

RESONANCE

Newsletter

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DEPARTMENT OF MECHANICAL ENGINEERING



Highlights

INR 32.52 lakhs of funded research projects and consultancy were secured from leading government bodies, academic institutions, and corporate industries in India and the UK.

Page 5

A total of 25 patents were filed, published, and granted, featuring innovations and technical marvels in specialized and multidisciplinary fields of research.

Page 5

91 peer-reviewed and indexed publications across diverse fields of engineering and technology were made by faculty, scholars, and students, with the highest impact factor being 15.9.

Page 9

The department hosted an interaction meeting with G.D. Naidu Chair Professor respected Mr. T. R. Parasuraman, Senior Executive Advisor, Toyota, in June 2024.

Page 19

Students awarded under various categories like Best Outgoing Student, Academic Excellence, Best Student Researcher, Young Leader, and Student Inspiration for AY 2023-24.

Page 49

89 out of 112 B.Tech. students secured attractive offers in the 2024 campus placement drive, with the highest package being INR 12.26 LPA.

Page 49

Brief Contents



Dignitory Messages **Page 1 - 3**



Department Corner **Page 4 - 7**



Faculty Corner **Page 7 - 48**



Centre of Excellence **Page 17 - 19**



Students Corner **Page 49 - 59**



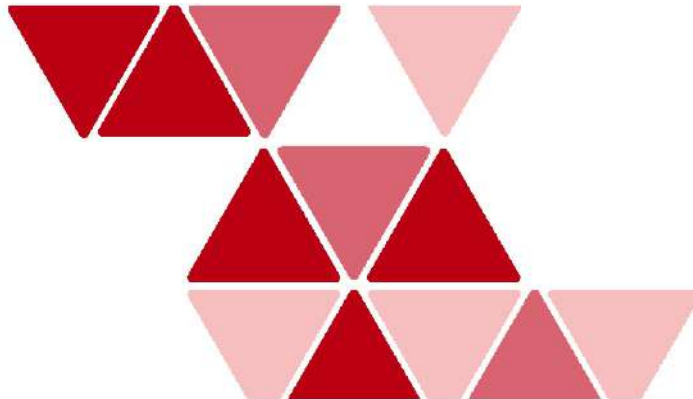
Future Corner **Page 60 - 62**

Contents

1. Message from the Dean, College of Engineering and Technology	1
2. Message from the Chairperson, School of Mechanical Engineering	2
3. Message from the HOD, Department of Mechanical Engineering	3
4. About the Department	4
A. Department Vision	4
B. Department Mission	4
C. Program Offered	4
D. Program Recognition	4
5. Funded Projects / Consultancy	5
6. Patents Granted / Published / Filed	5
7. Faculty Achievements / Highlights	7
A. Honours and Awards	7
B. PhD Awarded	8
8. Journal Publications	9
9. Book Chapter Published	14
10. Guest lectures delivered	14
11. Conference Presentations	15
12. Centre of Excellence Activities	17
A. Centre of Excellence for Electronics Cooling and Computational Fluid Dynamics (CFD) Simulation	17
B. Centre for Occupational Safety and Health (COSH)	19
13. Events Organized	19
A. Technical Events	19
B. Outreach Activities	40
14. Events Attended	46
15. Other Activities	48
16. Students Corner	49
A. Awards for the Students	49
B. Placements update (January 2024 – June 2024)	49
a) Top Offers	49
b) SRM Career Centre Hosts Placement Season 2025 Meet	51
c) Haveloc App for the 2025 Batch	51

d) Placement Induction - Department Level	51
e) SHL Assessment Test 2	51
f) CCC Training	51
g) "POINT" (Placement Outreach Initiatives to Nurture Talent) for Students	51
h) Major Recruiters	52
C. Best Project Awards – Major Project – B. Tech. / M. Tech.	52
D. Farewell to the Final Year Students	52
E. Students Achievements	55
F. Student Activities	55
a) First Year	55
b) Second Year	55
c) Third Year	57
d) Final Year	58
17. Upcoming Events	60
A. 3 rd International Conference on Recent and Advanced Composite Materials (ICRACM – 2025)	60
B. Smart Agro Storage Hackathon on “Engineers Day 2024”	62
Department Brochures	63
Resonance Editorial Board	72

1. Message from the Dean, College of Engineering and Technology



Dr. T. V. Gopal

Professor & Dean CET

Dear Friends,

It gives me great pleasure to learn that the department of Mechanical Engineering is coming up with the release of the 1st issue of the 6th volume of its biannual newsletter, 'Resonance', which highlights the achievements of the faculty and the students.

The Department has made significant strides, particularly with its 5th edition of periodic international conference ICAME 2024, which provided a platform for sharing groundbreaking ideas. Preparing the students to excel in evolving areas remains a priority. The department's achievements in publications, patents, and funded projects highlight its contribution to mechanical engineering.

With a rise in granted patents over the past six months, we aim to transform these innovations into viable commercial products that can impact society. This focus on patent commercialization is crucial for our development.

I invite our alumni to contribute to our growth by sharing their expertise. Your insights are invaluable assets that can significantly enhance our academic and research environment. By sharing your knowledge, mentoring current students, and participating in departmental initiatives, you can make a meaningful impact on the next generation of engineers.

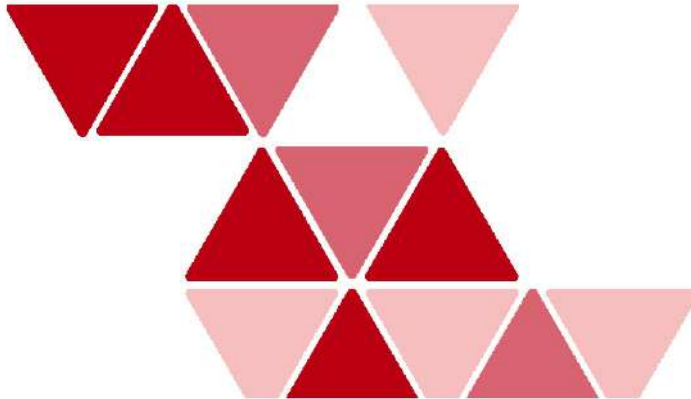
Seeing students from all years actively engage in project-based learning is heartening, as it bridges theoretical knowledge and practical application. These projects equip them with essential real-world skills. Sustaining our research culture, starting from the second year, will yield substantial outcomes.

I wish all the members of the Department of Mechanical Engineering in particular the editorial team great success in their future endeavours.

Warm regards,

Dr. T. V. Gopal

2. Message from the Chairperson, School of Mechanical Engineering



Dr. Kingsly Jeba Singh D

Chairperson, School of Mechanical Engineering

I am happy to note that the next newsletter of the Department of Mechanical Engineering, Resonance, Vol.: 6 (1) is ready to roll out.

The Department of Mechanical Engineering has organized the international conference ICAME 2024 in March 2024, a flagship event, in which the researchers got an opportunity to share their ideas and research outcomes in the core and multi-disciplinary areas.

Digitalization, internet of things (IoT) and Artificial Intelligence are evolving and are making our lives easier and smoother. Preparing the students to be proficient in Mechanical Engineering with these human-software-machine collaboration competencies and skills are challenging for the department. Ideathons, Hackathons, webinars, expert lectures, Industrial visits, faculty development programs, symposiums, and workshops were organised in these areas. I hope this effort will definitely enrich our ecosystem with academic rigour required for the 21st century. A team of faculty members are trained in design thinking and project based learning. They motivate multi-disciplinary projects among the students.

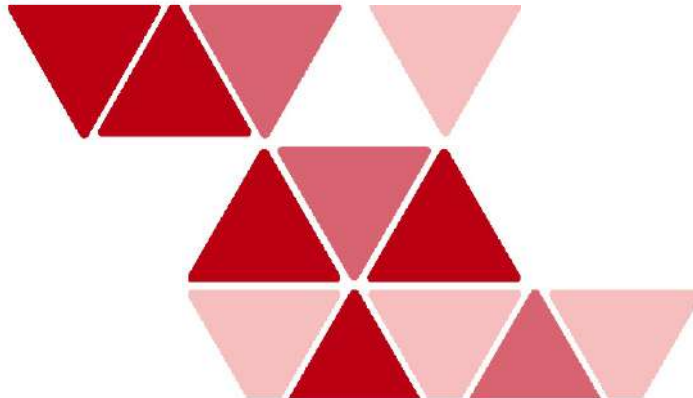
I wish all the best for the academic, research and developmental activities in the Department of Mechanical Engineering to achieve greater heights.

Your comments and suggestions are welcome to improve our academic journey.

Warm regards,

D. Kingsly Jeba Singh

3. Message from the HOD Department of Mechanical Engineering



Dr. M. Cheralathan
Professor & Head

I take great pleasure in informing you that the Department of Mechanical Engineering is releasing the 1st issue of the 6th volume of its newsletter, 'Resonance'. This newsletter serves as a vibrant forum for disseminating the achievements and activities of our students, research scholars, and faculty members, motivating everyone to excel further in all their endeavors.

I have observed an increase in externally funded projects as well as consultancy projects. More patents have been granted status in the last six months. I am confident that many more students and faculty members will make incredible contributions and make the department proud.

I extend my profound gratitude to our Honourable Chancellor for his unwavering encouragement and guidance. I would like to express my heartfelt thanks to our respected Vice-Chancellor, Registrar, Dean (CET), and Dean (SME) for their relentless support.

I applaud the commendable efforts of our dynamic editorial team members, whose dedication over the past few months has resulted in this new volume of the newsletter.

I wish all the students, research scholars, and faculty members a great career ahead.

Dr. M. Cheralathan

4. About the Department

The Department of Mechanical Engineering, established in 1985, is one of the pioneering departments of SRM IST. Currently, the department boasts a faculty comprising 109 members, with 71 holding a Ph.D., and the remainder diligently progressing toward completion. The non-teaching faculty currently comprises 63 professionals and 19 supporting staff members. Noteworthy is the presence of 61 full-time scholars who contribute significantly to the academic vibrancy of the department. The department's academic accomplishments are evident in the publication of over 1500 research papers in prestigious peer-reviewed international journals renowned for their high impact factors. The department's intellectual strength is highlighted by the publication of approximately 80 plus patents, with 22 patents granted recognition at both the national and international levels. The department is functionally divided into three broad areas of specialization: (i) Design (ii) Manufacturing and (iii) Thermal. The department also offers Doctoral programs in these three areas of specializations.

A. Department Vision

To enhance learning and research skills in mechanical engineering and allied fields to accomplish crest positions in world-renowned organizations.

B. Department Mission

- To impart quality education to produce eminent mechanical engineers.
- To establish Centers of Research Excellence to inculcate research acumen to faculty and students on the emerging thrust areas of mechanical engineering.
- To inculcate progressive education and intricate facts through cognitive training programs to the faculty and students using state-of-art facilities.

C. Programs Offered

- The Department offers the following programs:
- B. Tech Mechanical Engineering
- B. Tech Mechanical Engineering with Specialization in AI & ML (Artificial Intelligence and Machine Learning)
- B. Tech Mechanical Engineering (Automation and Robotics)
- Integrated M. Tech (Mechanical Engineering)
- M. Tech (Solar Energy)
- M. Tech (CAD)
- M. Tech (Robotics)
- M. Tech (Thermal Engineering) with Specialization in Electronics Cooling / CFD / Gas Dynamics / Renewable Energy
- Doctoral programs in Mechanical Engineering specializations

Additionally, the department offers Semester Abroad Program through the Directorate of International Relationship, SRMIST for undergraduate students, providing them with the opportunity to spend a semester at esteemed universities worldwide, such as Carnegie Mellon, Northeastern University, SUNNY Buffalo, University of Wisconsin, UC Berkeley, George Mason, New Hampshire, Lille Catholic University, University of Western Australia, Western Ontario, Queen's University and many others.

D. Program Recognition

The National Board of Accreditation has accredited the Mechanical Engineering programme for six years from the year 2021 to 2027. The B.Tech. – Mechanical Engineering program at Kattankulathur campus is accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>. The department is ranked between 401-450 in the QS ranking for 2024. In terms of research excellence, as of January 2024, the department holds a Scopus H-Index of 49 and an i-10 Index of 327.

5. Funded Projects / Consultancy

1. **V. Magesh** received **INR 80,000** from **SIIEC, SRMIST** for a project titled "Jaw Muscle Force Measurement Device for Bilateral Synchronized Occlusion and Jaw Relation" as a Co-Principal Investigator (Co-PI). The project, led by Dr. KT. Magesh, Vice Principal of SRM Kattankulathur Dental College Hospital as Principal Investigator (PI), includes Dr. V. Magesh and Dr. Gangadevi R as Co-PIs, along with students Harsika Kesavan from SRM Dental College and Hospital and Thanigaikumar G, a second-year Mechanical Engineering student.
2. **D. Siva Krishna Reddy** has been awarded **INR 22,94,480** by **ISRO - VSSC** for a funded research project titled "Effect of Blockage and Wall Correction Methodology on Scaled Models at Sub-Sonic Mach Numbers."
3. **B. K. Gnanavel**, and **Prabhakar Subrahmanyam**, have been awarded **INR 8,28,000 (\$10,000)** by **ANSYS**, UK for a funded project on active learning techniques and project-based learning. The project focuses on "Microelectronics Thermal Management, Electronics Thermal Management, and Capstone Program in Electronic Cooling & Thermal Management."
4. **Dr. I. Infanta Mary Priya** has completed the consultancy work on "Investigation and analysis of the heating chamber issue in the fully automatic injection molding machine" for **AM Components LLP**, to the worth of **Rs 25,000/-**
5. **Dr. I. Infanta Mary Priya** has completed the consultancy work on "Investigation and analysis of the control Panel error in a Fully Automatic Injection Molding Machine" for **AM Components LLP**, to the worth of **Rs 25,000/-**
6. **K. S. Vignesh** and **S. Karuppudaiyan** have received a consultancy project titled "Physio-mechanical Safety Investigation of Blasting Rock Samples in Limestone Mines," funded by **Dalmia Cements Pvt. Ltd.**, worth **INR 4,25,000**.

6. Patents Granted / Published / Filed

1. **Steve James, R. Ambigai, and S. Prabhu**. "An apparatus for detecting presence of defects in a pipeline". Patent Application No. 202241000424, Filed on: 04/01/2022 and Granted on: 29/12/2023. Patent No. 491790. Applicant: SRMIST.
2. **Shailendra Kumar Bohidar, Lakshmi Tulasi Chavali, Abhishek Yadav, D. Premnath, Prashant Sunagar, P C Krishnamachary**. "Artificial intelligent based pest capturing agriculture machine". Granted on 25/01/2024. Patent No. 400215-001.
3. **R. Senthil Kumar** and **Shaik Subhani**. "A device for natural convection heat transfer in an enclosure". Patent Application No. 202041055442, Filed on: 21/12/2020 and Granted on: 30/01/2024. Patent No. 505188. Applicant: SRMIST.
4. **Deborah Serenade Stephen, S. Prabhu**. "A grinding tool for machining hard materials". Patent Application No. 202041031752, Filed on: 24/7/2020 and Granted on 12/2/2024, Patent No. 509742. Applicant: SRMIST.
5. **R. Ambigai and S. Prabhu**. "A functionally graded material and a process for preparation thereof". Patent Application No. 202041052341, Filed on: 01/12/2020 and Granted on 16/02/2024. Patent No. 511517. Applicant: SRMIST.
6. **Sumit Pramanik, M. Praveen Kumar, Rajkanya Datta, and Anudipta Chaudhuri**. "A vertical axis wind turbine (VAWT) system". Patent Application No. 202041040197, Filed on: 16/09/2020 and Granted on 20/02/2024. Patent No. 512758. Applicant: SRMIST.
7. **R. Senthil Kumar, Nishchay Sachdeva, Mridul Ranjan Upadhyay, and Ashwin Mahendra**. "Lithium Ion cell with elliptical cross-section and a battery pack comprising the same". Patent Application No. 202041028872, Filed on: 07/07/2020 and Granted on: 21/02/2024. Patent No. 513278. Applicant: SRMIST.
8. **R. Senthil Kumar** and **Shaik Subhani**. "A system and a method for effective heat transfer in a laminar flow". Patent Application No. 202041057239, Filed on: 30/12/2020 and Granted on 23/02/2024, Patent No. 514802. Applicant: SRMIST.
9. **S. Prabhu, CH Vasanth Kumar, Vamsi Krishna Dommeti, V Raghavendra Rao**. "A vacuum suction gripper". Patent Application No. 202041029980, Filed on: 14/07/2020 and Granted on 26/02/2024. Patent No. 515222. Applicant: SRMIST.
10. **R. Senthil Kumar** and **Ashwin Mahendra**. "Shape modification of electronic components for mass optimization". Patent Application No. 201941042259, Filed on: 18/10/2019 and Granted on 28/02/2024. Patent No. 516733. Applicant: R. Senthil Kumar.
11. **Shardul Vikram, Pankaj Kumar**. "A duct-based fluid turbine apparatus". Patent Application No. 202041044987, Filed on: 15/10/2020 and Granted on 29/02/2024. Patent No. 517055. Applicant: SRMIST.

