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MARCH 2025

ASPIRE

ACHIEVEMENTS IN SPORTS, PROJECTS, INDUSTRY, RESEARCH AND EDUCATION

DEPARTMENT OF MECHANICAL ENGINEERING



SRI SIVASUBRAMANIYA NADAR COLLEGE OF ENGINEERING
RAJIV GANDHI SALAI(OMR), KALAVAKKAM, CHENNAI, TAMIL NADU, INDIA.

From the HoD's desk.....



Dr. K S Vijay Sekar

Professor and Head,
Department of Mechanical
Engineering

We are delighted to bring you the March edition of Aspire!!

We profile Nihon Hidankyo who received the 2024 Nobel Peace Prize for his pioneering efforts in calling for nuclear disarmament and fighting for the rights of nuclear bomb survivors.

The annual SNF leadership conclave was conducted in a memorable manner at the Shiv Nadar School, Faridabad and an entire day was filled with presentations of the past year and the road ahead, by the various arms of SNF with some wonderful chat shows with eminent people such as PR Sreejesh, Anirudh Kanisetti and Javed Akhtar.

It was a month of activities in the department with the third edition of ISERMAT organized with keynotes from foreign expert and Indian auto industry. National level workshops, FDPs were conducted in key research areas such as smart materials, shape memory alloys and many of our faculty engaged themselves actively in invited talks, consultancy projects and attended conferences as session chairs. Industry collabs were initiated with NAMTECH and CATERPILLAR.

Mech students get placement offers from core companies such as Isuzu Motors, Saint Gobain and DAR international, with more coming up in the next few weeks. Mech students get many projects sanctioned from the SSN management which will accelerate their research careers. Students of II and III year share their experiences in going for their Industrial visits. Alumni shares his journey from SSN to Georgia Tech, USA.

Best wishes for a mind-blowing march,

KSV
vijaysekarks@ssn.edu.in

"There is no road to happiness, happiness is the road itself "

NIHON HIDANKYO: NOBEL PEACE PRIZE WINNER ADVOCATING FOR A NUCLEAR-FREE WORLD



Nihon Hidankyo, the Japan Confederation of A- and H-Bomb Sufferers Organizations, is a leading advocate for nuclear disarmament and the rights of atomic bomb survivors (Hibakusha). Founded in 1956, the organization has worked tirelessly to raise awareness of the devastating humanitarian consequences of nuclear weapons. In recognition of its efforts, Nihon Hidankyo was awarded the 2024 Nobel Peace Prize.

The organization's mission is to support Hibakusha and prevent future nuclear tragedies. Through survivor testimonies and public advocacy, Nihon Hidankyo has shaped global disarmament discussions. Its slogan, "No more Hibakusha," reflects its commitment to ensuring that nuclear weapons are never used again.

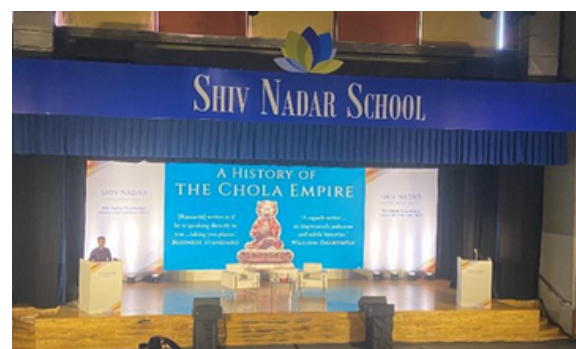
The Nobel Committee recognized Nihon Hidankyo's grassroots activism and its powerful use of witness testimony to highlight the horrors of nuclear warfare. As the number of surviving Hibakusha declines, the organization is focused on educating younger generations to continue the fight against nuclear proliferation.

Despite challenges, Nihon Hidankyo remains a vital force in the global disarmament movement. The Nobel Peace Prize has amplified its message, bringing renewed attention to the urgent need for nuclear abolition.

The 2024 Nobel Peace Prize has amplified Nihon Hidankyo's message, bringing renewed international attention to the dangers of nuclear weapons. As global tensions and the potential for nuclear conflict remain pressing concerns, the organization's work underscores the critical importance of disarmament and the prevention of future nuclear catastrophes. Nihon Hidankyo's dedication serves as a powerful reminder of the human cost of nuclear warfare and the imperative to strive for lasting global peace.

SNF LEADERSHIP CONCLAVE ORGANISED AT SHIV NADAR SCHOOL, FARIDABAD DR KS VIJAY SEKAR TUNES IN...

The annual Shiv Nadar Foundation Leadership Conclave at the Shiv Nadar School, Faridabad on 15/02/2025 was a well-organized and celebrated event, that brings together the entire SNF family for a day filled with success stories from the recent past to the challenges that were surmounted in the process. Roshini Nadar Malhotra set the tone for the day with her overview of SNF and its milestones. Dr Kala Vijayakumar, President SSN Institutions presented an overview of SSN's journey over the last year and shared the great news of SSN being awarded the prestigious STAARS rating, a first among institutions in India. This year we had luminaries such as legendary hockey player P R Sreejesh, eminent writer and poet, Javed Akhtar and trendsetting author and historian Anirudh Kanisetti grace the event and share their experiences to a captive audience. While Sreejesh delved on his journey from being a rookie hockey player to becoming one of the country's best goalkeeper, Anirudh gave us glimpses of oriental history of the Chola period through his well-researched temples architecture and Javed Akhtar signed off in his signature style with a liberal dose of poetry and philosophy coupled to a nicety. It was a well spent day and a joie de vivre all the way. Looking forward to another year of bonding and reminiscing!! Best wishes to the entire SNF fraternity and the organizers for putting together a fantastic event!!!



