

ASPIRE

Achievements of sports, Projects, Industry, Research & Education



From the HoD's desk.....



Dr. K S Vijay Sekar

Professor and Head,
Department of Mechanical
Engineering

We are happy to bring you the September edition of Aspire!!

We bring to you the fascination of a six-stroke engine, which has its own challenges, yet remains an unexplored concept, but Porsche has recently patented a model based on this.

It's a proud moment for the SNF family that HCL Tech has been honoured with the Excellence in Remote & Hybrid Work Strategy Award at the HR Summit & Awards by Financial Express, an award that celebrates the work-life balance ingrained in the organisation.

We were happy to host an expert from IIT Tirupathi as a guest speaker on "fluid flow in porous structures". I was invited to an excellent initiative by Caterpillar to host senior leaders from colleges from where they recruit engineers in what was termed Building Bridges event. The opportunities and challenges of the younger workforce were discussed with a visit to their plant at Tiruvallur, which was truly world class.

As the placement season has started for the 2026 batch, it's been a busy month for the students with marquee companies like Caterpillar and Ashok Leyland landing opportunities for an enthusiastic team of mechanical engineers, with more companies lined up. The department places its gratitude to CDC at SSN for being prime movers in the placement process.

Special placement- technical training sessions were organized for the students at the department, with faculty conducting pre-interview in class sessions and alumnus in the respective companies lending a helping hand with virtual sessions with students a day before the interview. The department places its gratitude to the faculty and alumnus.

Students conduct an outreach program at a school showcasing the go-kart that was built in the SSN Mech garage, which was received with wonder by the school students. Another 2026 batch student shares his Caterpillar interview experience.

Alumnus shares her experience pursuing MS at Cranfield University, UK.

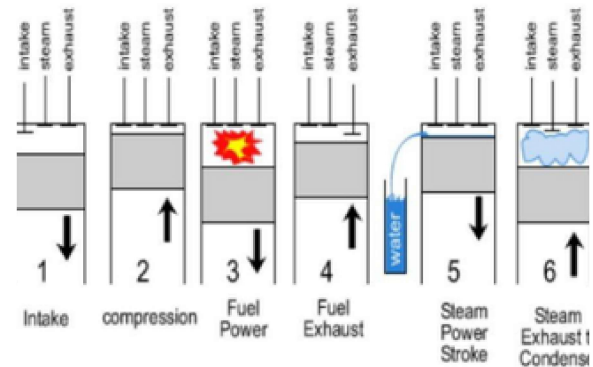
Best wishes for an eventful September,

KSV

vijaysekarks@ssn.edu.in

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

WHAT IS A SIX STROKE ENGINE?



INTRODUCTION

Six-stroke engines have attracted attention in the engineering world in recent times. The concept became widely discussed in India after Allahabad University alumnus **Shailendra Singh Gaur** reportedly built a 100cc bike engine that ran 176 km on one liter of fuel. His innovation revived the interest in extending the classic Otto and Diesel cycles among auto-enthusiasts.

DESIGN & OPERATION	THERMALS
• Base Structure: Same as a conventional four-stroke engine (piston, crankshaft, cylinder, valves). • Cycle Duration: Takes three crankshaft revolutions (1080°) instead of two (720°). • Additional Strokes: ○ 5th stroke (steam/air power): After exhaust, water (or air) is injected. ○ 6th stroke (final exhaust): Steam/air and residual gases are expelled. • Valve Mechanism: Requires modified valve timing or an extra valve to inject water/air. • Extra Injector: A water injector (or secondary chamber, in some designs) is fitted alongside the fuel injector. • Cooling Function: The injected water absorbs residual heat, lowering cylinder temperature and acting as a built-in cooling system, reducing the need for heavy radiators. • Durability Considerations: Materials must resist thermal cycling, corrosion, and lubrication issues caused by water/steam.	• Heat Recovery: Six-stroke engines reuse part of this heat by converting water to steam, producing a second power stroke without extra fuel. • Efficiency upto 50% and more and mileage more than 100km/L. • Lower exhaust temperature → reduced entropy waste (as shown on T-s diagrams). • Combustion & Expansion: • First power stroke = combustion of air-fuel mixture. • Second power stroke = expansion of water-derived steam (or hot air), increasing work per cycle. • Lower peak combustion temperature reduces NO_x emissions. Steam injection can clean deposits inside the cylinder. • Entropy Reduction: By converting some waste heat into useful work, entropy generation decreases.

Though thermodynamically sound, the six-stroke engine faces some practical challenges such as regular frequent water refills, increased complexity of parts and weight, corrosion concerns, and emissions trade-off (if tuned incorrectly). With the automotive industry rapidly shifting focus towards electrification and hydrogen-based power, the six-stroke engine may remain a fascinating engineering concept rather than a mainstream reality.