12. **P. Chandrasekaran, M. Cheralathan, R. Velraj.** "A phase change material and a system for reducing super-cooling". Patent Application No. 3791/CHE/2015, Filed on: 23/07/2015 and Granted on 05/03/2024. Patent No. 519695. Applicant: P. Chandrasekaran.
13. **V. Praveena, Leenus Jesu Martin.** "A system for reducing exhaust gas emissions". Patent Application No. 202241048892, Filed on: 26/08/2022 and Granted on 05/03/2024. Patent No. 520183. Applicant: SRMIST.
14. **Sumit Pramanik, Amaresh Tripathy, Anirudh Banik, and Dhiral Panchal.** "A sensing system for a prosthetic socket". Patent Application No. 202041050424, Filed on: 19/11/2020 and Granted on 06/03/2024. Patent No. 521017. Applicant: SRMIST.
15. **P. Chandrasekaran, M. Cheralathan, R. Velraj.** "Selection of the size of spherical capsule for encapsulating water-based PCM in packed bed latent cool thermal energy storage system". Patent Application No. 4430/CHE/2015, Filed on: 24/08/2015 and Granted on 11/03/2024. Patent No. 523444. Applicant: P. Chandrasekaran.
16. **C. Selvam, S. Manikandan, Rohit Varma, Kiran James, Saurav Venu, Adarichaitanya, Maddi Ajay Kumar Reddy, Katamreddy Sri Goutham.** "A refrigeration system and a method of refrigeration thereof". Patent Application No. 202041017170, Filed on: 21/04/2020 and Granted on 14/03/2024. Patent No. 525246. Applicant: SRMIST.
17. **Murali Subramaniam and D. Bhanu Priya.** "A non-invasive electromyography (EMG) system". Patent Application No. 202241065099, Filed on: 14/11/2022 and Granted on 14/03/2024. Patent No. 524992. Applicant: SRMIST.
18. **Karni Singh Chauhan, Sahil Uppal, Umang Grover, Niranjana Lumpataki, Sahil Kanchan (Team Hybrutos Racing).** "A coupling mechanism for a parallel hybrid vehicle drivetrain". Patent Application No. 201941043999, Filed on: 30/10/2019 and Granted on 15/03/2024. Patent No. 527552. Applicant: SRMIST.
19. **V. Magesh, P. Harikrishnan, and D. Kingsly Jeba Singh.** "An orthodontic bracket slot deformation testing system (OBSCTS) and applications thereof". Patent Application No. 201941048614, Filed on: 27/11/2019 and Granted on 02/04/2024. Patent No. 531437. Applicant: SRMIST.
20. **T. Rajasekaran and K. Gokul.** "A composite reinforced with natural fibers and a process for preparing the same". Patent Application No. 201741045695, Filed on: 19/12/2017 and Granted on 29/05/2024. Patent No. 539798. Applicant: SRM University.
21. **R. Senthil Kumar and Amit Varakhedkar.** "A square cylinder with a slight taper on lateral sides". Patent Application No. 201941051475, Filed on: 12/12/2019 and Granted on 09/05/2024. Patent No. 537490. Applicant: R. Senthil Kumar.
22. **R. Senthil Kumar and Ashwin Mahendra.** "Heat exchanger with semi-circular tubes and mountings for effective heat transfer". Patent Application No. 201941049387, Filed on: 02/12/2019 and Granted on 30/05/2024. Patent No. 540035. Applicant: R. Senthil Kumar.
23. **Seung Nam Min, Jae Seong Lee, Chae Min Lim, Ki U Kim, Yung Woo Kuw, Kim Jin Woo, Murali Subramaniam, and Godla Navyatha.** "Safety helmet integrated management system". Patent Application No. 1020220018456, Filed on: 11/02/2022 and Published on: 18/08/2023. Patent Publication No. 1020230121492. Applicant: Shinsung University, South Korea. SRMIST and Shinsung University Collaboration MoU Outcome.
24. **Seung Nam Min, Su Min Noh, Ji Eun Rho, Murali Subramaniam, D. Mounika and Muhammed Inzamam.** "Finger Assistance Apparatus". Patent Application No. 1020220018454, Filed on: 11/02/2022 and Published on: 18/08/2023. Patent Publication No. 1020230121490. Applicant: Shinsung University, South Korea. SRMIST and Shinsung University Collaboration MoU Outcome.
25. **V. Arunprasad, D. Premnath, Amit Porwal, G. Ramya, G. Padmanaban, B. Madhubabu.** "A carbon nanotube (CNT) and ethylene glycol (EG) nanofluid for heat convection in complex heating systems and method thereof". Patent Application No. 202341082220, Filed on: 02/12/2023. Applicant: All the inventors.

7. Faculty Achievements / Highlights

A. Honours and Awards

1. SRM University and R. Ambigai's SSUP Project Recognized on Sony's Official Website. The project titled "A Vision-Based Modular Robotic Pipeline Inspection System for Rapid and Non-Invasive Surface Crack Detection Based on Real-Time Image Processing in Oil and Gas Pipelines," led by R. Ambigai, has been featured on Sony's official website. Sponsored by Sony under their Sensing Solution University Collaboration Program (SSUP), the project showcases innovative use of Sony's sensing technologies. Sony has recognized this project for its significant national-level impact in India. The acknowledgment, along with relevant blogs, news, and updates, was released on May 22, 2024, and is available on the SSUP webpage.



2. Dr. K. S. Vignesh has been honored with an Award of Appreciation by the India Universities and Institutions Network for Disaster Risk Reduction (IUIINDRR), under the aegis of the National Institute of Disaster Management (NIDM), Ministry of Home Affairs, Govt. of India. This accolade, conferred on the occasion of International Women's Day 2024, celebrates Dr. Vignesh's remarkable contribution to disaster risk reduction through a women-centric approach. Recognized for the implementation of best practices in disaster risk reduction, Dr. Vignesh's work aligns closely with the Prime Minister's 10-Point Agenda for a Resilient Nation. The acknowledgment underscores her dedication to fostering resilience and inclusivity in disaster management strategies.



3. The Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science (Impact factor: 1.8), has published a special issue featuring articles presented at the International Conference on Advanced Materials and Mechanical Characterization (ICAMMC 2021). This conference was jointly organized by the Departments of Physics & Nanotechnology and Mechanical Engineering. The special issue, Vol. 238 (2024), Issue 8, Guest Editors: Sumit Pramanik, Shubhabrata Datta, M Cheralathan.
4. C. Selvam acted as the Guest of Honour at the International Conference - ICATME-2024 organized by New Prince Shri Bhavani College of Engineering & Technology, Chennai on May 4th, 2024. He was also a member of the National Advisory Committee for the conference.
5. U. Mohammed Iqbal appointed as One of the Topic editors for the journal "Intelligent and Sustainable Manufacturing" for collecting papers on the topic Sustainable Machining and Green Products.
6. M. Prakash appointed as DC member for a candidate in Centre for Research, Anna University
7. Vijaya has received an appreciation certificate for successfully conducting November-December and January 2024 online central evaluation by CoE, SRMIST.
8. Vijaya Chaired a technical session in the 5th International Conference on Advances in Mechanical Engineering (ICAME 2024) during 20-22 March 2024 held at the department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur, Chennai.
9. U. Mohammed Iqbal Chaired a technical session in 5th International Conference on Advances in Mechanical Engineering (ICAME 2024) during 20-22 March 2024 held at department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur, Chennai.
10. U. Mohammed Iqbal received a certificate of appreciation award in recognition for being a recipient of an External Funded Project sanctioned during the year 2023 in the research day event held on 04th March 2024 at SRM Institute of Science and Technology, Kattankulathur.
11. S. Vignesh has received an Award of Appreciation from the India Universities and Institutions Network for Disaster Risk Reduction (IUIINDRR), Ministry of Home Affairs, Govt. of India for the "Implementation of Best Practices on DRR – Women Centric Approach".
12. R. Senthil Kumar was honoured with a "Proud Inventor" badge and "Letter of Appreciation", during the event held at the Mini Hall 2, T.P. Ganesan Auditorium.

13. **B K Gnanavel** of SRM Institute of Science and Technology is recognized as Ph.D. supervisor in the Department of Mechanical to guide the Ph.D. Scholars.
14. **Thejesh Guru Sivashankar** and **Venkateswara Balaji** received the Best Poster Presentation award for the project entitled "Experimental Investigation of Mechanical quad robotic soft gripper for fruit harvesting using Machine learning", from B.Tech Mechanical, Department of Mechanical Engineering, SRMIST, 14th May 2024 guided by **S. Prabhu**.
15. **Santhosh. R** received the Best Poster Presentation award for the project entitled "Design and Fabrication of Vision Based Arecanut Picking Robot", from M.Tech Robotics, Department of Mechanical Engineering, SRMIST, 14th May 2024 guided by **S. Prabhu**.
16. **Dhruba Jyoti Sut**, **M. Uma**, and **S. Prabhu** received the Best Sponsored Presentation Award for the presentation titled "An examination of the various soft pneumatic gripper's gripping techniques" at the 6th International Conference on Emotion and Sensibility 2024 (ICES2024_Summer), held from June 26-27, 2024, at Seoul National University, Republic of Korea.
17. **Senthil Vadivelan D.**, **S. Prabhu**, and **M. Uma** received the Best Sponsored Presentation Award for the presentation titled "Two-class motor imagery EEG decoding based on EEGNet classification" at the 6th International Conference on Emotion and Sensibility 2024 (ICES2024_Summer), held from June 26-27, 2024, at Seoul National University, Republic of Korea.
18. **M. Uma**, **R. Beaulah Jeyavathana**, **Vedant Rai**, and **S. Prabhu** received the Excellent Sponsored Presentation Award for the presentation titled "Developing an AI-based multi-sensory module for personalized literacy development in children with dyslexia" at the 6th International Conference on Emotion and Sensibility 2024 (ICES2024_Summer), held from June 26-27, 2024, at Seoul National University, Republic of Korea.
19. **Prabhu** appointed as Early Career Conference Grants, Assessment Selection Committee member, The Association of Commonwealth Universities (ACU), UK, Year May 2024.
20. **R. Senthil** was honoured as an Editorial Board Member - SSRG International Journal of Mechanical Engineering, Scopus indexed.
21. **D. Bhanu Priya**, and **Murali Subramaniyam** received the Best Sponsored Presentation Award for the presentation titled "Machine Learning-Based Neck Posture Classification and Recognition from sEMG Data" in the 6th International Conference on Emotion and Sensibility (ICES 2024_Summer), hosted by the Korean Society for Emotion and Sensibility, South Korea from June 26 - 27, 2024, conference organized by Artificial Intelligence Institute Seoul National University (AIIS@SNU).
22. **Murali Subramaniyam** was honoured with a "Proud Inventor" badge and "Letter of Appreciation", during the event held at the Mini Hall 2, T.P. Ganesan Auditorium.
23. **T. Rajasekaran** received a Certificate of Appreciation from AICTE Training and Learning (ATAL) Academy for successfully coordinating FDP on the Impact of Industry 4.0 on Industries and Academia from 22/01/2024 to 27/01/2024.
24. **Shubhabrata Datta** received the "Eminent Engineering Personality" award from the Institution of Engineers (India) for the year 2023 in February 2024.
25. **G. Balaji** received appreciation certificate for research excellence in "Environmental Research", World Environment Day 2024, SRMIST

B. PhD Awarded

1. **Mr. S. P. Sundar Singh Sivam** successfully defended his Ph.D viva-voce examination on 05th February 2024. Thesis Title: "An Experimental Study on Geometric Downsize Scaling Effects in Deep-Drawn Directionally Rolled Copper Cups". **Research Supervisor:** Dr. R. Rajendran
2. **Mr. D. Selwyn Jebadurai** successfully defended his Ph.D viva-voce examination on 09th February 2024. Thesis Title "Performance Enhancement of Sandwich Composites by Improving Skin-core Bonding". **Research Supervisor:** Dr. A. Arul Jeya Kumar.
3. **Mr. S. Sasikumar** successfully defended his Ph.D viva-voce examination on 16th February 2024. Thesis Title: "Stabilization and Mechanical Behavior of Aluminum Foam Stabilized by Various Particles". **Research Supervisor:** Dr. G. S. Vinod Kumar
4. **Mr. Abburi Lakshman Kumar** successfully defended his Ph.D viva-voce examination on 4th March, 2024. Thesis Title: "Experimental Investigations on Torsion, Damping and Machinability of Fiber Reinforced Polymer Composites Using Sensors Signal Analysis". **Research Supervisor:** Dr. M. Prakash
5. **Mrs. Deborah Serenade Stephen** successfully defended her Ph.D viva-voce examination on 18th April 2024. Thesis Title: "Experimental Investigation of Grinding Ti-6Al-4V Alloy using CNT Incorporated CBN Grinding Wheels". **Research Supervisor:** Prof. S. Prabhu
6. **Mr. J. Daniel Glad Stephen** successfully defended his Ph.D viva-voce examination on 6th May, 2024. Thesis Title: "Tribological and Biomechanical Analysis of Polycarbonate Urethane Artificial Disc". **Research Supervisor:** Dr. M. Prakash
7. **Mr. J. Thavamani** successfully defended his Ph.D viva-voce examination on 23rd May, 2024. Thesis Title:

"Numerical and Experimental Studies of Influencing Factors on the Performance of Solar Still". **Research Supervisor:** Dr. Pankaj Kumar

8. **Mr. Kollibala Siva Rama Reddy**, successfully defended his Ph.D viva-voce examination on 19th June, 2024 at Dr. A. P. J. Abdul Kalam University,

Indore. Thesis Title: An Experimental Investigation of Load Measurement and Life Modelling in Wind Turbine Bearings". **Research Supervisor:** Dr. Prashant Kumar Shrivastava, Dr. A. P. J. Abdul Kalam University, Indore.

8. Journal Publications

1. **Praveena, V.,** Leenus Jesu Martin, Jonas Matijošius, Fethi Aloui, Arivalagan Pugazhendhi, and Edwin Geo Varuvel. "A systematic review on biofuel production and utilization from algae and waste feedstocks—a circular economy approach." *Renewable and Sustainable Energy Reviews* 192 (2024): 114178. Q1; IF: 15.9
2. **Krishnan, Ganga, Radhakrishnan Shanthi Priya, and R. Senthil.** "Ecological effects of land use and land cover changes on lakes in urban environments." *Sustainable Development*. Q1; IF: 12.5
3. **Sudhakar, S., and V. Mathanraj.** "Development of sustainable energy: Performance investigation of the combined utilisation of a seawater electrolyser and single slope solar desalination still." *Journal of Cleaner Production* 460 (2024): 142613. Q1; IF: 11.1
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9. Book Chapter Published

1. Sekhar, K.C., Ranganathan, L., Bathrinath, S., Premnath, D., Yuvasri, B. and Boopathi, S., 2024. Cloud Computing Adoption for Small and Medium Enterprises in Mechanical Engineering. In *Semantic Web Technologies and Applications in Artificial Intelligence of Things* (pp. 219-247). IGI Global. ISBN number: 9798369314876, May 2024.

10. Guest lectures delivered

1. **R. Senthil** acted as a Resource Person and delivered a talk on "4Ps: Publication, Patent, Products, and Profits" at Samavesha Episode 2.0 held at AMET University, Chennai, organized by i-STEM, IISc Bengaluru.
2. **I. Infanta Mary Priya** acted as a Panellist at the National Conference on "Redefining and Revisioning Business Strategies with AI" on the topic "Role of AI in Business," organized by the Department of Business Administration, Loyola College, Chennai, on February 1st, 2024.
3. **A. Vijaya** delivered a Guest Lecture on the topic "Identification of Research Problem through Literature Survey," organized by MIT Alumni Association (MITAA), on April 17th, 2024.
4. **R. Senthil** acted as a Resource Person and delivered a talk on "4Ps: Publication, Patent, Products, and Profits" at Samavesha 2.0 held at AMET University, Chennai, organized by i-STEM, IISc Bengaluru.
5. **S. Prabhu** acted as a resource person for a two-day FDP on "Unlocking Insights: Mastering Data Analysis and Interpretation in Research" for faculty members of Karunya Institute of Technology and Science, Coimbatore, on May 2nd and 8th, 2024.
6. **Murali Subramaniyam** delivered a lecture titled "Development of portable sensors for healthcare and ergonomics applications" for graduate and undergraduate students of the Department of Smart Safety System Engineering, Dongyang University, South Korea on October 11, 2023.
7. **Murali Subramaniyam** delivered a lecture titled "Innovations in Biomechanics: Wireless sEMG Sensors for Muscle Activity and Posture Analysis using Machine Learning" for undergraduate students of the Department of Mechanical/Materials Design Engineering, Kumoh National University, South Korea on January 14, 2024.
8. **Shubhabrata Datta** delivered an invited lecture on "Data-driven design of biomedical composites" at two-day course on "Artificial Intelligence in Materials Engineering" (AIME-2024) organized by Indian Institute of Metals' Chapters of Chennai and Kalpakkam in Chennai during April 26-27, 2024.
9. **Shubhabrata Datta** delivered a keynote lecture on "AI-based Design of Materials with Conflicting Property Requirements" at International Conference on Advanced Technology in Material Science and Engineering (ICATMSE-24) organized by Department of Civil Engineering, ISiksha 'O'Anusandhan University, Bhubaneswar during April 4-6, 2024.
10. **Shubhabrata Datta** delivered a keynote lecture on "AI-based Design of Biomedical Composites" at 36th National Convention of Metallurgical and Materials Engineers, organized by Institution of Engineers (India) MME Division Board, held at Kolkata during February 28 - March 2, 2024.
11. **G. Balaji** delivered a talk on "Collaboration as a Strategy for Design Thinkers" on the Two-day workshop on "Design Thinking for Sustainable Development in Academic and Socially Relevant Projects", held at SRMIST Kattankulathur during May 5–6th 2024.

11. Conference Presentations

1. **K. Jegadeesan**, "Vibration energy harvester design and analysis using laminated composite materials" International Conference on The Role of AI and Multidisciplinary Research in Shaping a Sustainable Future, organized by Kaaf University College, Ghana (West Africa), in collaboration with International Institute for Special Education (IISE), Lucknow and Science Tech Institute, Lucknow, India, during January 11-13, 2024.
2. **Sowndharya and V. Praveena**, "Investigation on production of binderless garden waste briquette" in NCWECCUS 2023 at the Department of Mechanical Engineering, NIT Rourkela, Odisha, December 22-24, 2023.
3. **Abdul Raghuman and V. Praveena**, "Preparation, characterization of cocos nucifera shell-based nanoparticle for PEMFC heat transfer applications" in NCWECCUS 2023 at the Department of Mechanical Engineering, NIT Rourkela, Odisha, December 22-24, 2023.
4. **B. K. Gnanavel and G. Raja**, "Effect of Interfacial Contact Forces for Lay Ratios Used in Analyzing the Cardiac Lead Cables Assemblies," organized by the Mechanical Engineering Division, Central Power Research Institute, Bangalore.
5. **P. Chandrasekaran, D. Premnath, M. Cheralathan, and R. Senthil**, "Effect of various nanoparticles on solidification characteristics of DI water in a spherical capsule - A comparative study" at the National Conference on Waste to Energy, Carbon Capture, Utilization, and Storage (NCWECCUS 2023), organized by the Department of Mechanical Engineering, NIT Rourkela, Odisha, during December 22-24, 2023.
6. **Deepan Aman Dixit, G. Manikandaraja, and P. Chandrasekaran**, "Chemical thermodynamics analysis of CI engine fueled with cottonseed oil-pine blend oil" at the National Conference on Waste to Energy, Carbon Capture, Utilization, and Storage (NCWECCUS 2023), organized by the Department of Mechanical Engineering, NIT Rourkela, Odisha, during December 22-24, 2023.
7. **S. Nanda Kumar and P. Chandrasekaran**, "Role of DI water-based hybrid nanofluid phase change material for energy-efficient cool thermal energy storage system" at the 3rd International Conference on New Frontiers in Chemical, Energy, and Environmental Engineering, conducted by the Department of Chemical Engineering, NIT Warangal, Telangana, during December 24-25, 2023.
8. **V. Magesh, P. Harikrishnan, Shubham Dubey, and Aman Kumar**, "Deformation and torque loss in orthodontic bracket-archwire segment" at the 5th International Conference on Advances in Mechanical Engineering (ICAME'24), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, from March 20-22, 2024.
9. **Balamurali V, V. Magesh, and P. Harikrishnan**, "Finite element analysis of tooth intrusion in mandible segment for varying miniscrew dimensions" at the 5th International Conference on Advances in Mechanical Engineering (ICAME'24), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, from March 20-22, 2024.
10. **Jegadeesan K. and K. Shankar**, "Comparative analysis of the vibration energy harvester using laminated composite beam" at the International Conference on Advanced Functional Materials and Devices (AFMD 2024), organized by the Department of Physics and Nanotechnology, SRM IST, Kattankulathur, Tamil Nadu, India, during February 26-29, 2024.
11. **Jegadeesan K and K. Shankar**, "Energy Harvester Design and Optimization for Performance Modulation using Laminated Composite Material" at the 5th International Conference on Advances in Mechanical Engineering (ICAME 2024), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, Tamil Nadu, India, during March 20-22, 2024.
12. **Aarthi Lavanya Dhanapaul, Arun Prakash Dhanapaul, and P. Nandakumar**, "Predictive Maintenance of Shunting Locomotive Parameters Based on Condition Monitoring – A Comprehensive Analysis" at the 5th International Conference on Advances in Mechanical Engineering (ICAME'24), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, from March 20-22, 2024.
13. **Mahesh Kumar Sah, Vijaya A., and Harpreet Singh**, "Nano finishing of Al sheet using CNC fixed abrasive lapping" at the 5th International Conference on Advances in Mechanical Engineering (ICAME'24), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, from March 20-22, 2024.
14. **P. Ramesh Kumar and Vijaya A.** "GAUSSIAN PROCESS REGRESSION MODEL FOR MATERIAL CHARACTERISATION USING FINITE ELEMENT ANALYSIS AND DIGITAL IMAGE CORRELATION" at the 5th International Conference on Advances in Mechanical Engineering (ICAME'24), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, from March 20-22, 2024.