MELA25: A FUN-FILLED DAY OF LEARNING ENTERTAINMENT

Mela25 was successfully organized at our college by the Lakshaya team on the 21st of February. The event featured more than 80 stalls, offering a wide variety of products and services. It provided students with a unique opportunity to learn essential skills such as business management, negotiation, and marketing. This hands-on experience allowed everyone to gain valuable insights into running a business while interacting with stall owners.

Apart from the business aspect, Mela25 was also a day full of fun and enjoyment. Students had the chance to try a variety of delicious foods from different stalls, experiencing a wide range of cuisine. The event also included several fun games, adding excitement and entertainment to the day.

Overall, Mela25 was a successful and memorable event, combining learning and fun. It gave students practical exposure to real-world skills while providing an enjoyable break from academics. The event truly highlighted the spirit of creativity and community at our college.





A Srinivasan, B Musthafa, B Vishnu Vardhana Naidu, M Sunil Kumar "Optimization and experimental investigation on CI engine characteristics fuelled with low carbon alcohols and juliflora biodiesel blends: A RSM approach". Fuel. clarivate impact factor:6.7.

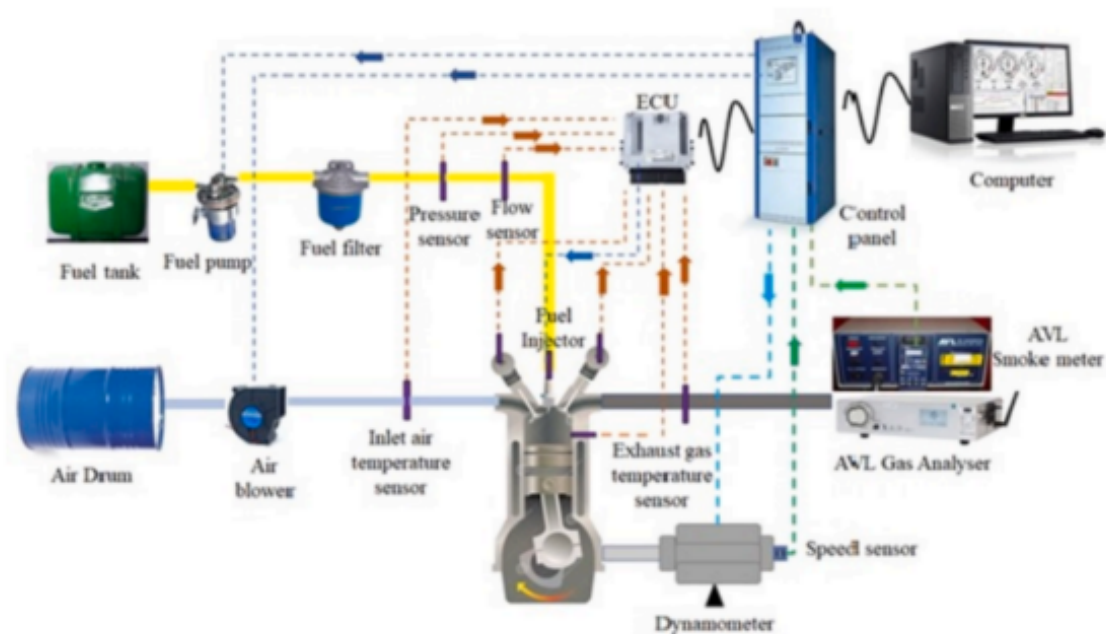


Fig. 1. Schematic layout of the experimental setup.



A. Surya, R. Prakash and N. Nallusamy "Heat transfer and fluid flow characteristics during the charging of a packed bed thermal energy storage unit using myristic acid". Journal of Energy Storage. clarivate impact factor:8.9.

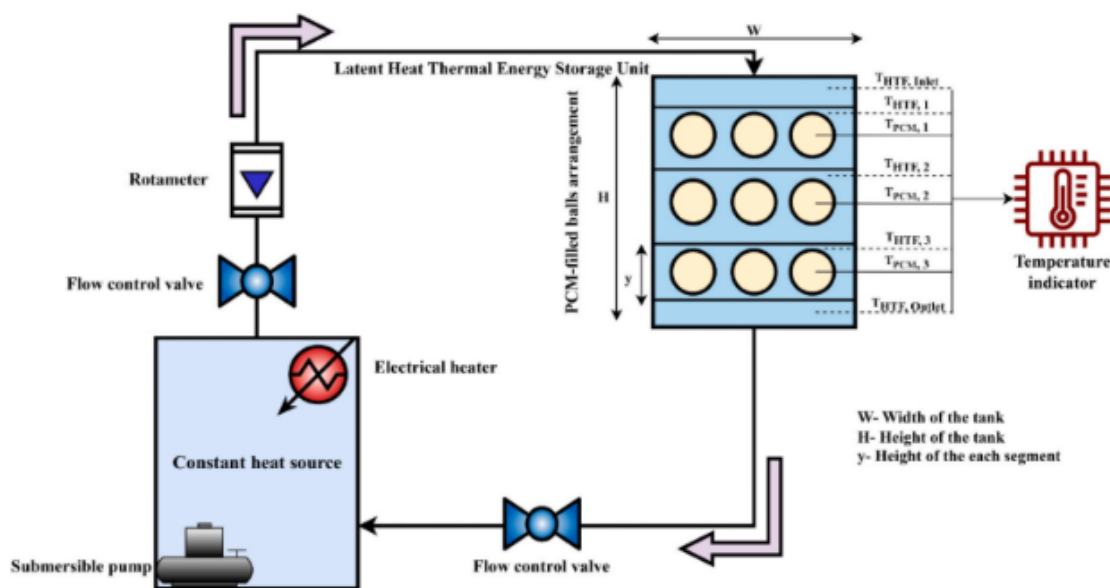


Fig. 1a. Schematic layout of the PBTES unit [46].