HCLTECH WINS EXCELLENCE AWARD FOR REMOTE & HYBRID WORK STRATEGY

HCLTech has been honored with the Excellence in Remote & Hybrid Work Strategy Award at the HR Summit & Awards by Financial Express. This recognition highlights our continuous efforts to create a workplace that is inclusive, connected, and adaptable to the evolving needs of our people. By embracing innovative remote and hybrid work strategies, we have enabled our employees to thrive and deliver their best, regardless of location.

This achievement reflects our strong belief in fostering flexibility, collaboration, and seamless integration of work and life. It is a proud milestone that motivates us to further strengthen our culture of empowerment and innovation. Here's to building more opportunities for our people to find their spark and excel.



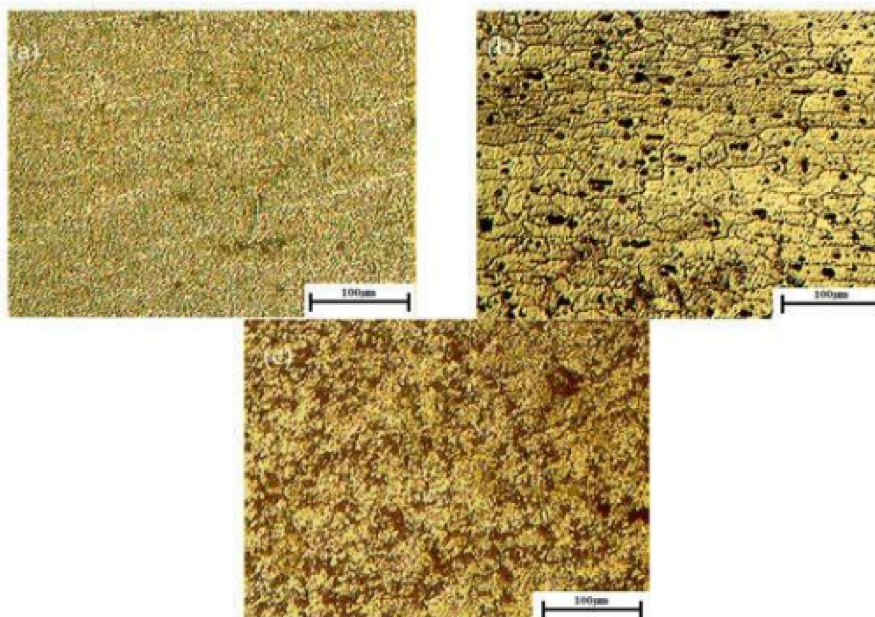


M. Dhananchezian, S. Santosh, Journal of Manufacturing Processes, Evaluation of surface topography in turned Ti-13V-3Al SMA and wear mechanisms of carbide inserts, Volume: 152, Pages: 724-740, **Impact Factor: 6.8.**

International Journal Publication - SCI /Clarivate Indexed

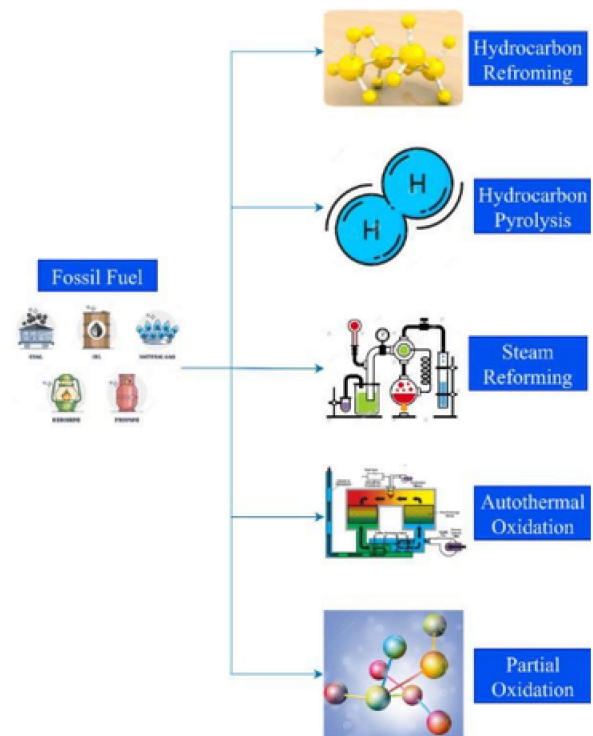
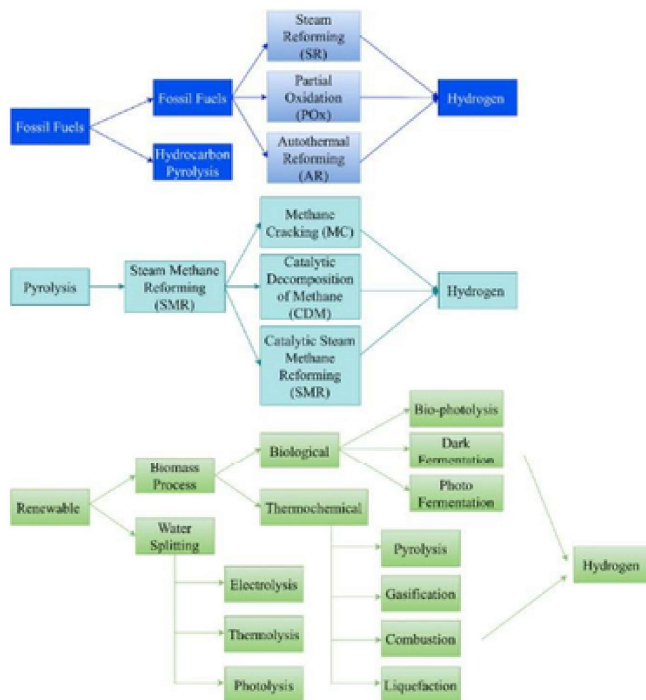