15. Satheesh Kumar A. and Vijaya A. "Influence of temperature in Friction Stir Back Extruded Brass tubes on its Mechanical behaviour" at the 5th International Conference on Advances in Mechanical Engineering (ICAME'24), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, from March 20-22, 2024.
16. Krishnaprasad S. Menon and R. Ambigai "Experimental and Molecular Level analysis of the anti-wear properties of Karanja Oil using tribological test and Quantum Chemical Calculations" at the 5th International Conference on Advances in Mechanical Engineering (ICAME'24), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, from March 20-22, 2024.
17. Steve James and R. Ambigai, "A review of experimental and molecular-level analysis of the anti-wear properties of Karanja Oil using tribological test and quantum chemical calculations" at the 5th International Conference on Advances in Mechanical Engineering (ICAME'24), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, from March 20-22, 2024.
18. Punit Matai, Chandiwal Manojkumar, and R. Ambigai, "Characterization and analysis of tribological properties of functionally graded composites" at the 5th International Conference on Advances in Mechanical Engineering (ICAME'24), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, from March 20-22, 2024.
19. U. Mohamed Iqbal, "Effect of nanofiller addition on the mechanical characteristics of biodegradable polylactic acid natural fiber-reinforced composites" at the 5th International Conference on Advances in Mechanical Engineering (ICAME 2024), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, Tamil Nadu, India, during March 20-22, 2024.
20. U. Mohamed Iqbal, "Optimizing the process parameters in wire electrical discharge machining of magnesium nanocomposite prepared by powder metallurgy" at the 5th International Conference on Advances in Mechanical Engineering (ICAME 2024), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, Tamil Nadu, India, during March 20-22, 2024.
21. K. Dhayanidhi and R. Senthil Kumar, "Numerical simulation of electronic component cooling inside welding equipment" at SRM Research Day, February 28, 2024. Paper ID: MCE0009.
22. D. Hari Krishna, K. Dhayanidhi, and R. Senthil Kumar, "Review on recent developments in microchannel heat sinks in electronics" at SRM Research Day, February 28, 2024. Paper ID: MCE0008.
23. G. Balaji, Sayan Ghosh, and Vishnu Nair, "An assessment of a new catalytic material for CI engines running on diesel and biodiesel to reduce emissions" at the International Conference on Sustainable Energy & Environment, organized by the Department of Chemical Engineering, Maulana Azad National Institute of Technology, Bhopal, from January 23-25, 2024.
24. G. Balaji, T. R. Sathish Kumar, R. A. Roshan, and B. Fayash, "Investigation of diesel engines powered by pyrolytic oil and their fuel injection timing" at the International Conference on Sustainable Energy & Environment, organized by the Department of Chemical Engineering, Maulana Azad National Institute of Technology, Bhopal, from January 23-25, 2024.
25. Dhruba Jyoti Sut, M. Uma, and S. Prabhu "An examination of the various soft pneumatic gripper's gripping techniques" at the 6th International Conference on Emotion and Sensibility 2024 (ICES2024_Summer), held from June 26-27, 2024, at Seoul National University, Republic of Korea. This research was supported by Physionics Co., Ltd., Seoul National University, South Korea, by authors' registration fees of \$300.
26. Senthil Vadivelan D., S. Prabhu, and M. Uma "Two-class motor imagery EEG decoding based on EEGNet classification" at the 6th International Conference on Emotion and Sensibility 2024 (ICES2024_Summer), held from June 26-27, 2024, at Seoul National University, Republic of Korea. This research was supported by Junmeditech, Seoul National University, South Korea, by authors' registration fees of \$300.
27. M. Uma, R. Beaulah Jeyavathana, Vedant Rai, and S. Prabhu "Developing an AI-based multi-sensory module for personalized literacy development in children with dyslexia" at the 6th International Conference on Emotion and Sensibility 2024 (ICES2024_Summer), held from June 26-27, 2024, at Seoul National University, Republic of Korea. This research was supported by the industrial collaboration project of Earth-Science Communication class (YR 2020-2024, 0670-20230062) in Seoul National University, South Korea, by authors' registration fees of \$300.
28. D. Bhanu Priya, Murali Subramaniyam. "Machine Learning-Based Neck Posture Classification and Recognition from sEMG Data" in the 6th International Conference on Emotion and Sensibility (ICES 2024_Summer), hosted by the Korean Society for Emotion and Sensibility, South Korea from June 26 -

- 27, 2024, conference organized by Artificial Intelligence Institute Seoul National University (AIIS@SNU).
29. **M. Ramnaath, Murali Subramaniyam.** "Bridging Anthropometric Diversity: Predictive Solutions for Indian and Global Populations" in the 5th International Conference on Advances in Mechanical Engineering (ICAME2024), hosted by the Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, India from March 20 - 22, 2024.
30. **Samanth Verma, Aravind Ajay, D. Bhanupriya, Murali Subramaniyam.** "Leveraging Social Media Reels: Real-time Analysis of Pupil Diameter and Blink Rate Using a Portable Wireless Device" in the 5th International Conference on Advances in Mechanical Engineering (ICAME2024), hosted by the Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, India from March 20 - 22, 2024.
31. **M. Ramnaath, Murali Subramaniyam.** "Bridging Anthropometric Diversity: Predictive Solutions for Indian and Global Populations" in the 5th International Conference on Advances in Mechanical Engineering (ICAME2024), hosted by the Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, India from March 20 - 22, 2024.
32. **Steve James and R. Ambigai.** "Design and Development of a Modular Semi-Autonomous Pipeline Inspection Robot for Detecting External Surface Defects" at the International Conference on Advances in Management, Energy, Engineering and Technology (ICAMEET 2024) organized by Lourdes Matha College of Science and Technology, Thiruvananthapuram, Kerala, from June 13th to 14th, 2024.
33. **R. Chandrasekar and T. Rajasekaran.** "Mechanical and Metallurgical Characterization of Dissimilar Inconel 718-P72 Joints using CMT Welding" in the International Conference on Recent Innovations in Production Engineering (RIPE -2024) held during 30 & 31st May 2024, organized by the Department of Production Technology, Madras Institute of Technology Campus, Anna University, Chennai, Tamilnadu, India.
34. **G. Balaji, Wan Nazwanie Wan Abdullah, Ojjas Yadav, Sahil.** "Assessment of the joint effect of antioxidant addition and catalytic converter on emissions in off-road motors using diesel tyre oil blend", in the 5th International Conference on Advances in Mechanical Engineering (ICAME2024), hosted by the Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, India from March 20 - 22, 2024.

12. Centre of Excellence Activities

A. Centre of Excellence for Electronics Cooling and Computational Fluid Dynamics (CFD) Simulation

During last semester, the Center of Excellence for Electronic Cooling received our International Advisor Dr. Prabhakar Subrahmanyam, Staff Scientist, Intel Corporation, CA, USA., Industrial Expert / Visiting Professor at SRMIST, KTR. on 22nd April 2024. Highlights of his SRMIST Campus Visit between 22nd to 26th April 2024 are highly thematic and interacted with 456 students from various departments at college of engineering and technology who have engaged themselves in centre related activities. Industrial Expert Dr. Prabhakar Subrahmanyam given lecture on "Jet Impingement for Electronic Cooling Application", Icepak-Hands on Training and doubts

clarification at the centre, Students Counselling, final year project plan by extending ETM, MTM and Capstone Program and also Briefed the current job opportunities in electronic cooling sector across the globe. Also, Dr. Prabhakar Subrahmanyam met higher officials of our University. Interacted Mechanical Engineering faculty members and took part in Mechanical Engineering syllabus revision. Our guest addressed faculty coordinates for their effective contribution and students service at the center.



In addition, the Center of Excellence for Electronic Cooling conducted a one-day workshop titled “INDUSTRY INTERNSHIP EXPERIENCE IN CLASS ROOM” on 24th April 2024. This is the first time we have decided to exhibit and share our state-of-the-art resources at the centre to outsiders, for knowledge enhancement through this initiative which is the speciality of this programme. The main objective of this programme is to make the engineering students at entry level to realize the importance of industry internship exposure and how effectively our centre of excellence can be used for their career building with multidisciplinary exposure. Highlights of the program to realize the needs of industry internship experience and interact with the industrial experts through this program. Experts from five leading industries [Intel, Sagar Thermal Materials, ANSYS Inc., Data patterns, Kriti Labs] delivered lectures to our students. The total number of students' participants is 214.

As a newly nurtured performing center handled 496 students both UG & PG and conducted final laboratory examinations [496 – pre/co request course ETM & MTM + 400 – Capstone, totally 996 students had been examined last semester] for the subjects 18IPE401J Capstone Program in Electronic Cooling, 18MEO122J / 18MEO122JA Electronics Thermal Management,

18MEE451J Microelectronics Thermal Management, 20MEE542J Thermal Design for Electronic Equipment, and 20MEE544J Heat Transfer in Electronic Systems by scheduling 37 batches with maximum students' strength per batch is 30 and also completed last semester academic activities successfully and results were declared. Right now, the students who have completed courses at our Center are directed to concentrate on paper publication / internships / R&D activities etc. The Center wholeheartedly expresses its sincere thanks to all the examiners who have provided unlimited support to conduct final examinations for our students smoothly. Specifically, to facilitate our students center took initiatives in appointing CFD Engineers to operate the laboratory on 24/7 - shift basis.

To have clear views on 21IPP401J Capstone Program in Electronic Cooling, the detailed PPT with students' video feedback are circulated to all students and faculty members by aiming to admit 1000 students during the current semester. Hence, the Center of Excellence for electronic cooling [our wonderful learning ambiance at BEL 407, Third floor, Basic Engineering Lab] announced open day from 17th June to 12th July 2024 to clear doubts on center related services for our student and faculty members.





B. Centre for Occupational Safety and Health (COSH)

The Centre for Occupational Safety and Health (COSH), Department of Mechanical Engineering has organized a three-day Faculty Development Program on Occupational Safety and Disaster Risk Management between 03-05 April, 2024, funded by Ministry of Home Affairs, GOI.

13. Events Organized

A. Technical Events

1

The Mechanical Engineering Department has organized an interaction meeting with G.D. Naidu Chair Professor. Mr. T. R. Parasuraman, Senior

Executive Advisor, Toyota Industries Engine India Pvt. Ltd, Chairman, ASSOCHAM Southern Development Council and Chairman, Karnataka State Development Council on 24th and 25th of June 2024. During his stay at the department, he witnessed the facilities in the department as well as interacted with faculty and research scholars.

13





2

Indian Society for Quality (ISQ) – Chennai Chapter hosted a contest titled “TOPS Convention 2023-24” in the Department of Mechanical Engineering, SRMIST, Kattankulathur on 06th January 2024. This event, aimed at executives from OEMs, Tier-1 and Tier-2 manufacturers, the process industry, academia, and the service sector, focused on promoting a scientific approach to problem-solving, teamwork, customer-centricity, and skill enhancement through case studies. The Chennai chapter expressed gratitude to the SRM Institute of Science and Technology, especially Dr. Cheralathan, HOD of Mechanical Engineering, for providing the venue and support. He served as the Chief Guest at the inaugural function. The event was attended by key ISQ Chennai Chapter members and dignitaries from SRM Institute. ISQ acknowledged the voluntary service of the experienced jury members. The concluding session featured Chief Guest Mr. P Kaniappan, Managing Director of ZF Commercial Vehicle Control Systems India Ltd., and other notable guests from SRM University. With 53 teams and over 200 delegates, the contest was conducted in four parallel sessions. Teams were awarded trophies based on the jury’s assessment, categorized as Meritorious, Distinguished, and Exemplary. Organizer: Dr. Vijayaraghavan.



3

The Mechanical Engineering Department organized a six-day offline FDP on the "Impact of Industry 4.0 on Industries and Academia" from January 22nd to 27th, 2024. Sponsored by the AICTE Training and Learning (ATAL) Academy, the primary goal of the FDP was to bridge the gap between industry and academia and to disseminate knowledge of Industry 4.0 through high-quality theoretical and hands-on training. The event was inaugurated by Shri C. Thomas Mathew from Apollo Tyres and Prof. U. Ramamurthy from NTU Singapore. Eminent speakers included Shri Lakshmikanth Baskaran from Ashok Leyland Chennai, Mr. C. V. Gowri Sankar from MSME Technologies, Dr. P. Vetrivelan from VIT Chennai, representatives from Immersive Technologies (AR/VR), SRMIST; Dr. T. Rajasekaran from SRMIST, Dr. K. Palanikumar, SSIT, Chennai; Dr. Paneerselvam, Ashok Leyland, Chennai; Dr. N. Arunachalam, IIT Madras; Mrs. Lakshmi Umapathy, Caterpillar Chennai. Participants also had the opportunity to visit the Heartfulness Foundation, Chennai Trade Centre for the Automation Expo by Dairy Development, and FaureciaIndia Ltd. in Sriperumbudur. **Convenor: Dr. M. Cheralathan. Coordinator: Dr. T. Rajasekaran and Dr. E. Vijayaragavan.**



4

Centre for Lean and Six Sigma (CLASS) in association with the Department of Mechanical Engineering, SRMIST, Kattankulathur organized a Professional Development Programme titled “Lean Six Sigma Green Belt Certification” from 10 to 12 & 17 to 19 February 2024 in collaboration with International Council for Quality & iTRACK Solutions. A total of 17 B. Tech mechanical students across the year registered for this course and benefited. The resource persons are Dr. Rajkumar Swaminathan, RANE Engine Valves Limited; Dr. Panneerselvam Ramaswamy, MSME TDC, Agra; Mr. Vinothkumar Rajedran, iTRACK solutions & National Institution for Transformation and Excellence; Mr. R. Senthil Raj, Tech Mahindra; Dr. E. Vijayaragavan, SRMIST. This program also arranged an industrial visit to FORVIA, Sriperumbudur. **Coordinators:** Dr. E. Vijayaragavan, Dr. M. Cheralathan.



5

The Mechanical Engineering Department and Directorate of Alumni Affairs jointly hosted an Alumni Conclave on 17th February 2024. During the Conclave, the department newsletter "RESONANCE" was released by esteemed alumni of the department in the presence of respected administrators of the department and institution. A total of 15 alumni who graduated in different periods with either B.Tech or M.Tech degrees participated in the Conclave. The alumni's also shared their professional experience with current B. Tech / M. Tech students. **Conveners:** Dr. A. Rathinam, Dr. M. Cheralathan, Dr. E. Vijayaragavan, Mr. S. Balamurugan.



6

SERB-sponsored workshop: The "Biomechanics and Biomaterials for Potential Dental Applications" workshop was held on the 26th and 27th of February 2024. Sponsored by the Science and Engineering Research Board (SERB) under the Social Scientific Responsibility scheme, the event received Rs. 50,000 from SERB and an additional Rs. 29,500 from SRMIST's department budget. Conducted as part of the SERB sanction order No. CRG/2022/005834, the project titled "Development of Controlled Force Orthodontic Debonding System." The workshop featured a distinguished list of speakers, including Dr. Murugaiyan Amirthalingam, IIT Madras; Dr. Harikrishnan Pandurangan, Teeth "N" Jaws Center in Chennai; Dr. Debdutt Patro, Ducom Instruments, Bangalore; Dr. S. Narayana Kalkura, Anna University, Chennai; Dr. Sandipan Roy, SRMIST; Dr. S. Karuppudaiyan, SRMIST; and Dr. V. Magesh, SRMIST. The event successfully highlighted the latest developments in dental biomechanics and materials, fostering collaboration and innovation in the field. **Convenors:** Dr. V. Magesh, and Dr. P. Harikrishnan, an Orthodontics and Oral Surgeon from the Teeth "N" Jaws Center in Chennai.



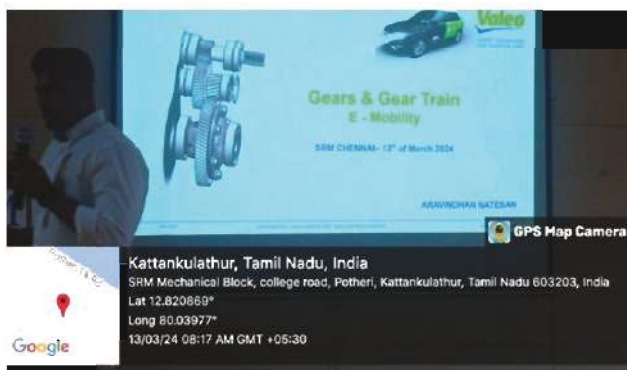
7

On 6th March 2024, the Mechanical Department Students' Counselling Cell organized a talk titled "Crafting Success: The Artful Path to Achievement", was attended by first and second-year mechanical students. Mrs. Muhil, a psychologist and counselor from Ahana Group of Hospitals, was the guest speaker. The program emphasized self-awareness, mental health, and strategies for personal and academic success. Mrs. Muhil discussed the importance of mental health in emotional, psychological, and social well-being. She provided insights on stress management, seeking professional help, and maintaining a healthy lifestyle. The concept of self-awareness was highlighted, stressing the need to understand one's thoughts and emotions and their impact on others, crucial for personal growth and emotional intelligence. The event concluded with interactive activities and feedback sessions, helping students recognize their strengths and areas for improvement. **Convenors:** Dr. R. Ambigai, Dr. V. Rajasekar, Dr. J. Santhakumar, Dr. D. Vamsikrishna.