DEPARTMENT OF MECHANICAL ENGINEERING CLASS OF 2025

PLACEMENT UPDATE

ISUZU



MOHAMMED
MUSTAFA A



KEVIN JUDE A



ARAVINDHAN R

DEPARTMENT OF MECHANICAL ENGINEERING CLASS OF 2025

PLACEMENT UPDATE



JAGATHRATCHAGAN S



LOKESHWAR R

DR. M.S. ALPHIN RECEIVES BEST PAPER AWARD AT INTERNATIONAL CONFERENCE VSPICE 2025

Dr. M.S. Alphin Attended the VSPICE conference on February 7, 2025, at NMAM Institute of Technology, Nitte, where we presented a paper titled "IoT-Based Virtual Reality Comforting Movement Design for Healing Rehabilitation." My presentation highlighted the integration of IoT and Virtual Reality (VR) technologies to create a comforting movement design aimed at enhancing rehabilitation processes. This innovative approach leverages the immersive capabilities of VR, combined with IoT sensors, to provide personalized and effective healing experiences for patients. The paper demonstrated how such a system can improve patient engagement and outcomes in rehabilitation settings.. I was honored to receive the Best Paper Award for this work. This recognition underscores the potential of interdisciplinary research in healthcare innovation.

CERTIFICATE

Based on the evaluation report of the session chairs & review report, the following paper has been conferred as BEST PAPER among the papers presented in the technical session Track 3: VLSI, Embedded Systems and IOT

Paper ID & Title of the paper:

23 - IoT - Based Virtual Reality Comforting Movement Design For Healing Rehabilitation



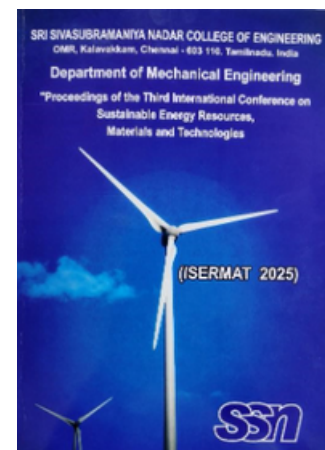
ISERMAT 2025 – INTERNATIONAL CONFERENCE CONDUCTED BY MECH TEAM

The third International Conference on “Sustainable Energy Resources, Materials and Technologies – ISERMAT 2025 was conducted by our department on February 13 and 14, 2025. Chief Guest, Dr. Senol Piskin from Istinye University, Istanbul, Turkey inaugurated the conference and released the conference proceedings.

In his chief guest address, Dr. Senol Piskin spoke about the role of computational models and extended reality in sustainable healthcare innovations. His talk also explored the integration of advanced simulation techniques, digital health solutions, and AI-driven modeling in addressing critical challenges in healthcare and engineering.

Dr. S. Karthikeyan, Assistant General Manager, Fuel Cell-Product Development, Ashok Leyland Ltd, Chennai, Dr. S. Kalaiselvam, Director for Industrial Safety, Professor, Department of Mechanical Engineering, College of Engineering Guindy, Anna University, Chennai and Dr. N. Lakshmi Narasimhan, Vice President – Industry-Institute Partnership, GRT group of educational institutions, Tiruttani, delivered keynote lectures during the conference.

Dr. Karthikeyan spoke about revolutionizing transportation using hydrogen fuel cell vehicles. He explained in detail about fuel cell system components and incorporation methods in a vehicle. Dr. Kalaiselvam’s speech focused on enhancing the phase change materials with nanomaterials for efficient thermal energy harvesting in sustainable buildings. Dr. Lakshmi Narasimhan deliberated in detail about the evolution and challenges of Lithium-Ion batteries. He discussed stages of development, thermal stability issues, safety and test standards of these batteries. The conference provided major technical sessions in the areas of heat transfer, fluid dynamics, IC engines, solar energy, electric vehicles, materials, composites, welding, manufacturing, machining, robotics and automation. A total of 115 technical papers were presented by the faculty, scholars and students during these 2 days.





Dr. Senol Piskin, Chief Guest – ISERMAT 2025



Dr. S. Karthikeyan,
Keynote speaker



Dr. S. Kalaiselvam,
Keynote speaker



Dr. N. Lakshmi Narasimhan,
Keynote speaker



Conveners – ISERMAT 2025

Dr. M. Suresh

Dr. S. Rajkumar

Dr. R. Prakash

NATIONAL WORKSHOP ON "SHAPE MEMORY ALLOYS – FROM FUNDAMENTALS TO PRODUCT DEVELOPMENT"

The **National Workshop on "Shape Memory Alloys – From Fundamentals to Product Development"** was successfully conducted as a one-day event at **SSN College of Engineering**. This workshop aimed to provide students with a comprehensive understanding of Shape Memory Alloys (SMAs)—focusing on their fundamentals, processing techniques, and practical applications in engineering and technology.

The sessions were led by **Dr. Santosh**, who provided in-depth insights into the theoretical aspects of SMAs, while **Dr. S. S. Mani Prabu** conducted **hands-on demonstrations**, offering participants a practical perspective on the material's behavior and implementation. The workshop facilitated engaging discussions, allowing attendees to explore the potential of SMAs in various advanced applications, including **robotics, biomedical devices, and smart actuators**.

The event saw enthusiastic participation from students, fostering knowledge exchange and hands-on learning. We extend our sincere appreciation to our **HoD and Dr. M Dhananchezian** for their efforts in organizing this insightful workshop. The event successfully highlighted the importance of **Shape Memory Alloys** in next-generation technologies and reinforced the need for continued research and innovation in this domain.



