explore Recent Trends at VIT Vellore

Three Students members, Prashun Gopali (23781A0306), Bhuvan Chandran (24785A0307), and K. Hajimallang (24785A0314), participated in "Advances in Recent Trends," a program featuring an advanced lab facility visit at VIT Vellore campus, organized by Vellore Institute of Technology.

Program Details:

Program Name: Advanced Lab Facility Visit

Event Name: Advances in Recent Trends

Organized by: Vellore Institute of Technology

Participants:

Prashun Gopali (23781A0306)

Bhuvan Chandran (24785A0307)

K. Hajimallang (24785A0314)

This program updated their knowledge on latest trends and technologies.



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)