8

The Department of Mechanical Engineering, Centre for Lean and Six Sigma (CLASS) in association with Valco India Private Limited organized a Valeo – SRM Lecture Series – 09 on the topic "Gears and Gear Trains" on 13th March 2024. A total of 130 B. Tech students attended the lecture and gained knowledge on the topic. The lecture was arranged as a part of the 21MEC206T Kinematics and Dynamics of Machines course. **Resource person:** Mr. Aravindhan Natesan, Deputy Team Lead, Valco. **Coordinators:** Dr. M. Cheralathan, Dr. E. Vijayaragavan, Dr. D. Raja.



9 The Mechanical Engineering Association in Collaboration with the Directorate of Entrepreneurship and Innovation (DEI), and the NSS Cell, SRMIST jointly organized a Workshop on “Design Thinking for Sustainable Development in Academic and Socially Relevant Projects” on 05th & 06th March 2024 in the Department of Mechanical Engineering. **Conveners:** Dr P Nandakumar, Dr D Kumaran, Dr G Balaji. **Coordinators:** Dr T Lakshmanan, Dr A Vijaya, Dr Sundar Singh Sivam



10 The Mechanical Engineering Department has organized a Six-day Certification Course on “CNC Programming and Practice in CNC Machines” on 11th – 16th March 2024. A total of 30 participants registered for this course and benefited. The resource persons for this course include faculty and technical staff: Dr. U. Mohammed Iqbal, Dr. A. Arul Jeya Kumar, Dr. S. Muralidharan, Dr. J. Santhakumar, Mr. R. Vasu, Mr. S. Simson Selvakumar, Mr. R. Kalidass, Mr. K. R. Srinivasan, Mr. Thirunavukarasu, Mr. Mageshwaran. **Convenors:** Dr. U. Mohammed Iqbal, Dr. A. Arul Jeya Kumar, Dr. S. Muralidharan, Dr. M. Prakash and Dr. J. Santhakumar, Mr. D. Nithyananthan.




11

The Department of Mechanical Engineering organized the fifth International Conference on Advances in Mechanical Engineering (ICAME 2024). This Conference is one of the most comprehensive Mechanical Engineering-related conferences in India. The Conference is held during 20-22, March 2024, at the SRM Institute of Science and Technology, Kattankulathur, Chennai, India. There were around 465 presentations from India and around the world at the importance conference with 10 Keynote Speakers from prestigious institutes around the world. The conference's highlights included roundtable discussions with practitioners from various countries, the publication of abstracts from academic journals in the conference proceedings, and the publication of full-length research papers from 630 abstracts and 502 submissions to journals indexed by Science Citation Index (SCI) and SCOPUS.

The Chief Guest, Prof. Sandro Nizetic from University Split in Croatia, Prof. Robert C. Richardson from University of Leeds in UK, Shri. Murali Shankar Sambasiva, Managing Director of Super Auto Forge Pvt. Ltd. addressed the audience and released the International Conference Proceedings. Other Guests of Honour included Prof. Junghyun Cho from Binghamton University in US and Mr. Sachin Goel, Head of the Foundry Business in Ashok Leyland, Chennai had also addressed the gathering. Prof. T.V. Gopal, Dean of College of Engineering and Technology, Prof. D. Kingsley Jebasingh, Chairperson of School of Mechanical Engineering, Prof. M. Cheralathan, Head of the Department of Mechanical Engineering, SRMIST welcomed the guests and delivered the inaugural speeches followed by a Vote of Thanks given by Dr. R. Senthil, Associate Professor & Organizing Secretary of the Conference.



Day 1: After the inaugural function, Prof. Robert C. Richardson from the University of Leeds delivered a talk on "Self-repairing cities using robots." There were 16 parallel sessions, totaling 180 research presentations. The afternoon featured keynote talks by Dr. M. Jawaharlal on "Scope of Mechanical Engineering in Agriculture" and Mr. Sreejith K. V. on "Empowering engineering innovation and design." Dr. Supakij Suttiruengwong gave a talk on "Composites and advanced materials for energy-efficient buildings."



The Department of Mechanical Engineering, in association with the National Institution for Quality and Reliability, organized an event named “EXCEL” under the umbrella of ICAME 2024. This is a competition for the industry professionals on the following categories: Continuous Improvement; Quality Circle; Six Sigma; SMED; and Reliability. This event was conducted on 21st March 2024.



ICAME



Department of Faculty

2024



Mechanical Engineering Fraternity



The competition had 150 participants from various organizations, including Ashok Leyland, BASF, FORVIA, Intimate Fashions (India) Pvt Ltd, FRITZMEIER MOTHERSON CABIN ENGINEERING LIMITED, IP Rings Limited, Rane Engine Valve Limited (REVL), Saint-Gobain, Sarang Auto Parts Pvt Ltd, Sharda Motor Industries Ltd, Simpson & Co. Ltd., Sujan Contitech AVS Pvt Ltd, Super Auto Forge (P) Limited, Roop Polymers Ltd, TAFE - Tractors and Farm Equipment Limited, Yazaki India Private Limited, and ZF Rane Automotive India Private Limited. The competition was inaugurated by Dr. V. Swaminathan, Sr. Vice President of NIQR, Mr. Sriram R., Vice President of India Pistons & Chairman of NIQR Chennai Branch, Prof. D. Kingsly Jebasingh, Chairperson of the School of Mechanical Engineering, and Prof. Nandakumar P., Professor & Design Division Head, Mechanical Engineering.



The Department of Mechanical Engineering, in association with the Centre for Electric Mobility, conducted a technical session on "Electric Mobility" with the Department of Electrical and Electronics Engineering on March 21, 2024, at 2 PM (DST PURSE Supported session). Chaired by Dr. C. Bharatiraja and Dr. K. Vijaykumar, the session featured over 14 high-quality papers.



Day 2: The day started with a plenary talk by Prof. Sandro Nizetić on "Photovoltaic technologies in energy transition," followed by talks from Mr. M. Surianarayan on "Evolution of Shimadzu" and ABS Instruments Pvt. Ltd. Another 16 parallel sessions took place, with 178 research presentations. The afternoon featured keynote talks by Mr. V. Manoj Siva on "Energy storage system" and Kemppt India Pvt. Ltd., and an invited talk by Mr. Brajesh Asati on "Resistance spot welding of dissimilar galvannealed automotive steel sheets."



Day 3: The final day began with an inaugural talk by Prof. Junghyun Cho on "3D Semiconductor Chip Stacking," followed by a talk from ZESIS on "ZEISS Contributions to Research and Innovation in Metrology." Eight parallel sessions in the morning covered 107 research presentations. The afternoon keynote was delivered by Prof. Rajakumar Balla on "Chemical kinetics of bio-fuel."

The Valedictory function at 3:00 PM was led by Prof. M. Cheralathan and presided by Prof. S. Ponnusamy, Registrar, SRM IST with a conference report by Prof. K. Suresh Kumar. The valedictory address was given by Dr. Shivaprasad Amaravayal, followed by a special address from Prof. Rajakumar Balla, best paper awards, and a vote of thanks from Dr. C. Selvam, concluding the ICAME 2024 conference.

12 A Competition on Exploring Product Based Lifelong Learning was conducted for 18MEE329T - Modern Manufacturing Techniques, a professional elective course offered to 3rd year Mechanical Engineering Students on 06th April 2024. The objective was to combine theoretical knowledge with practical application through hands-on additive manufacturing. Students were assessed individually on their design and manufacturing processes, including dimensions, tool choices, and constraints. They also discussed their product's multiple utilities and innovative ideas. Evaluation criteria included innovation/creativity, design complexity, assembly quality, performance/working, and accuracy/finish. **Coordinator:** Dr. R. Ambigai. **Judge:** Dr. M. Prakash



13 The Mechanical Engineering Department and Directorate of Alumni Affairs jointly arranged an Alumni Talk on 15th April 2024. The talk on the topic titled "Scope and future of AI & ML in Mechanical Engineering" was delivered by one of the prestigious alumni Mr. Raviteja Burugu, Lead Robotics Engineering, Wootzano, UK. The talk was attended by the second-year B. Tech Mechanical w/s AI&ML students. **Coordinator:** Mr. S. Balamurugan.



- 14** The Department of Mechanical Engineering, Centre for Lean and Six Sigma (CLASS), Directorate of Alumni Affairs in association with Valeo India Private Limited organized a Valco – SRM Lecture Series – 11 on the topic “Fundamentals of Vibrations” on 23rd April 2024. A total of 130 B. Tech students attended the lecture and gained knowledge on the topic. The lecture was arranged as a part of the 21MEC206T Kinematics and Dynamics of Machines course. **Resource person:** Mr. Balasubramanian Ravichandran, Valeo, Mr. Senthilkumar Ravichandran, Valeo, Mr. Guruparan Pitchai, Valeo. **Coordinators:** Dr. M. Cheralathan, Dr. A. Rathinam, Dr. E. Vijayaragavan, Dr. D. Raja.



- 15** The Mechanical Engineering Department has organized a Three-day Certification Course on “CNC Programming and Practice in CNC Machines” on 24th – 26th April 2024. A total of 17 participants registered for this course and benefited. The resource persons for this course include faculty and technical staff: Dr. A. Arul Jeya Kumar, Dr. S. Muralidharan, Dr. J. Santhakumar, Mr. S. Simson Selvakumar, Mr. R. Vasu, Mr. Sudhakar, Mr. P. Balakumar, Mr. Mageshwaran. **Convenors:** Dr. U. Mohammed Iqbal, Dr. A. Arul Jeya Kumar, Dr. S. Muralidharan, Dr. M. Prakash and Dr. J. Santhakumar, Mr. D. Nithyananthan.



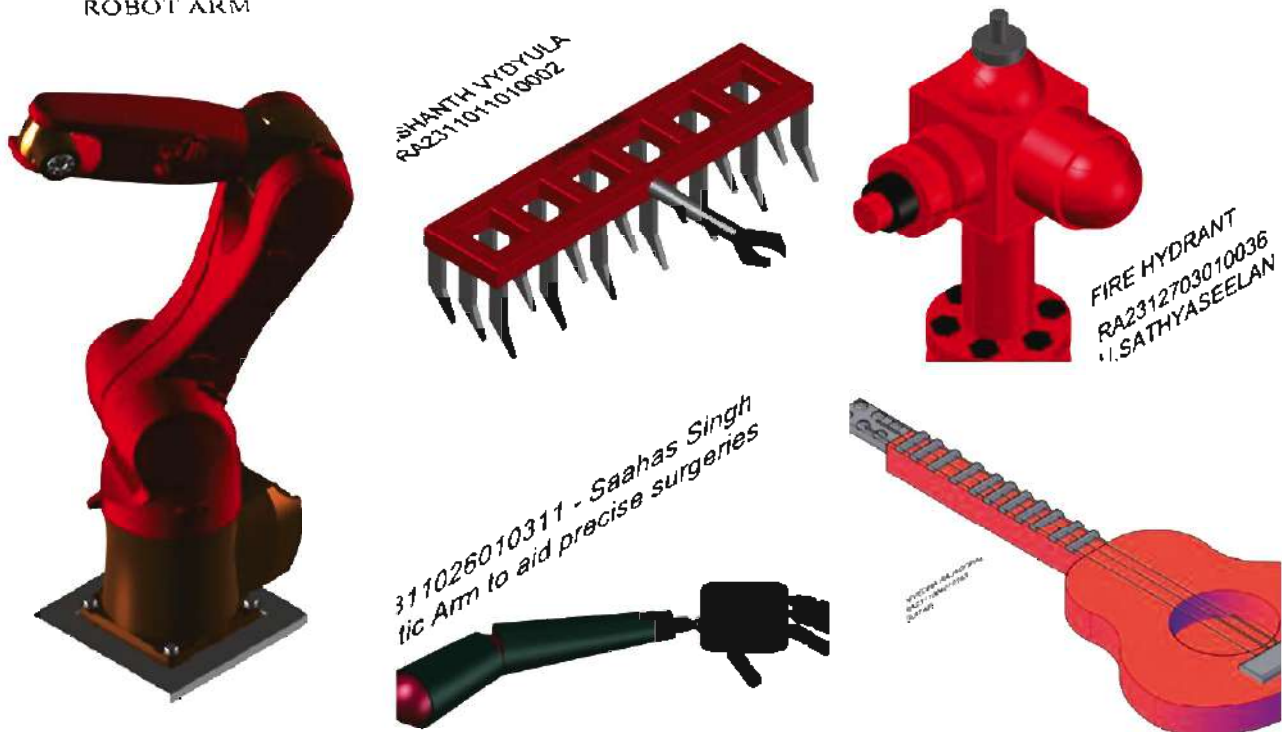


16 The Department of Mechanical Engineering organized a modeling contest in the Engineering Graphics and Design Course (21MBS102L) for first-year B.Tech students in the EVEN semester (2023-24). The contest featured five themes—Agricultural, Health Care, Personal Care, Environmental, and Energy-based equipment—allowing students to demonstrate their innovative models using AutoCAD software. This creative initiative encompassed 58 batches of the Engineering Graphics and Design course in the second semester of AY 2023-24. **Convenors:** Dr. I. Infanta Mary Priya and Dr. R. Santhanakrishnan. **Co-Convenors:** Dr. C. Shravankumar and Dr. S. Karuppudaiyan. **Coordinators:** Mr. K. Jagadeesan, Mr. V. Raghavendra Rao, Mr. R. Harris Samuel, Mr. M. Sachidhanandam, and Mr. C. S. Palaniganesa Chakravarthy.





ROBOT ARM



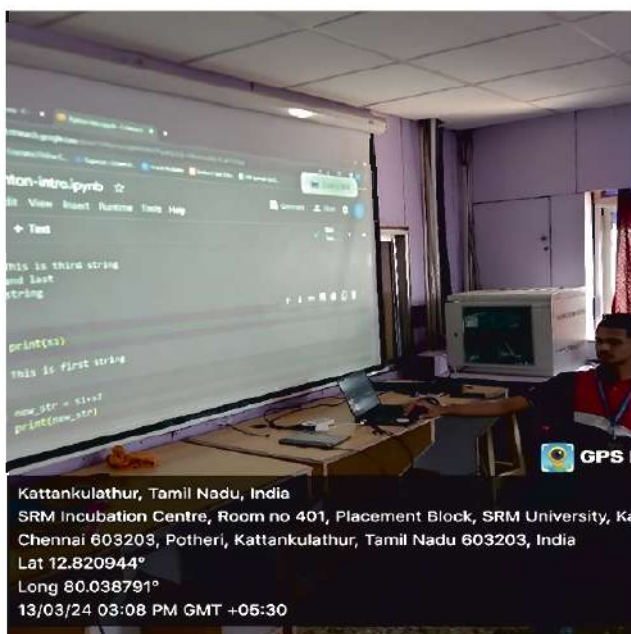
17 The Department of Mechanical Engineering organized Activity-Based Learning Skill contest for the first-year students during the even semester (2nd semester). Various group activities were conducted during regular class hours from April 17th to April 24th, 2024. Multiple departments participated in these group activities for the Basic Civil and Mechanical Workshop course, particularly for 2nd-semester students enrolled in the course. **Convenors:** Dr. I. Infanta Mary Priya and Dr. R. Saravanakumar. **Co-convenors:** Dr. N. Prem Kumar, Mr. S. Senkathir, Mr. R. Manoj Samson, and Dr. N. Harshavardhana.



18 On May 06th, 2024, the Mechanical Engineering Association conducted the Mini Project Exhibition on Open-Ended Experiment for the course metrology and quality control laboratory, which provided students with invaluable engineering experience through reverse engineering and 3D printing of common engineering components. Teams of up to five students selected everyday engineering components (excluding spur gears and metric threads), identified measurable features using conventional metrology equipment, and employed a portable Coordinate Measuring Machine (CMM) for reverse engineering. They generated 3D models from captured point clouds, utilized 3D printers to produce replicas, and compared the dimensions with the original components. Coordinators: Dr. A. Vijaya, Dr. Sundar Singh Sivam, Dr. S. Muralidharan. Student Coordinator: Mr. Joel Nithin Francis



19 The Mechanical Engineering Association conducted a one-day workshop titled "Basics of AI and ML Applications using Python: Hands-on Practice for Mechanical Engineers" on March 13th, 2024, from 1:30 to 4:30 pm. The workshop, led by Mr. Daketi Yatin, a final-year CSE student, covered the essentials of artificial intelligence and machine learning, emphasizing their practical applications using Python. Coordinator: Dr. A. Vijaya. Student coordinators: Mr. Shreyas Vadrewu and Mr. Arjun Sharma.



20 The Mechanical Engineering Association organized the Tech Quiz League 3.0, a three-day event held on February 29th, April 23rd, 2024 and July 11, 2024. The event engaged students from all years in a quiz competition focused on the science and workings of special machines in the mechanical industry. The competition featured three rounds, each with an elimination and a final level, determining the top four teams to proceed to the final round. Scores from these rounds were recorded and will be added to the overall score to declare the winner of the Tech Quiz League 3.0. The winners for the event are: First position awarded with 3000 INR to Mr. Hari Krishna (RA2111002010024) & Mr. Gautam (RA2111002010011); Second position awarded with 2000 INR to Mr. Joel Francis (RA2111054010019) & Mr. Aravindan (RA2111002010090); Third position awarded with 1000 INR to Mr. Yashowardhan Singh (RA2111002010107) & Mr. Aditya (RA2111002010106). The Head of the Department and other senior faculty congratulated the winners and awarded the certificates to the winners and organizing team. **Coordinator:** Dr. A. Vijaya. **Student Coordinator:** Adithya Sumesh, S.M. Keshav Nallasivam.



21 A guest lecture titled "Opportunities in Earthmoving & Mining Machinery" on February 20th, 2024, from 9:45 to 11:30 am, organized by the Mechanical Engineering Association and The Institution of Engineers (India) Kattankulathur Local Centre. Mr. Reji Jose K, representing Caterpillar, shared invaluable insights into the topic. The lecture was highly enlightening, receiving overwhelmingly positive feedback from attendees who expressed keen interest in similar future workshops and events. **Coordinator: Dr. A. Vijaya.**



22 The Centre for Occupational Safety and Health (COSH), Department of Mechanical Engineering have jointly organized a Three-day FDP Program on Occupational Safety and Disaster Risk Management from April 3-5, 2024, which was funded by Ministry of Home Affairs Govt. of India. **Convenor: Dr. K. S. Vignesh**
Co-Convenor: Dr. Oliver Nesa Raj.