Dr. S. Santosh
discussing the fundamentals of SMA



Dr. S. S. Mani Prabu
during the demonstration session

5 DAY FDP CONDUCTED UNDER ASM STUDENTS CHAPTER

A 5-day faculty development program was organized, and the co-ordinators were Dr. S. Santosh, Dr. S.A. Srinivasan and Dr. D. Ananthapadmanaban. On the 1st day, Mr. Nitin Reddy, students chapter chairman welcomed the gathering. Dr. Koteeshwara Rao, HoD I/C spoke about the importance of regular programs to enhance knowledge.

DAY 1 - Dr. Srinivasa Rao Bakshi, Professor, Department of Materials and Metallurgical Engineering, IITM spoke about cold metal transfer. He elucidated critical velocity, deposition efficiency, bonding mechanisms, advantages and applications of cold metal transfer.

DAY 1 - Dr. S. Santosh recently delivered an insightful talk on Shape Memory Alloys (SMAs), focusing on their unique ability to recover their original shape after deformation through martensitic phase transformations.

DAY 2 - Dr. C. Karthik, Assistant Professor, IIITDM spoke about leveraging ML tools to mechanical engineering. He brought out the differences between traditional medicine and modern medicine and showed practically how his lab works towards robotic assisted surgery tools.

DAY 2 - Dr. D. Ananthapadmanaban, gave a talk on Processing, testing and characterization of Tin Zinc Antimony based lead free alloys with Lanthanum addition. He talked about the problems in lead-based alloys and legislations in other countries regarding their use.

DAY 3 - Dr. Thirumurugan, Associate Professor, Crescent Institute of Science and Technology talked on natural fibre reinforced composite materials. Different methods of manufacture, mechanisms of binding and dynamic mechanical characterization were explained completely.

DAY 3 - Dr. Dhananchezian-Associate Professor, Department of Mechanical Engineering, SSNCE explained the limitations of conventional machining techniques when dealing with Ni-based superalloys, such as high cutting forces, tool wear, and thermal damage. The session was highly engaging, with faculty and students appreciating the practical insights and research advancements presented.

DAY 4 - Dr. Karunanithi, Associate Professor, Department of Mechanical Engineering, Crescent Institute of Science and Technology delivered a talk on hybrid composites. Alloy 7017, with 10 % Alumina, with 10% Yttria and with 5% Alumina, 5Y5 Yttria were synthesized and characterized. % contribution of each of the strengthening mechanisms were discussed elaborately using established mathematical equations.

DAY 4 - Dr S.A. Srinivasan, Assistant Professor, SSNCE talked on corrosion mitigation in the energy sector. He explained different types of corrosion and mitigation mechanisms in fuel cells.

Day 5 - Dr Balasubramanian, Associate Professor, Sri Venkateswara College of Engineering discussed several advanced machining techniques aimed at improving efficiency, precision, and tool life. Cryogenic machining, which involves the use of liquid nitrogen or carbon dioxide as a coolant, has been shown to reduce thermal effects, improve tool performance, and enhance surface finish. Ultrasonic-assisted machining, where high-frequency vibrations are applied during cutting, effectively reduces cutting forces, minimizes tool wear, and facilitates smoother chip removal.

DAY 5 - Dr. Mani Prabu, Associate Professor, Department of Mechanical Engineering, SSNCE discussed various smart materials, including shape memory alloys (SMAs), piezoelectric materials, electroactive polymers (EAPs), and magneto strictive materials, highlighting their unique properties and functionalities.

MECH AND PHYSICS DEPT GET CONSULTANCY PROJECT DR. SATHEESH KUMAR GOPAL SHARES...



I'm happy to share that a consultancy project titled "Fabrication of structurally modified PA 6,6/rGO aerogel composite as a potential connector for automobiles" has been sanctioned by the Company - Besmak Components Pvt. Ltd. to Dr. Julie Charles, Associate Professor, Department of Physics and Dr. Satheesh Kumar Gopal, Associate Professor, Department of Mechanical Engineering for a sum of Rs.1,50,000. The duration of the project is two years.

MECH ALUMNI WINS PRIZE IN INTERNATIONAL COMPETITION DR. S. VIJAYAN SHARES THE NEWS...

I am delighted to inform you that that Vishvessh M (2017-2021 batch), who did his BE final project under my guidance titled “Torsional Vibration Analysis of Gearbox of Armed Vehicle” won the first prize of £400 at the 2024 British Gear Association (BGA)/IMechE Final Year Project Prize. Also, Vishvessh has been invited to present our work to leading gear experts at On-line Gears 2025 Technical Awareness Seminar in November 2025 @ British Gear Association, University of Newcastle. I am happy to share the views of the judge about the project:

- A well-presented report which addresses an important characteristic of gear performance.
- The literature survey is appropriate and covers some key areas including misalignment but could have been extended to include the effect from micro-geometry corrections.
- Clear objectives are defined, and methodology is appropriate. The conclusions are reasonable and justified by the analysis results. A section on lessons learnt would be welcome for the BGA prize presentation.

The British Gear Association (BGA) Student Prize is awarded to recognize and encourage students in the field of gear engineering and related disciplines. This prize acknowledges outstanding academic performance or innovative projects including those related to gear technology, manufacturing, or design. The competition invites students from various educational institutions to submit their work, with winners receiving not only a monetary prize but also opportunities for professional development, networking, and exposure within the industry. It aims to promote the importance of gear engineering and inspire the next generation of engineers in the UK and beyond.

The brochure of announcement for the current year 2025 British Gear Association (BGA)/IMechE Final Year Project Prize could be found at:

<https://www.bga.org.uk/post/joint-bga-imeche-student-prize-2024>.

PREPARATION SESSION FOR ISUZU MOTORS INDIA PVT. LTD. – A STEP TOWARDS SUCCESS

A dedicated preparation session was conducted on February 4, 2025, for the shortlisted students appearing for the Isuzu motors India Pvt. Ltd. recruitment process. The session took place in the mechanical seminar hall from 2:30 pm to 3:30 pm and was moderated by Dr. Vijayan and Dr. Divya Zindani.

Dr. Vijayan, the mentor for the session, provided invaluable guidance to the students based on customized preparation material designed specifically in line with the job description. The session covered essential aspects such as group discussion strategies, technical interview readiness, and HR interaction techniques, ensuring that students were well-equipped to face the recruitment process with confidence. Thanks to Dr. Vijayan's mentorship, the session was highly engaging and beneficial for the participants. His expert insights and practical advice had a significant impact, leading to the successful selection of two students for the job role at ISUZU MOTORS INDIA PVT. LTD.

The session proved to be an excellent platform for students to refine their interview skills, gain industry-specific knowledge, and boost their confidence. We sincerely thank Dr. Vijay Sekar K S for his encouragement and support and Dr. Vijayan for his time and expertise in mentoring the students toward this achievement.



PRESIDENT, SSNI, GIVES IFSP (STIRS)- SANCTIONED PROJECTS; HOD SHARES...



Dr KS Vijay Sekar/Prof/Mechanical received the IFSP (STIRS) sanctioned projects for I/II/III years and PG departments, from President on 5th and 12th Feb 2025. A total of 57 projects with a total budget of 17.37 lacs were sanctioned for Mechanical. Mechanical students are constantly looking for the annual funding opportunity and with the help of their guides come up with excellent proposals. Kudos to the faculty and the inspired student community and the management for support.

GUEST LECTURE ON “ENERGY CONSERVATION IN BUILDINGS” DELIVERED BY DR. S. RAJKUMAR



Dr. S. Rajkumar, ASP/Mechanical, delivered a guest lecture on “Energy Conservation in Buildings – A Little Leap Towards Decarbonization” at the ATAL-AICTE sponsored Online Faculty Development Program (FDP) titled "EMERGING TRENDS AND TECHNOLOGIES IN RENEWABLE ENERGY FOR SUSTAINABLE DEVELOPMENT", on 12-02-2025

DR. L. POOVAZHAGAN INVITED AS ACADEMIC EXPERT AT ST. JOSEPH COLLEGE OF ENGINEERING



Dr. L. Poovazhagan, ASP/Mech. invited as academic expert for the mechanical engineering department advisory committee meeting held @ St. Joseph College of Engineering, Sriperumbudur, Affiliated to Anna University, Chennai, on 20.02.2025.

DR. S. VIJAYAN DELIVERED AN INVITED TALK AT SA ENGINEERING COLLEGE, CHENNAI

Dr. S. Vijayan Delivered an Invited Talk entitled Recent Trends in Additive Manufacturing in ATAL 6 Days Online FDP on "Recent trends in AI empowered 3D Bio Printing technologies towards fabrication of smarter Bio medical implants" Conducted by SA Engineering College, Chennai on 15.02.2025.

MECH STUDENTS GO FOR IV - DR. R RAJESWARI AND MR M GIRIDHARAN SHARE THE NEWS



Dr. R. Rajeswari, Associate Professor along with Mr. M. Giridharan, Lab Assistant have accompanied III year Mechanical Engineering students for an Industrial visit to Rainbow Pipes, a manufacturing company in Udipi that produces PVC pipes and a tour to northern Karnataka- Dandeli, GoKarna Beach during 22-26 February 2025.

DR. S. VIJAYAN AS SESSION CHAIR FOR RACEEE 2025

DR. S. Vijayan attended as the Session Chair for the 9th International Conference on Recent Advancements in Chemical, Environmental, and Energy Engineering (RACEEE 2025) on 06/02/2025 and 07/02/2025.

INDUSTRY COLLABORATION MEETINGS

31/01/2025	Dr KS Vijay Sekar/Prof/Mech organized a online meeting with NAMTECH, Gujarat for discussion on possible MOU/research/Internship collaborations between SSN and NAMTECH. The meeting was attended by Principal, CEO SSN ifound and Mechanical department colleagues.
19/02/2025	Dr KS Vijay Sekar, Dr G Satheesh Kumar, Dr S Suresh Kumar, Dr Divya Zindani, Dr Vimal Sam Singh and Dr SA Srinivasan attended an online meeting with CATERPILLAR company on Faculty and student-based consultancy projects on 12.02.2025

INTERNATIONAL JOURNAL PUBLICATION

14/02/2025	A Srinivasan, B Musthafa, B Vishnu Vardhana Naidu, M Sunil Kumar published a paper titled "Optimization and experimental investigation on CI engine characteristics fuelled with low carbon alcohols and juliflora biodiesel blends: A RSM approach" in the journal "Fuel"
18/02/2025	A. Surya, R. Prakash and N. Nallusamy published a paper titled "Heat transfer and fluid flow characteristics during the charging of a packed bed thermal energy storage unit using myristic acid" in the journal "Journal of Energy Storage".

SCHOLAR INFO

19/02/2025	Dr KS Vijay Sekar/Prof/Mech attended an online DC meeting for a Anna University Research Scholar registered at Chennai Institute of Technology on 19.02.2025
07/02/2025	Dr KS Vijay Sekar/Prof/mech attended the DC meeting of a scholar from St. Joseph's college of Engineering, registered under Anna University, on 07.02.2025
21/02/2025	Dr. M. Dhananchezian, ASP/Mechanical Engineering conducted the 4th DC meeting (Review of Examiners' Comments) for his part-time research scholar, Mr. P. Kaliyappan (1617299251) on 21.02.2025.