23 The Mechanical Engineering Department has organized a technical talk on the topic "A Mathematical Approach of Evaluating Sustainability Indicators in Milling of Aluminium Hybrid Composite by Different Eco-friendly Cooling Strategies." on 21st February 2024. **Expert: Dr. S. Vinoth Kumar, Shandong University, China**
Organizers: Dr. K. Sureshkumar, Dr. A. Sathishkumar, Dr. P. Ganeshkumar, Dr. P. Sundaram, and Dr. R. Santhana Krishnan

24 The Mechanical Engineering Department has organized a technical talk on the topic "Data Mining Applications in Buildings". On 11/03/2024. **Expert: Dr. P. Karthik, Research Engineer, Florida Solar Energy Centre (FSEC), USA.**
Organizers: Dr. M. Cheralathan, Dr. K. Sureshkumar, Dr. A. Sathishkumar, Dr. P. Ganeshkumar, Dr. P. Sundaram,

25 Dr. V. Magesh has coordinated ICT-SRMIST-Fusion 360 software training programme for UG students on 14.03.2024.

26 Dr. A. Vijaya carried out Innovative Teaching Methodology namely Portfolio Based learning and experiential learning through Project exhibition for the course (21MEC204T Manufacturing Processes and Metrology).

27 Dr. A. Vijaya conducted Multidisciplinary Project Exhibition for MDP Project for AY 23-24 on May 3rd, 2024 at Tech park Lobby.

28 Dr. R. Ambigai conducted a competition on "EXPLORING PRODUCT BASED LIFELONG LEARNING" for the course 18MEE329T - MODERN MANUFACTURING TECHNIQUES offered for 3rd year Mechanical students. The students performance was evaluated by 3rd year Professor In-charge Dr. M. Prakash.

B. Outreach Activities

1 On March 12th, 2024, the Department of Mechanical Engineering, in collaboration with the Universal Human Value (UHV) Cell, organized the "Save Our Planet" art competition at the Govt. Middle School in Thenmelpakkam, Chengalpattu. The event aimed to instill value-based living and environmental awareness among 56 participating students from VI, VII, and VIII standards. The feedback highlighted the positive impact of such initiatives in nurturing well-rounded individuals with strong values and a sense of self-worth. **Advisors:** Mrs. Nagammal G, Headminstress, Govt. Middle School, Thenmelpakkam & Dr. M. Cheralathan. **Conveners:** Dr. I. Infanta Mary Priya, Dr. R. Senthil, **Co-Conveners:** Dr. V. Raghavendra Rao, and Dr. Vamsi Krishna.



2 The Mechanical Engineering Department and NSS, SRMIST jointly organized a Blood Donation Camp on 4th March 2024 at CIM Lab, Mechanical C Block in collaboration with the SRMIST Hospital Blood Bank. The event drew 52 volunteers, including employees and students. The camp highlighted community engagement and social responsibility, contributing significantly to addressing healthcare challenges and saving lives. **Guest of Honor:** Dr. Suresh Kumar. **Coordinator:** Dr. Lakshmanan. **Co-coordinators:** Dr. Raghavendra Rao and Dr. S. P. Sundar Singh Sivam.



3

The Mechanical Engineering Department and NSS, SRMIST jointly organized a Special Camp featuring a diverse range of activities aimed at addressing multifaced community needs from 4th to 11th March 2024 at PUMS, Melkalvoy Middle School, Chengalpattu. The camp exemplified community spirit and social responsibility, making a positive impact on the local community. **Guest of Honor:** Dr. Lakshmanan. **Coordinators:** Dr. Ragavendra Rao and Dr. S. P. Sundar Singh Sivam.



4

The Mechanical Engineering Department and NSS, SRMIST jointly organized a Women's Day event on 8th March 2024 at PUMS, Melkalvoy Middle School, Chengalpattu, which was a vibrant celebration of women's empowerment. The event drew 20 volunteers from SRMIST. The event reaffirmed the commitment to gender equality and women's rights, making it a memorable and impactful celebration of women's achievements. **Guest of Honor:** Dr. D. Kumaran. **Coordinator:** Dr. Lakshmanan. **Co-Coordinator:** Dr. Ragavendra Rao and Dr. S. P. Sundar Singh Sivam.



SRM
INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University) U-3 of UGC Act, 1956

Department of Mechanical Engineering
College of Engineering and Technology
NSS-Unit 1 - WOMENS DAY CELEBRATIONS



5 The Mechanical Engineering Department and NSS, SRMIST jointly demonstrated Solar PV Generation and Utilization for Domestic Use at Kalvoy Government Middle School, Gudavanchery on 20th June 2024. The event highlighted the practicality and benefits of adopting solar energy, emphasizing its growing viability for reducing environmental impact and energy costs. **Guest of Honor:** Dr. Phani Teja Bankupalli, EEE. **Coordinator:** Dr. Lakshmanan. **Co-Coordinator:** Dr. Ragavendra Rao.



6 The Mechanical Engineering Department and NSS, SRMIST jointly celebrated an International Yoga Day at Kalvoy Government Middle School, Gudavanchery on 21st June 2024. The event featured a comprehensive yoga session, including various asanas, pranayama, and guided meditation. **Guest of Honor:** Dr. Ravi Eswar K.M., EEE. **Coordinator:** Dr. Lakshmanan. **Co-Coordinator:** Dr. Ragavendra Rao.



7

On January 29, 2024, a Tree Plantation Drive was held from 10:00 AM to 3:00 PM at the Thirukkachur Marudeeshwara Temple Village. This outreach program was organized to engage the community and promote environmental sustainability. Organizer: Dr. T. Lakshmanan, NSS Programme Advisor.



8

On February 6, 2024, from 9:30 AM to 10:30 AM, a Stress Management Programme outreach event was held at Government Higher Secondary School, S.P. Koil. This initiative aimed to inspire students to pursue careers aligned with their passions, fostering motivation, engagement, and success. The foreign delegates from Community medicine USA graced the occasion. Organizer: Dr. T. Lakshmanan, NSS Programme Advisor.



9

From February 13th to 15th, 2024, SRMIST KTR, a Road Safety Awareness Program was conducted in the Potheri Railway Station. The primary goal of this initiative was to enhance awareness about the critical importance of road safety within the community. Organizer: Dr. T. Lakshmanan, NSS Programme Advisor.



10

On February 16, 2024, a Tree Plantation Drive was held at Nandhivaram Lake, Guduvanchery, as an institutional-level outreach program from 10:00 AM to 1:00 PM. Organizer: Dr. T. Lakshmanan, NSS Programme Advisor.



11

On March 1, 2024, an outreach activity titled "Awareness in Robotics & Virtual Technology" was held at the Robotics & AR/VR Laboratory of the Mechatronics Department. The event took place from 10:00 AM to 3:00 PM. Coordinator: Dr. T. Lakshmanan, NSS Programme Advisor.



12

On March 7, 2024, the outreach program "Think Before You Trash" was conducted at Gnanodya Unaided High School in Venkatapuram, Chengalpattu, Tamil Nadu. The event, held from 11:30 AM to 1:00 PM. Note books made from unused assessment papers were distributed. Coordinator: Dr. T. Lakshmanan, NSS Programme Advisor.



13

On March 28, 2024, from 9:00 AM to 10:00 AM, an outreach program titled "Writing Pad Distribution for School Children" was conducted at the Government School Potheri and Government School Vallanchery. The exam pads were sponsored by Dr A Arul Jeyakumar and Dr M Prakash. Coordinator: Dr. T. Lakshmanan, NSS Programme Advisor.



14. Events Attended

1. **E. Vijayaragavan** has successfully completed his internship at IP Rings Ltd., Maraimalai Nagar, Chengalpattu under the Faculty Industry Immersion Program (FIIP) from 25th December to 13th January 2024.
2. **S. Sasikumar** has successfully completed his internship at IP Rings Ltd., Maraimalai Nagar, Chengalpattu under the Faculty Industry Immersion Program (FIIP) from 25th December to 13th January 2024.
3. **K Jegadeesan** Participated in the six days online faculty development program on “Additive Manufacturing advancements in different applications (AMADA-23)” organized by the department of Mechanical Engineering, SRM Institute of Science and Technology, Ramapuram from 26th to 31st Dec 2023.
4. **T Rajasekaran** attended FDP on “Design and development of virtual reality and augmented reality applications” from 13-12-2023 to 18-12-2023 organized by P.A.COLLEGE OF ENGINEERING AND TECHNOLOGY at Pollachi.
5. **Thavamani. J.** has participated in the Six days Online Faculty Development Program on SMART MANUFACTURING organized by the Department of Mechanical Engineering, SRM Institute of Science and Technology, Ramapuram from 18th to 23rd December 2023.
6. **Thavamani. J.** has participated in the Six days Online Faculty Development Program on “ADDITIVE MANUFACTURING ADVANCEMENTS IN DIFFERENT APPLICATIONS” organized by the Department of Mechanical Engineering, SRM Institute of Science and Technology, Ramapuram from 26th to 31st December 2023.
7. **Duraivelu K** attended FDP on “Universal Human Values” held on 3rd Feb 2024 organized by AICTE at CEG, Anna University, Chennai.
8. **Duraivelu K** attended workshop on “Universaal Human Values - Introductory” held during 20-22 Jan 2024 organized by AICTE at SRMIST, Kattankulathur.
9. **Infanta Mary Priya** has participated and successfully completed the 3-day Face-to-Face Management Development Program on the theme “Universal Human Values and Professional Ethics” organized by All India Council for Technical Education (AICTE) at S.R.M. Institute of Science and Technology, Kattankulathur Campus, Chennai from 19th October to 21st October 2023.
10. **S. Karuppudaiyan** attended three-day Face-to-Face FDP - on “Inculcating Universal Human Values in Technical Education” (20.01.2024 to 22.01.2024) organized by SRMIST.
11. **Vamsi Krishna Dommeti** from S.R.M. Institute of Science and Technology, Chennai has participated and successfully completed the 5-day Face-to-Face FDP on the theme “Holistic Human Health (Part - 1)” organized by All India Council for Technical Education (AICTE) at S.R.M. Medical College Hospital and Research Centre S.R.M. Institute of Science and Technology, Kattankulathur from 23rd February to 27th February 2024.
12. **E. Vijayaragavan** has participated and successfully completed the 5-day Face-to-Face FDP on the theme “Holistic Human Health (Part - 1)” organized by All India Council for Technical Education (AICTE) at S.R.M. Medical College Hospital and Research Centre S.R.M. Institute of Science and Technology, Kattankulathur from 23rd February to 27th February 2024.
13. **K. Jegadeesan** has attended the One-week FDP on “Energizing Sustainability through Renewable Energy Systems” held from 18th to 22nd March 2024 organised by Dept. of Mechanical Engg., Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur, India
14. **Vijaya A** attended workshop held on “CYBER PHYSICAL SYSTEM” from 29.02.2024 to 02.03.24 by Department of Electronics and Instrumentation, SRMIST, KTR
15. **I. Aatthisugan** has attended Virtual Domain Specific training on Virtual Labs held on 10th April 2024 organized by PALS VLAB - 2023-24 initiative with NITK, Surathkal.
16. **R. Ambigai** has attended Virtual Domain Specific training on Virtual Labs held on 10th April 2024 organized by PALS VLAB - 2023-24 initiative with NITK, Surathkal.
17. **Selwyn Jeba Durai** has attended Virtual Domain Specific training on Virtual Labs held on 10th April 2024 organized by PALS VLAB - 2023-24 initiative with NITK, Surathkal.
18. **P. GaneshKumar** has participated in the Six days Online webinar on Navigating Emerging Trends and Global Industrial advancements in Mechanical Engineering, SMART MANUFACTURING organized by the Department of Mechanical Engineering, Rajalakshmi Institute of Technology, from 18th to 23rd March 2024.
19. **J. Thavamani** attended the Five days faculty development programme on “Energizing sustainability through renewable energy systems” held from 18.03.24 to 22.03.24 organised by department of mechanical engineering, Swami keshanand institute of technology, management & gramothan, Jaipur, India.

20. **A. Sathishkumar** attended the one-day workshop on "Research Grants" by Dr. Rajiv K Tayal, Formerly Advisor, DST, held on 15th March 2024 at Ramanujam Hall, Techpark, organized by dean research, SRMIST, KTR.
21. **S. Balaji** attended and delivered talk in An International Level One-week Short-term Course On "Computational Fluid Dynamics and Heat Transfer "- Online mode from April 28th to May 4th, 2024, organised by Department of Mechanical Engineering, Kumaraguru College of Technology – Coimbatore
22. **P. Ganesh Kumar** attended a 5-days UGC and AICTE Sponsored Online Faculty Development Program (FDP) on "AI Insights: Predictive Power of ML, DL, and NLP" organized by the Department of Artificial Intelligence & Machine Learning, Sphoorthy Engineering College (Autonomous) Hyderabad.
23. **Balaji** attended a 5-days UGC and AICTE Sponsored Online Faculty Development Program (FDP) on "AI Insights: Predictive Power of ML, DL, and NLP" organized by the Department of Artificial Intelligence & Machine Learning, Sphoorthy Engineering College (Autonomous) Hyderabad.
24. **P. Sundaram** attended a 5-days UGC and AICTE Sponsored Online Faculty Development Program (FDP) on "AI Insights: Predictive Power of ML, DL, and NLP" organized by the Department of Artificial Intelligence & Machine Learning, Sphoorthy Engineering College (Autonomous) Hyderabad.
25. **A. SathishKumar** attended the 5-days Online Faculty Development Program (FDP) on "AI Insights: Predictive Power of ML, DL, and NLP" organized by the Department of Artificial Intelligence & Machine Learning organized by (UGC and AICTE Sponsored) Sphoorthy Engineering College (Autonomous) Hyderabad.
26. **E. Vijayaragavan** attended the Virtual Domain Specific training on Virtual Labs. An Initiative of the Ministry of Education Under the National Mission on Education through ICT held on 10th April 2024 as part of "PALS VLAB - 2023-24 initiative with NITK, Surathkal" and supported by IIT PALS.
27. **S. Karuppudaiyan** has completed the NEP 2020 Orientation & Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) organized by Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, Chennai during April 15-24, 2024.
28. **S. Karuppudaiyan** has completed FDP on biomechanics - NPTEL held during Jan 2024 to April 2024 for 12 weeks, conducted by Indian institute of Technology, Madras.
29. **V. Magesh** has completed FDP on biomechanics - NPTEL held during Jan 2024 to April 2024 for 12 weeks, conducted by Indian institute of Technology, Madras.
30. **P. Susai manickam** has completed FDP on biomechanics - NPTEL held during Jan 2024 to April 2024 for 12 weeks, conducted by Indian institute of Technology, Madras.
31. **P. Nandakumar** has completed FDP on Modelling and Simulation of Dynamic system - NPTEL held during Jan 2024 to April 2024 for 8 weeks, conducted by Indian institute of Technology, Roorkee.
32. **I. Infanta Mary Priya** attended online certification course on "NBA Accreditation and Teaching-Learning in Engineering" from Jan - April 2024 through NPTEL Swayam platform.
33. **G. Balaji** attended a Five Day STTP on "Hands - On AI tools: Elevate your creative research writing", organized by Department of Mechanical Engineering, Radhakrishna Institute of Technology and Engineering, Bhubaneswar, from 17th June to 21st June 2024.
34. **E. Vijayaragavan**, has participated in the 2.5 day program for senior management on 13 to 15 June 2024 at Indian Institute of Technology Madras organized by the Indian Society for Quality.
35. **E. Vijayaragavan** successfully completed the 8-day Face-to-Face UHV-III FDP organized by AICTE at SRM Institute of Science and Technology, Kattankulathur from 01 May to 08 May 2024.
36. **I. Infanta Mary Priya** has participated and successfully completed the 8-day Face-to-Face UHV-III FDP organized by All India Council for Technical Education (AICTE) at SRM Institute of Science and Technology, Kattankulathur from 1st May to 8th May 2024.
37. **D. Premnath** from SRMIST-Kattankulathur, a partner institute of PALS 2023-24, attended the virtual domain-specific training on Virtual Labs, an initiative of the Ministry of Education under the National Mission on Education through ICT, held on April 10, 2024, as part of the "PALS VLAB - 2023-24 initiative with NITK, Surathkal.

15. Other activities

1. **Dr. R. Senthil** reviewed a total of 167 manuscripts across the following journals. Applied Energy, Applied Thermal Engineering, Atmosphere, Buildings, Building and Environment, Case Studies in Thermal Engineering, CFD Letters, Desalination, Energies, Energy, Energy Conversion and Management, Energy for Sustainable Development, Energy Nexus, Energy Reports, Energy Research & Social Science, Environmental Science and Pollution Research, Green Energy and Environment, Greenhouse Gases, Heat Transfer, Heliyon, International Journal of Energy Research, International Journal of Thermofluids, Journal of Building Engineering, Journal of Cleaner Production, Journal of Energy Storage, Journal of Thermal Analysis and Calorimetry, Physics of Fluids, Renewable and Sustainable Energy Reviews, Renewable Energy, Results in Engineering, RSC Advances, Solar Energy, Solar Energy Materials and Solar Cells, Sustainable Energy Technologies and Assessment, Sustainable Materials and Technologies, Sustainability, Symmetry, Water.
2. **Dr. R. Senthil** acted as a BoS Member in Excel Engineering College, Namakkal, on 18.06.2024.
3. **Dr. R. Senthil** evaluated an MS Dissertation of North West University, South Africa on 04.01.2024.
4. **Dr. I. Infanta Mary Priya** reviewed various articles in the following journals: Journal of The Institution of Engineers (India): Series D; Part E: Journal of Process Mechanical Engineering and Nature Indexed Journal - Scientific Reports; Scientific Reports, Journal of Polymer Research, Smart Materials and Structures, Materials Today Proceedings.
5. **Dr. I. Infanta Mary Priya** has coordinated 5 days Face to Face FDP on Universal Human Values - II organized by SRM Institute of Science and Technology, Kattankulathur, Chennai from 12th to 16th December 2023
6. **Dr. I. Infanta Mary Priya** has coordinated 3 days Face to Face FDP on "Universal Human Values - Introductory" organized by SRM Institute of Science and Technology, Kattankulathur, Chennai from 20th to 22nd January 2024
7. **Dr. I. Infanta Mary Priya** acted as Local Program Coordinator (LPC) for the FDP on UHV-II supported by AICTE during April 8th to 12th April, 2024.
8. **Dr. I. Infanta Mary Priya** co-facilitated the AICTE Approved 3-day Faculty Development Program (FDP) on Universal Human Values from April 24th to 26th, 2024. Hosted at Amrita Vishwa Vidyapeetham, Chennai
9. **Dr. I. Infanta Mary Priya**, Co-Chaired a technical session in the in 5th International Conference on Advances in Mechanical Engineering (ICAME'24), organized by the Department of Mechanical Engineering, SRM IST, Kattankulathur, from 20-22nd March 2024.
10. **Dr. I. Infanta Mary Priya** is the board member of the National Conference on "Redefining and Revisioning Business Strategies with AI" organized by the Department of Business Administration, Loyola College, Chennai on Feb 1st, 2024
11. **Dr. I. Infanta Mary Priya** admitted as Individual Life Member (LM-CH-04282) of National Institution for Quality & Reliability on 12th Feb 2024.
12. **D. R. Ambigai** received an appreciation certificate as a member of sponsorship committee in 5th International Conference on Advances in Mechanical Engineering (ICAME'24), organized by Department of Mechanical Engineering, SRM IST, Kattankulathur, from 20-22nd March 2024.
13. **Dr. R. Ambigai** was one of the Organising Committee members for 6 days AICTE sponsored ATAL offline FDP on "Impact of Industry 4.0 on Industries and Academia" organized by Department of Mechanical Engineering, SRM IST, Kattankulathur, from 22-27th Jan 2024.
14. **Dr. D. Premnath** reviewed an article in the Journal of metal, mines and fuels - April 2024.
15. **Dr. P. GaneshKumar** reviewed 10 papers for Desalination, Energy, Journal of Building Engineering, Journal of Energy Storage, Journal of Molecular Liquids, and Powder Technology.
16. **Dr. G. Balaji** reviewed an article in the journal Engineering Research Express.
17. **Dr. Gnanavel B K** acted as Session Chair for the National Conference on "Latest Development in Design & Testing of Transmission Line Towers / Poles & its Accessories, 14th & 15th December 2023, organized by Mechanical Engineering Division, Central Power Research Institute, Bangalore.
18. **Dr. I. Aatthisugan** and **Mr. S. Sasikumar** visited the Brakes India Ltd., Shollinghur Foundry unit through PALS on 27th October 2023.
19. **Dr. S. Balaji** Reviewed 4 articles in the Journal of Environmental Progress & Sustainable.