NON-TEACHING STAFF ACTIVITIES

02/12/2024	Mr. Balasundaram P / Assistant Lab Instructor / Mechanical / Master of Engineering / Manufacturing 3rd Semester (Parttime) Passed Result with Cgpa 9.0 In Aarupadai Veedu Institute of Technology Pyanoor . Kanchipuram 603104
11/12/2024	Mr.Balasundaram P /Assistant Lab Instructor / Mechatronics & Automation Lab / Attended One Day Webinar Ironcad Packaging From 12 Pm To 1 Pm On 21.02.2025 (Friday)

25/02/2025	Mr.Giridharan M /Lab instructor/ Mech attend 'Empowering Communication: A Brainstorming Workshop on Professional Use of the English Language" organized by the Department of Electronics & Communication Engineering on February 21, 2025.
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FDP ATTENDED

26/02/2025	Dr. R. Damodaram,Associate Professor, attended One-week online AICTE-ATAL Sponsored Faculty Development Programme (FDP) on "AI-driven Innovations: Transforming Core Engineering Disciplines at SRI SIVASUBRMANIYA NADAR COLLEGE OF ENGINEERING from 20/01/2025 to 25/01/2025.
28/02/2025	Dr. M. Dhananchezian, Associate Professor, attended the Five Days Faculty Development Program on “Advanced Materials and Manufacturing” conducted by Sri Sivasubramaniya Nadar (SSN) College of Engineering in Association with ASM International Chennai Chapter, during February 17-21, 2025
28/02/2025	Five Days Faculty Development Program on “Advanced Materials and Manufacturing” conducted by Sri Sivasubramaniya Nadar (SSN) College of Engineering in Association with ASM International Chennai Chapter, during February 17-21, 2025 at Department of Mechanical Engineering, Sri Sivasubramaniya Nadar (SSN) College of Engineering. Rajiv Gandhi Salai (OMR), Kalavakkam – 603 110, Tamil Nadu, India

INTERNATIONAL CONFERENCE ATTENDED

14/02/2025	Dr. L. Poovazhagan, ASP/Mech., presented a paper entitled "Comprehensive review on creation of superhydrophobic surfaces on magnesium alloys" in the Two-days INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY RESOURCES, MATERIALS AND TECHNOLOGIES (ISERMAT 2025) organized by Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Thiruporur, Chennai, during February 13-14, 2025.
14/02/2025	Dr. L. Poovazhagan, ASP/Mech., presented a paper entitled "Mechanical behavior and microstructural characterizations of SiC whisker reinforced aluminum composites" in the Two-days INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY RESOURCES, MATERIALS AND TECHNOLOGIES (ISERMAT 2025) organized by Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Thiruporur, Chennai, during February 13-14, 2025.
25/02/2025	Dr.M.Nalla Mohamed presented a paper entitled "Influence of foam filling on the energy absorption characteristics of cylindrical tubular structures for lateral impact" in the international conference on "Sustainable Energy Resources, Materials and Technologies (ISERMAT 2025)" during February 13-14, 2025 at SSN college of Engineering

25/02/2025	Dr.M.Nalla Mohamed presented a paper entitled "Axial crushing and energy absorption behaviour of aluminium conical foam filled sandwich shells with corrugated cores" in the international conference on "Sustainable Energy Resources, Materials and Technologies (ISERMAT 2025)" during February 13-14, 2025 at SSN college of Engineering
25/02/2025	Dr.M.Nalla Mohamed along with UG students, (Arulsivam KN, Lokshwar R Niraikulathan R) presented a paper entitled "Low velocity impact and Energy absorption capacity of hybrid sandwich tubes" in the international conference on "Sustainable Energy Resources, Materials and Technologies (ISERMAT 2025)" during February 13-14, 2025 at SSN college of Engineering
25/02/2025	Dr.M.Nalla Mohamed along with UG students (Ameekh Saju, Malepati Athish, HariMadhavanN.B) presented a paper entitled "Impact Performance and energy absorption Analysis of Glass woven roving fabric/Fiber Mesh Sandwich Composite Plates under Low-Velocity Impact "in the international conference on "Sustainable Energy Resources, Materials and Technologies (ISERMAT 2025)" during February 13-14, 2025 at SSN college of Engineering
28/02/2025	Dr. S. Rajkumar, ASP/Mechanical, presented a paper entitled "Role of Artificial Intelligence and Machine Learning in Optimising the Engine Characteristics of Dual Fuel Combustion with Oxygenated Fuels" in the two-day International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT 2025) organized by Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai – 603 110, during February 13-14, 2025.

28/02/2025	Dr. M. Dhananchezian, Associate Professor presented a paper entitled INVESTIGATE THE PERFORMANCE OF TEXTURED CARBIDE INSERTS IN TURNING TI-6AL-4V ALLOY in the Third International Conference on Sustainable Energy Resources, Materials, and Technologies (ISERMAT 2025) organized by SSN College of Engineering, Kalavakkam, Tamil Nadu, India, on 13-14 February 2025.
28/02/2025	Dr. M. Dhananchezian, Associate Professor presented a paper entitled OPTIMIZATION OF CUTTING PARAMETERS DURING DRY TURNING OF INCONEL 100 WITH CRYO-TREATED TIALN CARBIDE INSERTS in the Third International Conference on Sustainable Energy Resources, Materials, and Technologies (ISERMAT 2025) organized by SSN College of Engineering, Kalavakkam, Tamil Nadu, India, on 13-14 February 2025.
28/02/2025	M. Dhananchezian, B. Prasana, V. Niranjan presented a paper entitled A COMPREHENSIVE REVIEW ON VARIOUS COATED CARBIDE INSERTS USED IN TURNING OF INCONEL 718 ALLOY in the Third International Conference on Sustainable Energy Resources, Materials, and Technologies (ISERMAT-2025) organized by SSN College of Engineering, Kalavakkam, Tamil Nadu, India, on 13-14 February 2025.
28/02/2025	M. Dhananchezian, B.M. Tharuna Rakshaa, S.L. Sricharan presented a paper entitled EVALUATE THE TURNED SURFACE TOPOGRAPHY OF HASTELLOY C-22 AT VARIOUS CUTTING SPEEDS in the Third International Conference on Sustainable Energy Resources, Materials, and Technologies (ISERMAT-2025) organized by SSN College of Engineering, Kalavakkam, Tamil Nadu, India, on 13-14 February 2025.