16. Students Corner

A. Awards for the Students

16



Mr Jemait Adhyaru
RA2011002010170
was awarded
"Best Outgoing Student Award"
for the academic year 2023-2024.



Mr Vashista Marudhara Srinivas
RA2011002010125
was awarded
"Academic Excellence Award" for
the academic year 2023-2024.



Mr Shrawat Pathak
RA2011002010196
was awarded
"Best Student – Researcher Award"
for the academic year 2023-2024.



Mr Bhagat Abhishek Kumar R
RA2011002010004
was awarded
"Young Leader Award" for the
academic year 2023-2024.



Ms Shalaka Rajesh –
RA2011002010001
was awarded
"Student Inspiration Award" for the
academic year 2023-2024.

B. Placements update (January 2024 – June 2024)

The Campus placement cycle of 2024 Batch started on June 2023. As on 30th June 2024, 89 offers were secured by the B-Tech students during the campus placement cycle. A total of 112 B-Tech students enrolled for the campus placement. The highest package provided by the companies is 12.26 LPA and a mean package of around 6.65 LPA.

B.TECH SUMMARY / 2024 BATCH / AS ON 30.06.2024

Total Strength	181
No of Students Enrolled	112
Number of Students Placed	81
Total Number of Offers	89
Core Offers	80
Non-Core Offers	9
No of Companies Visited	173
Internship Offers	11

a) Top Offers

Caterpillar (CTC: 12.26 LPA)



Shalaka Rajesh
RA2011002010001
Manufacturing Professional



Mohammed Bilal
RA2011002010193
Manufacturing Professional

Asian paints (CTC: 10.5 LPA)



Anjali Shaha
RA2011002010025
GET

Havells India Ltd .(CTC: 8.5 LPA)

Siddharth Sreeni Nair
RA2011002010026
Engineer



Isha Kashyap
RA2011002010081
Engineer



Punit Matal
RA2011002010122
Engineer



Dhruv Srivastava
RA2011002010212
Engineer

Reliance Industries (CTC: 8 LPA)

JAYRAJ SAHA
RA2011002010004
GET



ADITYA SURENDRAN
RA2011002010053
GET

Godrej & Boyce. (CTC: 7.25 LPA)

Punit Matal
RA2011002010122
Engineer

Gulf Asia

JESVIN SAM THOMAS
RA2011002010037
Junior Engineer



BHARATH K A
RA2011002010116
Junior Engineer



RAVI TEJA THENTU
RA2011002010158
Junior Engineer



GIRUBAKAR P
RA2011002010166
Junior Engineer



SHANTANU DESHMUKH
RA2011002010168
Junior Engineer

b) SRM Career Centre Hosts Placement Season 2025 Meet

The SRM Career Centre is organized the Placement Season 2025 Meet for B.Tech and M.Tech students of the 2025 batch at the Kattankulathur campus on June 19, 2024, at the Dr. T.P. Ganesan Auditorium. This session provided crucial information about the placement process and offer insights to help students prepare for the upcoming campus hiring season.

c) Haveloc App for the 2025 Batch

Haveloc is designed to make your placement experience smoother and more collaborative. It's a tool that will assist you in various aspects of your placement and engagement with your peers and faculty. This platform is designed to streamline the placement process, fostering collaboration among students, faculty, and employers. Haveloc will serve as an invaluable resource, supporting the academic community and facilitating your career goals.

d) Placement Induction - Department Level

The Placement Induction Program was organized by the Mechanical Engineering Department on July 9, 2024. The Department Placement Coordinators gave a presentation about the rules and regulations of placements at SRM. All issues and doubts raised by students regarding placement and higher studies were clarified during this session.

e) SHL Assessment Test 2

SHL Test-1 was conducted on February 22-23 for all final-year E&T KTR Campus placement-enrolled BTech and MTech students. The test reports were shared with the students, and an orientation session was held to guide them on interpreting the results and identifying areas for improvement. SHL Test-2 was conducted on June 20, 21, and 22, 2024. The SHL score will be a key criterion for consideration for Super Dream / Marquee profiles.

f) CCC Training

The coding training was provided through the course "18CSC308L - Competitive Professional Skills" for non-computing branches from April 8 to 23, 2024. Students were grouped, and classes were conducted for the School of Mechanical Engineering students at various venues throughout the campus.

g) "POINT" (Placement Outreach Initiatives to Nurture Talent) for Students

The Career Centre is proud to be the hub for comprehensive career development, offering a myriad of resources and services to guide students towards their professional goals. To support this mission, we have launched "POINT" (Placement Outreach Initiatives to Nurture Talent), where placement help desks are arranged at the hostels across the Kattankulathur campus with the following objectives:

- To create awareness about careers and placements in general
- To inform about skill matrices, skill sets, and industry certifications
- To inform about placement norms and policies
- To display company presentations and videos
- To conduct company branding activities
- To highlight students' achievements and major placements
- To resolve queries and enquiries related to placement

This initiative will be conducted three days a week—Monday, Wednesday, and Friday—from 5:00 PM to 8:00 PM at the following four locations (see attached snapshots):

- Girl's Hostel
- M-Block (Girls Hostel)
- Sannasi Mess (Boys Hostel)
- Vendhar Square Seminar Hall (1st floor)

A team comprising one APO and one AIP member has been allocated for each location, with one of the DD/AD available to assist them.

h) Major Recruiters



C. Best Project Awards – Major Project – B. Tech. / M. Tech.

1. Shaswat Pathak [RA2011002010196]. "Optimizing the design parameters of cooling system of a gaming workstation with CFD simulations, ANN, and Evolutionary Algorithms. Project Team: E30. Guide: Dr. D. Siva Krishna Reddy
2. Akshat Gautam Jain [RA2011002010062] & Syed Tanseef Aliv [RA2011002010117]. "Design, Analysis and Fabrication of Electric Foldable Bicycle". Project Team: MS05. Guide: Mr. S. Balamurugan
3. Utkarsh Chauhan [RA2011002010045] & Shreyas Umesh Bulbule [RA2011002010044]. "Experimental and Numerical Analysis of Supercavitation behind an Underwater Vehicle". Project Team: E15. Guide: Dr. Pankaj Kumar

D. Farewell to the Final Year Students

The department of mechanical engineering organized a farewell event for the batch 2024 passing out students on 14th May 2024. All the department faculty members/staff members participated in the event, congratulated all the students for their future endeavours, and shared their sweet memories.





<2024 Batch - A Section>



<2024 Batch - B Section>



2024 Batch - C Section



2024 Batch - D Section



2024 Batch – M. Tech

E. Students Achievements

1. Mr. K V HARIBALAN [RA2311054010016] won the First prize in "Workshop of Creative Ingenuity'24" for the Event of Engineering Graphics and Design Course on 22nd April 2024 organized by the Department of Mechanical Engineering within SRMIST.
2. Mr. SHUBHAM CHAKRABORTY [RA2311002010065] won the Second prize in "Workshop of Creative Ingenuity'24" for the Event of Engineering Graphics and Design Course on 22nd April 2024 organized by the Department of Mechanical Engineering within SRMIST.
3. Mr. Joel Nithin F [RA2111054010019] secured the Third Position in the Auto Quiz Competition as part of the National Level Student Convention organized by SAEINDIA Southern Section on 15th & 16th March 2024.
4. Mr. Joel Nithin F [RA2111054010019] secured the Third Position in the National Level Competition on Finite Element Analysis (using ANSYS) organized by SAEINDIA Southern Section on 30th March 2024.
5. Mr. Praseeth Sharma [RA2111054010005] has applied for a patent on the topic "Design and Development of Low-Cost, Portable, and Wireless Setup for Visual Activity Measurement during Smartphone Usage."
6. Mr. Harshit Jain [RA2111054010008] secured 3rd position in the National Level Competition on Finite Element Analysis (NLCFEA 2024).
7. Mr. Agniprabha Chakraborty [RA2111054010001] was selected by Amazon for a Tech Role (Manager I, Operations) with a stipend of INR 70,000 per month / CTC 29.5 LPA.
8. Mr. Salgar Pratap Krishna [RA2111054010031] was selected by Amazon for a Tech Role (Manager I, Operations) with a stipend of INR 70,000 per month / CTC 29.5 LPA.
9. Ms. Kajal Singh [RA2111054010015] was selected by Cummins for an Internship with a stipend of INR 20,000 per month.
10. Mr. Agniprabha Chakraborty [RA2111054010001] is undergoing a paid internship (STEP: Spot Talent and Exchange for Proficiency) of 4 months at Maruti Suzuki India Limited from 15th January 2024 to 31st May 2024.
11. Mr. Aryan Mohan [RA2111054010003] is undergoing a paid internship (STEP: Spot Talent and Exchange for Proficiency) of 4 months at Maruti Suzuki India Limited from 15th January 2024 to 31st May 2024.
12. Mr. Kanaad Shirish Chaphekar [RA2111054010028] is undergoing a paid internship (STEP: Spot Talent and Exchange for Proficiency) of 4 months at Maruti Suzuki India Limited from 15th January 2024 to 31st May 2024.
13. Mr. Harshit Jain [RA2111054010008] was admitted to UMEA University, Sweden for the exchange student program (SAP Program). The program duration is from 19th August 2024 to 19th January 2025.
14. Mr. S. Balaji [RA2111054010014] was admitted to UMEA University, Sweden for the exchange student program (SAP Program). The program duration is from 19th August 2024 to 19th January 2025.
15. Mr. Parth [RA2111054010023] was admitted to UMEA University, Sweden for the exchange student program (SAP Program). The program duration is from 19th August 2024 to 19th January 2025.

F. Student Activities

a) First Year

1. Mr. K. Tharun Kumar [RA2311002010066] attended the implant training at Steel Strips Wheels Limited on 6th January 2024.
2. Mr. SHUBHAM CHAKRABORTY [RA2311002010065] presented the working model entitled "Alcohol Detention system in the car" in Techknow 2023-2024 from 22nd to 26th April 2024 organized by the Department of Physics and Nanotechnology within SRMIST.
3. Mr. ROHIT NIXON [RA2311002010064] presented the working model entitled "Alcohol Detention system in the car" in Techknow 2023-2024 from 22nd to 26th April 2024 organized by the Department of Physics and Nanotechnology within SRMIST.
4. Mr. ISHWAR KARTHI KUMAR [RA2311002010046] completed his internship at ELGI ULTRA PRIVATE LIMITED located in Chennai from 01.06.2024 to 15.06.2024.
5. Mr. ISHWAR KARTHI KUMAR [RA2311002010046] completed his internship at ROOTS INDUSTRIES INDIA PRIVATE LIMITED located in Coimbatore from 19.06.2024 to 26.06.2024.

b) Second Year

1. Mr. Ramidi Devanand Reddy (Reg. No. RA2211002010035) attended the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
2. Mr. Chandru Kaunder (Reg. No. RA2211002010069) attended "Industrial Implant Training" at Forvia, Faurecia, held from 9th March 2024 to 15th March 2024, organized by the Department of Mechanical Engineering, SRMIST.

3. Mr. Abel Varghese Philip (Reg. No. RA2211002010034) attended a Short Term Course on Revit MEP organized by G-TEC Computer Education on 8th December 2024.
4. Mr. Ayaan Mukherjee (Reg. No. RA2211002010047) completed an internship at Caterpillar from 21st June to 17th July 2024.
5. Mr. Ayush Gautam (Reg. No. RA2211002010055) completed an internship at Caterpillar from 21st May to 17th July 2024.
6. Mr. R. Vinayak (Reg. No. RA2211002010031) completed an internship at Indal Steel & Power Ltd., Raigarh-Chhattisgarh, from 1st June to 1st July 2024.
7. Mr. Dev Agarwaal (Reg. No. RA2211002010009) completed an internship at Penmet Engineering, Hyderabad.
8. Mr. Gandhi Jayanth Reddy (Reg. No. RA2211002010065) completed an internship at Faurecia Emission Technology India Pvt. Ltd., from 2nd March to 9th March 2024.
9. Mr. Keshav S (Reg. No. RA2211002010008) completed an internship at Faurecia Emission Technology India Pvt. Ltd., from 2nd March to 9th March 2024.
10. Mr. Maadavan (Reg. No. RA2211002010001) completed an internship at Faurecia Emission Technology India Pvt. Ltd., from 2nd March to 9th March 2024.
11. Mr. Bhagavan Chowdary B.S (Reg. No. RA2211002010064) completed an internship at Faurecia Emission Technology India Pvt. Ltd., from 2nd March to 9th March 2024.
12. Mr. Abhishek Selarka (Reg. No. RA2211002010049) attended "E-GNITE'24" organized by E-GNITE'24, an Entrepreneurship Talk Show, on 18th March 2024.
13. Mr. Kaunder Chandru Anandan (Reg. No. RA2211002010069) donated blood on 4th March 2024, organized by SRM Medical College Hospital & Research Center, SRM IST.
14. Mr. Pranav Kiran Gunda (Reg. No. RA2211002010112) attended the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
15. Mr. Rishi Kumar (Reg. No. RA2211002010012) attended the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
16. Mr. Dev Agarwaal (Reg. No. RA2211002010009) attended the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
17. Mr. Pyla Udit Narayan Sai (Reg. No. RA2211002010016) attended the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
18. Mr. S. Aravindan (Reg. No. RA2211002010015) attended the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
19. Mr. Dhanush Ram T.S (Reg. No. RA2211002010060) completed an internship at Faurecia Emission Technology India Pvt. Ltd., from 2nd April to 13th April 2024.
20. Mr. Sreedhar Saju (Reg. No. RA2211002010002) completed an internship at Faurecia Emission Technology India Pvt. Ltd., from 8th April to 13th April 2024.
21. Mr. Dev Agarwaal (Reg. No. RA2211002010009) completed an internship at Faurecia Emission Technology India Pvt. Ltd., from 8th April to 13th April 2024.
22. Mr. Pyla Udit Narayan Sai (Reg. No. RA2211002010016) completed an internship at Faurecia Emission Technology India Pvt. Ltd., from 8th April to 13th April 2024.
23. Mr. Abhishek Selarka (Reg. No. RA2211002010049) completed an internship at Faurecia Emission Technology India Pvt. Ltd., from 8th April to 13th April 2024.
24. Mr. Esha Rakshit (Reg. No. RA2211002010044) performed compering at the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
25. Mr. Esha Rakshit (Reg. No. RA2211002010044) attended the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
26. Mr. Yugash V (Reg. No. RA2211002010048) attended the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
27. Mr. Anin Anit (Reg. No. RA2211002010051) attended

the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.

28. Mr. Bikkina Saty Bhagavan Chowdary (Reg. No. RA2211002010064) attended the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
29. Mr. Sanjay Prabakaran (Reg. No. RA2211002010093) and Mr. Deepak R (Reg. No. RA2211002010098) along with Dr. Sundaram Planichamy presented a paper titled “Preparation, Characterization, and Stability of Hybrid Nanofluid PCM for Cold Thermal Energy Storage” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
30. Mr. Mehendiran M (Reg. No. RA2211002010101) attended the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
31. Mr. Charan (Reg. No. RA22110054010025) attended the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, from 20th to 22nd March 2024.
32. Mr. Pranav Pradeep (Reg. No. RA22110054010020) participated in the workshop on SAEINDIA Southern Section Electric Four Wheeler Design Challenge 2024 held at Rajalakshmi Engineering College, Chennai, on 16th & 17th February 2024.
33. Mr. Anika Maniam (Reg. No. RA22110054010018) participated in the workshop on UI/UX for app development, focusing on a hands-on approach to Figma conducted on 1st March 2024.
34. Mr. Charan (Reg. No. RA22110054010025) participated in the workshop on SAEINDIA Southern Section Electric Four Wheeler Design Challenge 2024 held at Rajalakshmi Engineering College, Chennai, on 16th & 17th February 2024.
35. Ms. Alan (Reg. No. RA22110054010032) participated in the workshop on SAEINDIA Southern Section Electric Four Wheeler Design Challenge 2024 held at Rajalakshmi Engineering College, Chennai, on 16th & 17th February 2024.
36. Mr. Kethan Babu (Reg. No. RA22110054010024) secured 3rd position at the International Rover Challenge (IRC), a space research and innovation

competition organized by the Space Robotics Society, held at PSG Institute of Technology and Applied Research, Coimbatore, India, from 24th to 29th January 2024.