28/02/2025	M. Dhananchezian, S.L. Sricharan, B.M. Tharuna Rakshaa, presented a paper entitled STUDY THE WEAR MECHANISMS OF TIALN-CARBIDE INSERTS DURING TURNING NIMONIC 90 ALLOY in the Third International Conference on Sustainable Energy Resources, Materials, and Technologies (ISERMAT-2025) organized by SSN College of Engineering, Kalavakkam, Tamil Nadu, India, on 13-14 February 2025.
28/02/2025	DJ. Eashwar (PG Manufacturing), Dr.S. Suresh Kumar (Co-Author) presented a paper titled “Low and high velocity Ballistic Performance of Impedance Graded (TRIP Steel and AA7075 T6) Composite Targets” in the “Third International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT2025)” organized by Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai on February 13 and 14, 2025.
28/02/2025	M. Dhananchezian, B. Raaghavan Mookiah, A.P. Sanjai Kumar presented a paper entitled CUTTING SPEED INFLUENCED THE ROUGHNESS OF TURNED MONEL 400 SURFACES WITH A COATED CARBIDE INSERT in the Third International Conference on Sustainable Energy Resources, Materials, and Technologies (ISERMAT-2025) organized by SSN College of Engineering, Kalavakkam, Tamil Nadu, India, on 13-14 February 2025.
28/02/2025	Dr.S. Suresh Kumar, Adhithya V, Anbarasu V, Hemachandran A, presented a paper titled “Determination of Mechanical Properties of Accumulated Roll Bonded (Al Alloy and Copper) Plates” in the “Third International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT2025)” organized by Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai on February 13 and 14, 2025.

28/02/2025	Mohamed Akmal Baig A, Kavya S, and Muhammad Jasoor, Dr. S. Suresh Kumar (Co-Author) presented a paper titled "Shock Behaviour of Naval Grade Steel Targets Subjected to Under Water Explosion (UNDEX) Loading" in the "Third International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT2025)" organized by Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai on February 13 and 14, 2025.
28/02/2025	Maalolan, Harish and Dr. S. Suresh Kumar (Co-Author) presented a paper titled "Determination of Ballistic Performance of Polymer Composite Targets using Numerical Method" in the "Third International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT2025)" organized by Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai on February 13 and 14, 2025.
28/02/2025	Dr. S. Suresh Kumar, Sachith C Santosh, Srivatsan S, Vignesh Pandian R (Co-Author) presented a paper titled "Estimation of Fracture Toughness of a Compact Tension Specimen Using Elastic Plastic Fracture Mechanics (EPFM) Approach" in the "Third International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT2025)" organized by Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai on February 13 and 14, 2025.
28/02/2025	M S Alphin , Jithu Morrison S, Anish, " IoT-Based Virtual Reality Comforting Movement Design for Healing Rehabilitation," International Conference VSPICE, 7 Feb 2025, Nitie.
28/02/2025	Micha Premkumar, Design and Analysis of Hybrid Solar and Wind Tree for Continuous Power Generation, ISERMAT25, SSN, Chennai, February 13 and 14, 2025

28/02/2025	D. Ebenezer, Solar Desalination using Multi-Effect Heat Recovery Systems – A Review, Third International conference on sustainable energy resources, materials and technologies, 13-14 of February 2025, Sri Sivasubramaniya Nadar College of Engineering, Chennai, p89
28/02/2025	R Rajeswari, J Fabrizio, Abhishek Kumar, Intelligent Adaptive Smart Door Mechanism: Design, Implementation, and Performance Analysis for Commercial and Industrial Use, International Conference on Sustainable Energy resources, Materials and Technologies, Sri Sivasubramaniya Nadar College of Engineering, 13-14 February, 77
28/02/2025	R. Rajeswari, K Sanjay, R Saran, A Sanjayakumar, Innovative design and development of a high-precision indexing drill jig for motorcycle brake disc machining, International Conference on Sustainable Energy resources, Materials and Technologies, Sri Sivasubramaniya Nadar college of Engineering, 13-14 February, 79
28/02/2025	M Suresh, Experimental studies on a water sprayed fin and tube evaporative heat exchanger, Third International Conference on “Sustainable Energy Resources, Materials and Technologies” (ISERMAT 2025), conducted by Sri Sivasubramaniya Nadar College of Engineering, in the campus, February 13 and 14, 2025, Page no. 6.

INDUSTRIAL VISIT - DINESH PRIYAN FROM THIRD YEAR WRITES...

We, 3rd-year students, embarked on an enriching industry visit to Karnataka from the 22nd of February to the 26th of February. Our journey began with a visit to Dandeli on the first day, where we explored the serene beauty of the place. On the second day, we traveled to Gokarna, known for its pristine beaches and cultural charm, making it a perfect getaway before diving into industrial learning.

The highlight of our trip was the visit to Rainbow Pipes on the third day. This industrial facility manufactures high-quality pipes, and it provided us with invaluable insights into the entire manufacturing process. We learned how raw materials are transformed into durable pipes, and we gained a deeper understanding of the logistics involved in the production and delivery of these essential products.

The trip was both educational and fun-filled, offering a unique opportunity to apply our theoretical knowledge in a real-world setting. Visiting Rainbow Pipes helped us comprehend the technical intricacies of pipe manufacturing, which will undoubtedly aid us in our future careers. Overall, it was a perfect blend of learning, exploration, and enjoyment, making the trip a memorable and highly beneficial experience.