C) Third Year

1. Mr. Bhagavan Narayana Bikkina [RA2111054010030] successfully completed the NPTEL course on "Manufacturing Guidelines for Product Design" from IIT Roorkee with a 56% score in April 2024.
2. Mr. Bhagavan Narayana Bikkina [RA2111054010030] participated in the "Basics of AI & ML Applications using Python" hands-on practice workshop for Mechanical Engineers conducted by MEA on 13th March 2024.
3. Mr. Praseeth Sharma [RA2111054010005] completed the NPTEL course on "Product Engineering and Design Thinking" from IIT Kharagpur, achieving Elite+Silver Ranking.
4. Mr. Praseeth Sharma [RA2111054010005] completed his internship on "Virtual UAV Design" from MARS Exploration Pvt. Ltd., from 1st December 2023 to 20th April 2024.
5. Mr. S. Balaji [RA2111054010014] was actively involved in organizing an Interactive Session at SRM Hotel on Surface Engineering (Coil Coating) for Global Automotive and Non-Automotive Applications delivered by Mr. Andre Bovenkamp, Managing Owner of HUEHOCO GROUP.
6. Mr. S. Balaji [RA2111054010014] attended a seminar at Park Hyatt, Chennai on 29th May 2024 themed "Offshore: Expanding Wind Frontier in India," where Directors and CEOs from various wind energy companies presented their company's future plans.
7. Mr. Tharun Mario R [RA2111054010016] has joined the SRM SAE collegiate club's EV team as a Powertrain Lead Engineer and Manager.
8. Mr. Tharun Mario R [RA2111054010016] presented a research paper titled "A Simulative Approach in Determining the Best Possible Material to Build A Model Reusable Rocket."
9. Mr. Tharun Mario R [RA2111054010016] worked as a Rocket Design Intern at MARS Exploration PVT. LTD. and completed a project on "Design and Analysis of Single Stage and Multi-Stage Rocket."
10. Mr. Trishar [RA2111054010012] participated in the "Basics of AI & ML Applications using Python" hands-on practice workshop for Mechanical Engineers conducted by the MEA on 13th March 2024.

11. Mr. Trishar [RA2111054010012] completed a course on "Learning Fusion 360 in 90 Minutes."
12. Mr. Arjun Sharma [RA2111054010009] completed the Foundation Course of Fusion 360 from Autodesk on 15th January 2023.
13. Mr. Arjun Sharma [RA2111054010009] completed the course "Introduction to Mechanical Engineering Design and Manufacturing with Fusion 360" offered by Autodesk on the Coursera platform.
14. Mr. Arjun Sharma [RA2111054010009] took part in the Hero Campus Challenge Quiz Round organized by Unstop on the 19th of January 2024.
15. Mr. Arjun Sharma [RA2111054010009] completed the course "Introduction to Modeling and Design for Manufacturing" by Autodesk on 25th January 2024.
16. Mr. Arjun Sharma [RA2111054010009] completed the Foundation and Advanced SolidWorks courses from Khodiyar CAD Center India Pvt. Ltd. in Ahmedabad, Gujarat. The course duration was 150 hours and consisted of numerous projects that helped him learn SolidWorks in depth.
17. Mr. Arjun Sharma [RA2111054010009] participated in the CAD Modeling competition at MEQNZO, a National Level Tech Symposium organized by SRM VEC on the 9th of March 2024. He secured first position in the event.
18. Mr. Arjun Sharma [RA2111054010009] presented his research work on "Evaluation of Heat Generation in a Tool during Friction Stir Processing of Polymer Composites" along with his guide Mr. Arun N. They presented the paper at ICAME 2024, held at SRM Kattankulathur from 20th to 22nd March 2024.
19. Mr. Arjun Sharma [RA2111054010009] was selected for an Internship at the Bureau of Indian Standards, Chandigarh Branch Office during August-September.
20. Mr. Arjun Sharma [RA2111054010009] and Mr. Harshit Jain [RA2111054010008] were selected for the 2nd round of the CADATHON event at BITS Pilani's fest APOGEE 24 in April.
21. Mr. Harshit Jain [RA2111054010008] participated in the International Conference on Advances in Mechanical Engineering (ICAME 2024) and applied for a full paper.
22. Mr. Harshit Jain [RA2111054010008] attended a 5-day 'Entrepreneurship' bootcamp organized by SRM DEI.
23. Mr. Abhinand Maniyanthottill [RA2111054010013] completed the NPTEL course on "Product Engineering and Design Thinking" from the Indian Institute of Technology, Kharagpur with an 80% score (Elite + Silver) in April 2024.

24. Mr. Abhinand Maniyanthottill [RA2111054010013] participated in the "Basics of AI & ML Applications using Python" hands-on practice workshop for Mechanical Engineers conducted by the MEA on 13th March 2024.

D) Final Year

1. Mr. Chiron A (Reg. No. RA2011002010067) presented a paper for Research Day held on 4th March 2024 at SRM Institute of Science & Technology, Kattankulathur.
2. Mr. Barath Kumar G (Reg. No. RA2011002010152) presented a paper entitled "Optimization of Wear Behaviour of AZ91D-SiC Composite Under Dry Sliding Conditions" at the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
3. Mr. Vajrapu Raghu Ram (Reg. No. RA2011002010124), Adithela Abhinav (Reg. No. RA2011002010146), and Dr. Vamsi Krishna Dommeti presented a paper entitled "Mechanical Response of Ceramic Coating Materials on Surface Texturing Using FEA" at the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
4. Mr. Pranav Sitharth K T (Reg. No. RA2011002010140) presented a paper entitled "Optimization of Wear Behaviour of AZ91D-SiC Composite Under Dry Sliding Conditions" at the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
5. Mr. Punit Matal (Reg. No. RA2011002010122) presented a paper entitled "Orbital Cold Forming of Rheocasted Al Alloy for Automotive Application" at the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
6. Mr. Dheeraj Ram Reddy Kalathur (Reg. No. RA2011002010010) presented a paper entitled "Thermal Performance Analysis of Compound Parabolic Collector" at the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
7. Mr. Tushar Negi (Reg. No. RA2011002010010017) presented a paper entitled "Development of Lattice

- Based Structures Using Additive Manufacturing Assisted Vacuum Investment Casting” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
8. Mr. Ojjas Yadav (Reg. No. RA2011002010010022) presented a paper entitled “Assessment of the Joint Effect of Antioxidant Addition and Catalytic Converter on Emissions in Off-Road Motors Using Diesel Tyre Oil Blend” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
 9. Mr. Ron Philip Philip (Reg. No. RA2011002010010023) presented a paper entitled “Development and Fabrication of Quick Delivery Drones” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
 10. Mr. Samvit Ghosh (Reg. No. RA2011002010010035) presented a paper entitled “Development of Lattice Based Structures Using Additive Manufacturing Assisted Vacuum Investment Casting” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
 11. Mr. Hakri G. Tonpe (Reg. No. RA2011002010010038) presented a paper entitled “Solidification Characteristics of DI Water with Hybrid Nanofluid in a Stainless Steel Spherical Capsule for Cold Thermal Energy Storage Systems” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
 12. Mr. Srijan Mazumder (Reg. No. RA2011002010010013) presented a paper entitled “Effect of Varying Face Sheets and Cores in Lantor Soric Foam Core Sandwich Composites” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
 13. Mr. Riyanshu Rajesh Pal (Reg. No. RA2011002010010014) presented a paper entitled “Development and Fabrication of Quick Delivery Drones” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
 14. Mr. Jayraj Saha (Reg. No. RA2011002010010004) presented a paper entitled “Effect of Varying Face Sheets and Cores in Lantor Soric Foam Core Sandwich Composites” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
 15. Mr. A. Srinvas Sai Siva Adithya (Reg. No. RA2011002010010040) presented a paper entitled “Solidification Characteristics of DI Water with Hybrid Nanofluid in a Stainless Steel Spherical Capsule for Cold Thermal Energy Storage Systems” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
 16. Ms. Shreyas Umesh Bulbule (Reg. No. RA2011002010010044) presented a paper entitled “Numerical and Experimental Investigation of Ventilate Super Cavitation Induced Around an Underwater Projectile” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
 17. Mr. Utkarsh Chauhan (Reg. No. RA2011002010010045), Shreyas Umesh (Reg. No. RA2011002010010045), and Dr. Pankaj Kumar presented a paper entitled “Numerical and Experimental Investigation of Ventilate Super Cavitation Induced Around an Underwater Projectile” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
 18. Mr. Ashutosh Mishra (Reg. No. RA2011002010010052), Mr. S.N. Vinoth, Mr. Malarmanan, and Dr. P. Chandrasekaran presented a paper entitled “Solidification Characteristics of DI Water in a Novel Spherical Capsule for Cool Thermal Energy Storage Systems” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
 19. Mr. Aditya Surendran (Reg. No. RA2011002010010052), Dheeraj Ram Reddy Kalathur (Reg. No. RA2011002010010010), Dr. P. Sudhakar, and Mr. Vijay Kumar presented a paper entitled “Thermal Performance Analysis of Compound Parabolic Collector” at the “5th International Conference on Advances in Mechanical Engineering (ICME 2024)” organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.

20. Mr. Sahil A (Reg. No. RA2011002010010057) presented a paper entitled "Assessment of the Joint Effect of Antioxidant Addition and Catalytic Converter on Emissions in Off-Road Motors Using Diesel Tyre Oil Blend" at the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
21. Mr. S. Manoj Kumar (Reg. No. RA20110020 10010083) presented a paper entitled "Development and Analysis of Polymer Composite via Friction Stir Process for Biomedical Applications" at the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
22. Mr. Mayank Verma (Reg. No. RA20110020 10010094), Isha Kashyap (Reg. No. RA20110020 10010081), Mr. Akash Vincent, and Dr. N. Harshavrdhana presented a paper entitled "Effect of Topology Optimization of 3D Lattice Structure and Its Mechanical Characterization" at the "5th International Conference on Advances in Mechanical Engineering (ICME 2024)" organized by the Department of Mechanical Engineering, SRM IST, during 20-22 March 2024.
23. Mr. Lopes Shaji Antony (RA2011002010011) attended a training programme on "Material Selection for Pressure Vessels," 1st March 2024, organised by Arveng Training & Engineering.
24. Mr. Akshat Somani (RA2011002010079) participated in "MVM MUN Edition IV" held on 19th and 20th January 2024, as the Vice-Chairperson of DISEC, and upheld the spirit of the committee.
25. Mr. AKSHAT GAUTAM JAIN (RA201100 2010062) secured Overall Performance – First Prize in the SAEISS Bicycle Design Challenge 2024 held at Knowledge Institute of Technology Salem, during 24th & 25th February 2024.
26. Mr. Soham Ravindra Taywade (Reg. No. RA2011002010039) participated in a one-day programme on "Heat Transfer Problems – Simulation Approach for Practical Problems" organised by the Department of Mechanical Engineering, SRM IST, on March 14, 2024.
27. Ms. Shalaka Rajesh (Reg. No. RA201100 2010001) attended the one-day programme on "Heat Transfer Problems – Simulation Approach for Practical Problems" organised by the Department of Mechanical Engineering, SRMIST, on May 14th, 2024.
28. Siddhant Raj (Reg. No. RA2011002010161) presented in "MILAN" organised by the Department of Mechanical Engineering, SRMIST, on March 17th, 2024.
29. Aditya Nehra (Reg. No. RA2011002010163) presented in "MILAN" organised by the Department of Mechanical Engineering, SRMIST, on March 17th, 2024.

17. Upcoming Events

A. 3rd International Conference on Recent and Advanced Composite Materials (ICRACM – 2025)

The Centre for Composites and Advanced Materials (CCAM), Department of Mechanical Engineering, SRM Institute of Science & Technology Kattankulathur Campus is going to organize the 3rd International Conference on Recent and Advanced Composite Materials (ICRACM-2025) during February 26-28, 2025 at the KTR campus.

The conference is being organized with the objectives of:

- Bringing together academicians and industry personnel from all over the world to deliberate upon the challenges, opportunities on composites and advanced materials.
- Promoting scientific information exchange among the academicians, researchers, developers, engineers, students, and practitioners working around the world.

The conference will cover various aspects of composites and other advanced materials, in the following six tracks

- Renewable and sustainable composites
- Composites for mobility solutions
- Energy materials
- Biomedical composites
- Smart and Advanced Manufacturing of Composites
- Informatics for Composites and Advanced Materials

The organizers invite the researchers to submit their original research for presentation after peer review. Abstracts may be submitted at ccam.mech.ktr@srmist.edu.in on or before 31st January 2025. On acceptance, the full paper may be submitted on or before 20th February 2025. The papers presented in the conference will be published in indexed journals and conference proceedings. The details will be announced later.

1st Call for Papers / Abstract Submission

**3rd International Conference on
Recent and Advanced Composite Materials
(ICRACM-2025)**

**ICRACM-2025
26-28 Feb-2025**



SRM
INSTITUTE OF SCIENCE & TECHNOLOGY
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Conveners

Dr. Shubhabrata Datta, Research Professor

Dr. M. Cheralathan, Professor and Head

Department of Mechanical Engineering, SRMIST

Co-Conveners

Dr. M. Kamaraj, Associate Professor

Dr. Sumit Pramanik, Research Associate Professor

Dr. P. V. Jeyakarthikeyan, Associate Professor

Department of Mechanical Engineering, SRMIST

Organized By

Centre for Composites and Advanced Materials

Department of Mechanical Engineering

SRM Institute of Science & Technology

Kattankulathur Campus, Chengalpattu District

Tamil Nadu 603203, India

<https://www.srmist.edu.in/events/icracm-2025/>



B. Smart Agro Storage Hackathon on “Engineers Day 2024”

The Institution of Engineers (India) Kattankulathur Local Center in association with Department of Mechanical Engineering, SRMIST, Kattankulathur organizing “Smart Agro Storage Hackathon for Engineers Day 2024” on 16th September 2024.



The Institution of Engineers (India)

Kattankulathur local center



ISHRAE

In association with

DEPARTMENT OF MECHANICAL ENGINEERING, SRMIST, KTR

SMART AGRO STORAGE HACKATHON for ENGINEERS DAY 2024

Inauguration and Virtual Presentation by Teams

September 16th, 2024

Project Exhibition of the Working Model on

September 17th, 2024



A team of up to 5 students, from various disciplines of Engineering & Technology is required to participate.

Attractive Cash Prizes



FIRST PRIZE : RS. 12000/-

SECOND PRIZE : RS. 8000/-

THIRD PRIZE : RS. 5000/-

Problem Statement: SMART AGRO STORAGE - Development of Working Model

Design and develop a Solar-Powered, Smart Storage System that utilizes IoT sensors to monitor and control environmental conditions in real-time, optimizing the storage environment for maximum freshness and shelf life of fresh agricultural products while reducing reliance on the electrical grid.

Technical Constraints

- Storage Volume : 5L ● Type of products to be stored : Vegetables / Fruits / Greens / Milk
- Sustainable materials for construction/solar powered ● Temperature and humidity monitoring ● Duration of storage: 3-5 Hrs

REGISTRATION FEE

Student team

with IEI members: Rs. 250 /-

without IEI members: Rs. 450/-

All payments can be made through payment through online NEFT / through UPI to,

Account Name: INSTITUTION OF ENGINEERS (INDIA)
KATTANKULATHUR LOCAL CENTRE

Account Number: 00000038988416050

Bank Name : STATE BANK OF INDIA, SRMIST, Kattankulathur

IFSC Number: SBIN0040922



REGISTRATION LINK : <https://tinyurl.com/AGROSTORAGEHackathon>

Appreciation Certificates

will be given to all participating teams

IMPORTANT DATES

Last Date for Registration : 12.08.2024

Team Confirmation & Rubrics : 16.08.2024

Team Virtual Presentation : 16.09.2024

Date of Event (Final Demo) : 17.09.2024

FOR FURTHER DETAILS CONTACT

Mr. S.M. Keshav Nallasivam, 9599905208, sn2612@srmist.edu.in

Dr. A. Vijaya, 8939917225, vijayaa@srmist.edu.in

ORGANIZING COMMITTEE

Prof. (Dr.) S Dhanalakshmi, Chairman

Prof. (Dr.) K. Vijayakumar,

Honorary Secretary

Kattankulathur Local Centre, IE(I)

CONVENERS

Dr. A. Vijaya, MIE, Committee member, IE(I), KTR LC

Dr. V. Praveena, AP / Mechanical Engg.

Dr. A. Sathish Kumar, AP / Mechanical Engg.

Prof. (Dr.) M. Cheralathan, FIE,
HOD / Mechanical Engg.





SRM

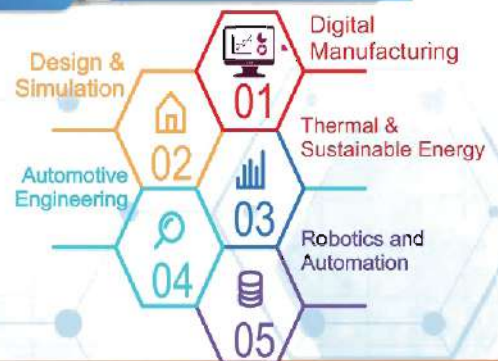
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Kattankulathur Campus

DEPARTMENT OF MECHANICAL ENGINEERING

“Get a head start on your career and start with the best”

Our program offers five tracks of specialization which lead to careers in cutting-edge technologies



About the program

B. Tech. Mechanical Engineering Program offered at Kattankulathur campus is accredited by



The National Board of Accreditation (NBA) for six years



The Engineering Accreditation Commission of ABET, <https://www.abet.org>

ABOUT THE DEPARTMENT

- One of the leading departments established in 1985.
- Funded by DST-FIST for Biomechanics Research.
- World class laboratories and R&D Centers with state of the art Software & Hardware.
- Center of excellence in materials and manufacturing in collaboration with leading industries.
- Experienced faculty members specialized in all the domains of mechanical engineering.
- MoUs with leading national & international industries & institutions.
- Mandatory internship & industrial training to the students.
- Excellent placement records with premier industries & IT Sectors.

PROGRAMS OFFERED

B. Tech.

- Mechanical Engineering
- Mechanical Engineering w/s in Automation & Robotics
- Mechanical Engineering w/s in AI and ML

M. Tech.

- Computer Aided Design
- Solar Energy
- Thermal Engineering
- Robotics

Ph.D

Mechanical Engineering

Stipend for all PG & Ph.D Programs*

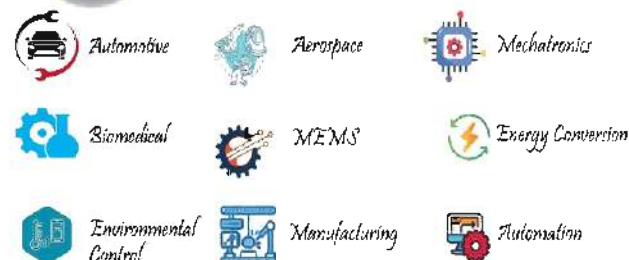
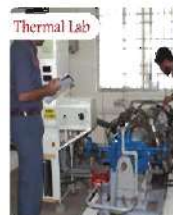
Global Recognition



In-House Industrial Training Centres



State of Art Laboratory Facilities



Prominent Recruiters



Global Immersion Program Opportunities

- **Dual Degree** - UG from SRMIST and PG from Foreign partners
- **Indo German** - 3 years in SRMIST and final year at a German University
- **SAP** - Semester Abroad Program - One Semester at a selected Foreign Institution
- **GTP** - Global Transfer Program two years in SRMIST and two years in a Foreign Institution

Professional Body Membership



ADMISSION CONTACT



<https://www.srmist.edu.in/admin-india/>
admissions.ie@srmist.edu.in
 Department Website Link:
<https://www.srmist.edu.in/departments/departments-of-mechanical-engineering/>
 (044) 27 45 513, 47 437 800

Department of Mechanical Engineering, SRM Institute of Science & Technology,
 Kattankulathur Campus - 603 203, Chennai, Tamil Nadu, India.





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Kattankulathur Campus

Department of Mechanical Engineering

Programs Offered

About the program

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The National Board of Accreditation (NBA) for six years



Engineering
Accreditation
Commission

The Engineering Accreditation Commission of ABET,
<https://www.abet.org>

B. Tech.

- Mechanical Engineering
- Mechanical Engineering w.in Automation and Robotics
- Mechanical Engineering w.in AI and ML

M. Tech.

- Computer Aided Design
- Solar Energy
- Thermal Engineering
- Robotics

Ph.D

- Mechanical Engineering

ADMISSION CONTACT

Department of Mechanical Engineering,
SRM Institute of Science & Technology,
Kattankulathur Campus,
Chennai - 603 203

(044) 2745510, 47437500
admission.in@srmist.edu.in
www.srmist.edu.in/admin-india/

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Prime Recruiters



Professional Memberships



SAE INDIA
Society of Automotive Engineers INDIA



ASME
PEOPLE AND STANDARDS
SRM STUDENT SECTION





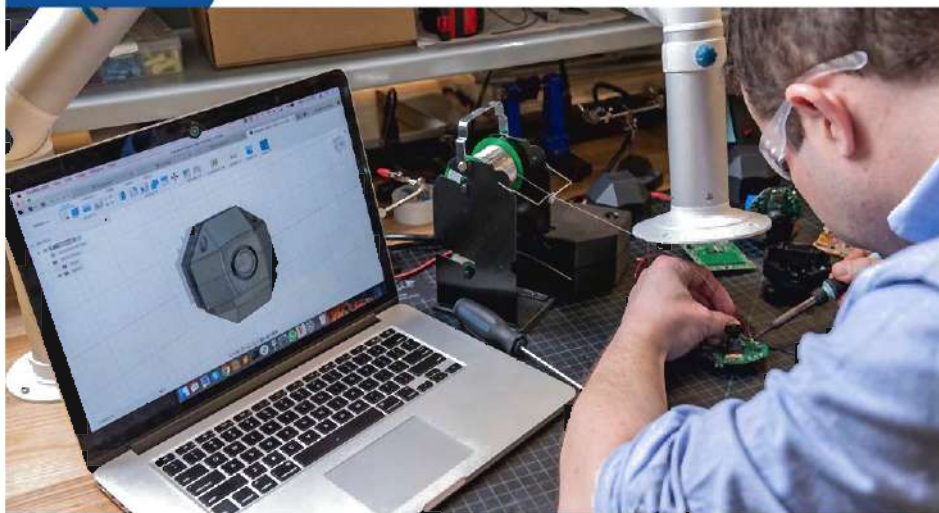
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M.TECH. CAD
COMPUTER AIDED DESIGN

Offered by

The Department of Mechanical Engineering

The Post Graduate (PG) programme in M.Tech. CAD is being offered by the Department of Mechanical Engineering since year 2000. This programme prepares students for design and development positions in industry, R&D institutes, and to pursue doctoral research to strengthen their professional career and build better society through innovative solutions to existing and challenging engineering problems. Students in this programme are trained in latest software used in industries. The programme is designed as an interdisciplinary one, focussing on real-time industry projects with experiential-learning. Research activities at the department level includes design analysis & synthesis at system level, assembly planning and automation, optimization, Bio-Mechanics, Rapid prototyping, VR, and AR, to name a few.



+ Infrastructure

Digital library
Industry software
Research Labs

+ Research

Latest equipments
Collaborative Research
Industry Funded research

+ Best practices

Industry visits and tie-ups
Industry project and courses
Teaching Associate (Rs.8000/-)

+ Faculty

Ph.D. holders
Subject experts
Impact Factor Publications
Patents applied and granted
Collaborative research
Funded projects

+ Higher studies

Support for Abroad
& Ph.D. programmes

+ MoUs

MoUs with centres like NIFDD
1 year training at NFTDC (stipend)

+ Placements

Placement in industries
Opportunities for start-up

Some Important Labs:

Computer Aided Design Lab
Product Design and Development lab
Rapid Prototyping
Bio-Mechanics Lab
Programming Lab
Materials Processing Lab
Tribology and Surface Interaction Lab

HIGHLIGHTS

- ★ NAAC "A++" grade
- ★ MHRD nirf Ranking
- ★ QS I-GAUGE Diamond rated Institute,
- ★ 5 stars for Teaching Employability and Inclusiveness.
- ★ I-GAUGE: Indian College & University Rating, Diamond Rated

Stipend*: 12,400/- per month

* for candidates who get through SRMJEE

Diamond Rated



**Limited
Number of
Seats: 20 Nos.**

For details visit:

www.srmuniv.ac.in

<https://qr.go.page.link/A4mKC>



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SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
College of Engineering and Technology
Department of Mechanical Engineering,
Kattankulathur Campus

M.Tech in Robotics (2 Years)

With specialized elective streams

- Machine Learning
- Autonomous System
- Robot Vision
- Mobile / Nano Robot

Stipend for M.Tech. Programme:
INR.12,400/- per month*

(*for candidates who get through SRMJEE)

About the Institutions

SRM Institute of Science and Technology (Formerly known as SRM University) is one of the top ranking Institutions and premier engineering destinations in India. It was established in 1985 by the Founder Chancellor, Dr. T. R. Paarivendhar. SRMIST has been categorized as a grade 'A' Institution by the Ministry of Human Resource Development (MHRD), Government of India. SRMIST was accredited by NAAC with an 'A++' Grade in 2018.

About the Department

The Department of Mechanical Engineering is one of the pioneering departments of SRMIST. The department offers B.Tech in Mechanical Engineering and B.Tech in Mechanical Engineering with a specialization in AI&ML (Artificial Intelligence and Machine Learning). The B.Tech Mechanical Engineering program offered at the Kattankulathur campus is accredited by the Engineering Accreditation Commission (EAC) of ABET, (<https://www.abet.org/>) and has also been accredited by NBA (National Board of Accreditation) for six years.

About the Program

The M.Tech Robotics is a postgraduate program that provides students real-time experience in industrial robots with specialized streams in Machine Learning, Artificial Intelligence, Robot Vision, Robot Sensor, Autonomous system, NLP, Mobile Robot and Nano Robot. This program has a well-organized curriculum to make students industry ready and cutting-edge facilities to satisfy the growing need for technology and manufacturing sector of the country human resources in the field of Robotics.

Eligibility

Eligibility for this M.Tech Program is a basic degree or equivalent in B.E. / B.Tech. in Mechanical Engineering / Production Engg. / Industrial Engg. / Aerospace Engineering / Automobile Engineering / Aeronautical Engineering / Mechatronics Engg. / ECE / EEE / ICE / CSE (or) AMIE (Mech) / AMAeSI (Aero) / IMechE / Any equivalent degree in the above disciplines.

Internship and Placement based on specialization:

Based on the M.Tech. Specialization, students are permitted to undergo industrial internships of (6 to 12 months) at the end of the first year. This will improve the opportunities for higher salary packages in top-notch industries.

Salient Features of M.Tech in Robotics

- Excellent infrastructure with state-of-the-art softwares and hardware laboratories
- Diversified specialization streams
- Well organized curriculum with structured course contents
- Dedicated Robotics laboratory with state-of-the-art softwares
- Placement opportunities in MNCs like ABB, KUKA, Robert Bosch, Renault, Airbus
- Potential employment opportunities in the fields of Robotics Engineering, Mobile Robotics Application Engineer, Software Robotics Engineer, etc.

DEPARTMENTAL FACILITIES (PROGRAM SPECIFIC INFRASTRUCTURE)



ABB IRB1410 Robot



ABB - IRB360 VISION BASED ROBOT

World Fastest Patented Robot Available in Our Institution

PROJECTS



IRB360 Robot with Machine Learning Technique



Mecanum Wheeled Collaborative Robots



Obstacle Avoidance Snake Robot



Humanoid Service Robot for Isolated Patients

PROSPECTIVE ORGANIZATIONS FOR PLACEMENTS

FOR ADMISSIONS, CONTACT



Director(Admissions),
SRM Institute of Science and Technology,
SRM Nagar, Kattankulathur- 603203,
Chengalpattu District, TamilNadu, India.
Phone: +91-44-2745 5510, +91-4447437500.
E-Mail: admissions.india@srmist.edu.in
For further details refer: <https://www.srmist.edu.in>

SCAN ME



Department of Mechanical Engineering, Kattankulathur Campus

M.Tech in Thermal Engineering (2 Years)

with specialized elective streams in

- Electronics Cooling
- Gas Dynamics
- Renewable Energy
- Computational Fluid Dynamics

Stipend for M.Tech. Programme: INR.12,400/- per month*

About SRMIST

SRM Institute of Science and Technology (Formerly known as SRM University) is one of the top ranking Institutions and premier engineering destinations in India. It was established in 1985 by the Founder Chancellor, Dr. T. R. Paarivendhar. SRMIST has been categorized as a grade 'A' Institution by the Ministry of Human Resource Development (MHRD), Government of India. SRMIST was accredited by NAAC with an 'A++' Grade in 2018.

About the Department

The Department of Mechanical Engineering is one of the pioneering departments of SRMIST. The department offers B.Tech. in Mechanical Engineering, B.Tech in Mechanical Engineering with specialization in AI&ML (Artificial Intelligence & Machine Learning). The B.Tech Mechanical Engineering program at the Kattankulathur campus is accredited by the Engineering Accreditation Commission (EAC) of ABET (<https://www.abet.org/>) and has also been accredited by the National Board of Accreditation (NBA). The department offers two-year M.Tech programs in Solar Energy, Thermal Engineering, CAD, and Robotics. The Department also offers Doctoral Programme in various fields of Mechanical Engineering with a monthly stipend of INR 25,000/- (for full-time scholars).

About the Program

The M.Tech Thermal Engineering program is offered with specialized streams in Electronics Cooling, Renewable Energy, Gas Dynamics, and Computational Fluid Dynamics. This program has a well-organized curriculum and cutting-edge facilities to satisfy the growing need for human resources in the field of thermal engineering.

Eligibility

Eligibility for this M.Tech Program is a basic degree or equivalent in B.E. / B.Tech. in Mechanical Engineering / Mechanical Engineering with any specialization / Aerospace Engineering / Automobile Engineering / Chemical Engineering / Computing Technologies /

(*for candidates who get through SRMJEE)

Data Science & Business Systems / Electronics & Communication Engineering / Electrical & Electronics Engineering / Electronics & Instrumentation Engineering / Energy Engineering / Food Process Engineering / Instrumentation & Control Engineering / Mechatronics Engineering / Materials and Metallurgy Engineering / Physics and Nano Technology / Renewable Energy / M.Sc. (Physics) / M.Sc. (Material Science) / Any equivalent degree in the above disciplines.

Internship and Placement based on specialization:

Based on the M.Tech. Specialization, students are permitted to undergo industrial internships of (6 to 12 months) at the end of the first year. This will improve the opportunities for higher salary packages in top-notch industries.

Salient Features of M.Tech Thermal Engineering Program

- Collaboration with M/s. Intel corp., USA for Electronic cooling
- Excellent infrastructure with state-of-the-art software and hardware
- Diversified specialization streams
- Well organized curriculum with structured course contents
- Electronic cooling laboratory with state-of-the-art software
- Internship opportunities in MNCs like Intel, L&T, GE and Google
- Potential employment opportunities in the fields of Electronic cooling, energy, fluid flow analysis etc.

DEPARTMENTAL FACILITIES (PROGRAM SPECIFIC INFRASTRUCTURE)



Solar PV Power Plant



Solar Cooking Plant



Water Tunnel



Wind Tunnel



DSC Lab



Engines Lab



CFD Lab



Machines Shop



Heat Transfer Lab

Prospective Organizations for placements



SCAN ME



FOR ADMISSIONS, CONTACT

Director(Admissions), SRM Institute of Science and Technology,
SRM Nagar, Kattankulathur- 603203,
Chengalpattu District, TamilNadu, India.
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SRM Institute of Science and Technology - Kattankulathur

Department of Mechanical Engineering

Thermal Energy Storage Research Cell

ABOUT THE THERMAL ENERGY STORAGE RESEARCH CELL

The Thermal Energy Storage Research Cell conducts the research on the development, demonstration and deployment of cost-effective, integrated energy storage technologies for energy storage applications. Various Research focuses on various phase change materials and nano-enhanced phase change materials that can be significantly used for charging/discharging the heat in thermal energy storage systems.

An effective energy storage is necessary for the large-scale deployment of renewable electricity, electrification, and decarbonization and is essential for meeting clean energy goals. Currently, around 50% of electricity is consumed by the systems toward meeting thermal loads. Thermal energy storage (TES) shows promise as a cost-effective energy storage alternative. TES refers to energy that can be stored in a material as a heat source or a cold sink rather than as electrical energy and reserved for use at a different time. These solutions can increase load flexibility, and promote the use of renewable energy sources in various thermal and electrical systems.

OBJECTIVES OF THE THERMAL ENERGY STORAGE RESEARCH CELL

The initial focuses and needs of the research cell are as follows:

- The thermal energy storage research cell aims to bring in all the research facilities related to thermal energy storage available in the different laboratories of the department to one lab so that the synthesis of materials, characterization, experimentation, and analysis can be done inside the same lab.
- The lab can be dedicated to the research and can be assessed at any time without disturbing other academic activities.

RESEARCH AREAS IN THE FIELD OF THERMAL ENERGY STORAGE

Cool Thermal Energy Storage

- Characterization
- Heat Transfer properties evaluation and stability analysis
- Thermal energy storage in walls and roofs
- Cascade refrigeration system

Thermal Management applications

- Solar PV systems
- Thermoelectric devices
- Electronic devices

Nano-enhanced Phase change Materials

- Characterization
- Heat Transfer properties evaluation and stability analysis
- Heat transfer applications

Solar Thermal Energy Storage

- Energy Storage in receiver
- Thermal performance enhancement studies of collection and storage systems

Building Energy Storage

- Building energy modeling
- Building energy conservation

This Research cell has salient features and test facilities and instruments which are as follows

Research test facilities

- Thermal Management of TEC/CPV
- Cascade Refrigeration System
- Constant Temperature bath for freezing and melting process
- Performance of electronic system with NePCM and Nano fluid.



Instruments

- Differential scanning calorimetry
- Ultrasonic probe sonicator
- Data acquisition system

DIFFERENTIAL SCANNING CALORIMETRY

- Differential scanning calorimetry (DSC) analysis is used to measure melting temperature, heat of fusion, latent heat of melting, reaction energy and temperature, glass transition temperature, crystalline phase transition temperature and energy, precipitation energy and temperature, denaturation temperatures, oxidation induction times, and specific heat or heat capacity.
- DSC analysis measures the amount of energy absorbed or released by a sample when it is heated or cooled, providing quantitative and qualitative data on endothermic (heat absorption) and exothermic (heat evolution) processes.



Thermal characteristics that can typically be detected by using DSC

Melting temperatures and enthalpies (heats of fusion)

- Crystallization temperatures and enthalpies
- Glass transition temperatures
- Degree of crystallinity
- Reaction temperatures and enthalpies
- Specific heat capacity

Outcome of the Cell	
No of Publications	30
No of Patents	2

Contact Details:

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Assistant Professor
Department of Mechanical Engineering
SRMIST, Kattankulathur, Chennai
Email: selvamc@srmist.edu.in
Mobile: +91 9003595904

Dr. A. Sathish Kumar

Assistant Professor
Department of Mechanical Engineering
SRMIST, Kattankulathur, Chennai
Email: sathisha@srmist.edu.in
Mobile: +91 8870534931

 NAAC A++	 Category 1 with 12B Status	 (2024) 12 th Ranked University	 (2025) World Ranking one among 46 Indian Universities	 (2024) World Ranking one among 91 Indian Universities	 VERY GOOD QS 4 Star Rated Globally	 (2024) World Ranking Ranked 5-7 in Indian Universities
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College of Engineering and Technology
SRM Institute of Science and Technology
Kattankulathur, Chennai-603203, Tamil Nadu, India
www.srmuniv.ac.in



Department of Mechanical Engineering M. Tech. Solar Energy (2 Years)

Stipend for M. Tech. Programme: INR.12,400/- per month*.
(*for candidates who get admission through SRMIEE)



About SRMIST

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About the Department

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About the Program

The M.Tech Solar Energy programme has a well-organized curriculum and cutting-edge infrastructures to provide an in-depth understanding of various solar energy technologies and power generation, both photovoltaic and solar thermal systems, to satisfy the growing need for human resources in the field of solar energy.

Solar Lab Facilities



Solar Concentrator Training System



Solar Thermal Training system



Differential Scanning Calorimetry Lab



CFD Lab



Solar Concentrator Test System



Solar Desalination system



Solar PV Training System



Solar PV Grid-tied System

Eligibility:

B.E./B.Tech. in Mechanical Engineering / Automobile Engineering / Chemical Engineering / Electrical & Electronics Engineering / Electronics & Instrumentation Engineering / Instrumentation & Control Engineering / Mechatronics Engineering / Materials and Metallurgy Engineering / Nano Technology / M.Sc. (Physics), M.Sc. (Material Science) (or) any equivalent degree in the above discipline.
(Admission to M.Tech. is based on SRMJEE (PG)/ GATE/ TANCET)

Salient Features:

- The students are getting hands-on experience with the Concentrated Solar collector based Solar Steam cooking plant and Solar PV power plants of a total capacity of 865 kWp on the campus to make them industry-ready.
- A semester abroad program (SAP) is an opportunity to gain international learning and work in a cross-cultural, multinational academic and research environment.
- The internship offers in reputed companies/institutes (India / overseas).
- Good Placement records in government organizations and reputed industries.

Our students are placed in the following organizations.



FOR ADMISSIONS, CONTACT

Director (Admissions), SRM Institute of Science and Technology,
SRM Nagar, Kattankulathur - 603203,

Kancheepuram District, Tamil Nadu, India. Phone: 91-44-2745 5510, 91-444743 7500.

E-Mail: admissions.india@srmist.edu.in For further details, refer: <https://www.srmist.edu.in>

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Professor



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Associate Professor



Dr. D. Kumaran
Assistant Professor



Dr. A. Sathish Kumar
Assistant Professor

STUDENT MEMBERS



Final Year
Mr Shahank. B
(IV Year B. Tech)
RA1911002010146



Third Year
Mr Rahul Chandran
(III Year B. Tech)
RA2011002010034



Second Year
Ms Kajal Singh
(II Year B. Tech)
RA2111054010015



First Year
Mr R. Vedeswarar
(I Year B. Tech)
RA2211002010088



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RESONANCE

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School of Mechanical Engineering
College of Engineering and Technology
SRM Institute of Science and Technology
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<https://www.srmist.edu.in/department/department-of-mechanical-engineering/>

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