HARIPRASATH FROM SECOND YEAR WRITES...

We, second-year Mechanical Engineering students, went on an exciting industry visit (IV) to Vagamon, starting our journey from Chennai on the 26th of February. Our trip to Vagamon was filled with adventure and scenic beauty. On the first day, we visited the famous Suicide Point, where we experienced breathtaking views. We also enjoyed an exhilarating jeep ride and explored the serene Pine Forest. The Vagamon Adventure Park offered thrilling activities, and in the evening, we gathered around a campfire, making the day even more memorable.

On the third day, we visited the Masco Tea Factory, where we gained valuable insights into the world of tea production. We learned about the various machines used in the factory, their maintenance, and the entire process of making tea powder. This visit gave us a deeper understanding of the mechanical engineering principles involved in tea production and how different machinery operates in a real industrial setting.

After the factory visit, we explored Fort Cochin and later relaxed at Vypin Beach. Finally, we boarded the train back to Chennai, reflecting on the wonderful experience. The trip was not only educational but also filled with fun and excitement, making it a perfect blend of learning and adventure that we will always cherish.



PRADHYUMNAN SARAVANAN (MECH 2024) SHARES...



As I step into my second semester of pursuing a master's degree at Georgia Tech, I can't help but reflect on the journey so far. Moving to a new country at 21 was definitely a leap into the unknown. It was challenging, exciting, and transformative all at once. The complete shift in time zones, culture and academic rigor pushed me in ways I never imagined.

I am deeply grateful for everyone who supported me along the way—my professors, friends, and family who believed in me even when things felt overwhelming. This semester wasn't just about individual growth; it was also about collaboration and shared achievements.

One of the highlights was a project where my team and I worked on developing the design for a "Polyethylene-Water Mist Radiation Shield for Lunar Habitats". Though it was a part of my coursework, collaborating with Adarsh Sasi, Antonin Attali and Samuel Yoon Yoon taught me the value of diverse perspectives and teamwork. Each of us brought unique skills to the table, and together, we overcame challenges to produce something we're truly proud of.

I extend my deepest gratitude to my project guide, Santosh Sampath, for his I expanded my academic horizons by taking courses in Partial Differential Equations and Mass Transfer—subjects from other disciplines. While demanding, these courses provided a rewarding challenge, enhancing my analytical skills and deepening my understanding of core concepts that complemented the skillset in thermal systems and advanced simulations.

Another highlight of this semester was serving as a Graduate Teaching Assistant (GTA) for the "Creative Decisions and Design" course. Guiding students through mechatronics, rapid prototyping, and manufacturing while managing a state-of-the-art prototyping lab was an enriching and challenging experience. Although I hadn't taken this course before, I embraced the learning curve, developed expertise and am excited to continue as a GTA in the upcoming semester, especially with the support of Nick Isaf and Ian Silva Trenkle.

I am grateful for the hurdles that pushed me to grow and for the incredible people who supported me along the way. Whether it was exploring new academic disciplines, collaborating on impactful projects, or mentoring students as a Teaching Assistant, each experience shaped me in impactful ways.

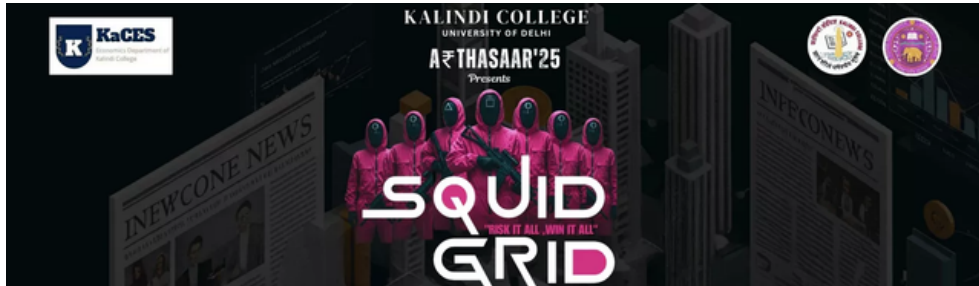
This journey has reaffirmed my belief that "Resilience is rising, not retreating, with every fall." With this mindset, I look forward to embracing the opportunities and challenges that lie ahead!

No Competition, No Progress

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From the desk of Ramki – Aspire to Inspire

From Ramki

Happy Morning – Aspire to Inspire

You Need a goal in life

If two people are trying to climb a mountain together, what is the most important things they need to get to the top ?

Is it

- Equipment
- Training
- Teamwork
- Favourable weather conditions

Well, they need all of these for sure. But the most important thing is the MOUNTAIN itself, They need a clear GOAL !



Too often, we get obsessed with the equipment and the training but have no clear goals. The best mountain climbing equipment is of little use if you don't have a mountain to climb.

We are all very fortunate. We have the most fabulous equipment there is. We have access to training. And there are colleagues out there, waiting to help us succeed.

But we need to have our own mountains . Our own goals.

When you have you own mountain to climb, everything changes.

- You get your sense of purpose
- You begin to want to climb that peak.
- You become disciplined.
- You get up early.
- You brave the cold.
- You watch your diet.
- You seek out experts.
- You read the books

All because you have a mountain to climb and a peak to conquer. Equipment's, Skills, Competence, Training everything comes later depending on the mountain you want to climb. So instead of complaining about your equipment or your training and worrying about buying more sophisticated gadgets, set your goals first . Ask questions “ what is that I want “ and next one “ How do I get there ? Get the answers for these Next things take time and write down your goals today

“ The best mountain climbing equipment is of little use, if you don't have a mountain to climb .

#WishingMostAndMore



Dr. M S Alphin



Dr. Satheesh Kumar G



Magari Ramasamy



Abirami Subbaih



Aravindhan R



Nithish Kumar S



Dhivya Dharshini R



Mithun Kumar



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