Sanjuvigasini Nagappan, Saran Kumar Murugesan, Sanjay Prakash Prithiviraj, Jayakumar Krishnamoorthy, Engineering Proceedings, Effect of FSW Parameters on Microstructure and Mechanical Properties of Dissimilar Aluminum Joints, Volume: 93, DOI: Pages: 1-7, Impact Factor: 0.205.





M. Sunil Kumar, S A Srinivasan, M. Vichitra, Amith S C, N. Beemkumar, Ritesh Pratap Singh, Kamakshi Priya K, Results in Engineering, Green, blue, and turquoise hydrogen: A review of production technologies and sustainability, Volume: 27, Pages: 1-18, **Impact Factor: 7.9.**



HOD ATTENDS THE CATERPILLAR – BUILDING BRIDGES EVENT

I was invited by Caterpillar for their Building Bridges, industry - institute meet on Aug 22 at their Chennai, Tiruvallur plant. It was an event that was aimed at understanding the needs of engineers of today and have an interactive discussion on the way forward in recruitment and other collaborative aspects. As we all know, they build an army of earth movers, huge in size, capacity and operational capabilities, catering to individuals on one end to Coal India to the Export market. Got a glimpse of some real engineering at their shop floor and in the process networked with HOD's/Deans from NIT (Trichy, Surathkal), PSG, Sastra, Anna university, BMS, Amrita, Thiagaraja colleges/universities, the commonality being students who are from these colleges and now at Caterpillar. Good interactive panel discussions with senior HR and Technical teams and excellent hospitality were key takeaways for the day. Looking forward to some mutually beneficial collaborations!!



WITH THEIR LARGEST EARTH MOVER

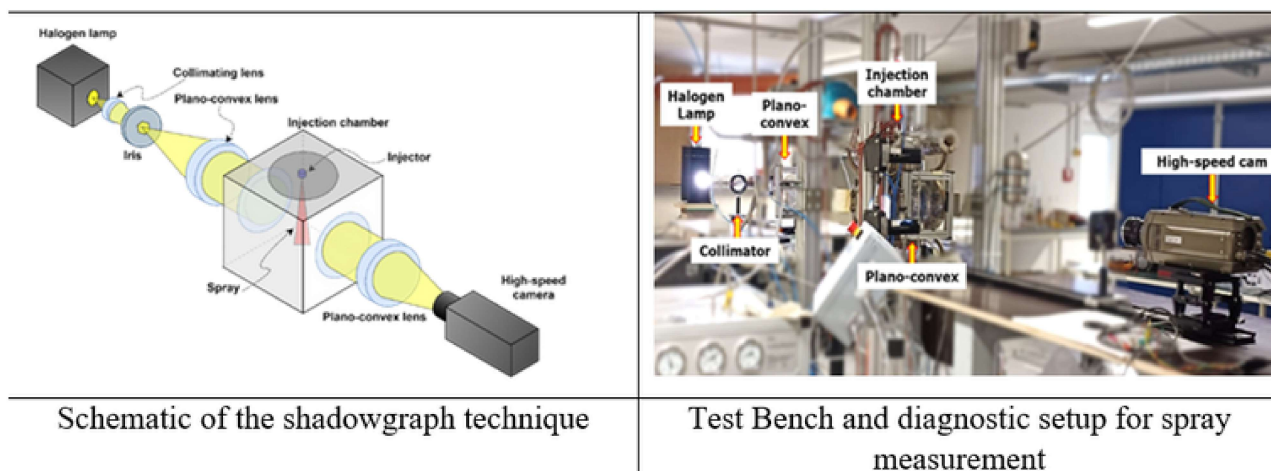


WITH MITHILA, ALUMNUS OF 2025 BATCH

PUBLICATION IN “ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE” (ELSEVIER Q1 JOURNAL) WITH CLARIVATE ANALYTICS IMPACT FACTOR OF 8.0.

T. Jeyaseelan, Abhijeet G, S. Rajkumar, Santosh Narayan, Min Son and Lars Zigan. “Application of artificial neural networks to model macroscopic spray characteristics of alcohol fuels”, Engineering Applications of Artificial Intelligence, 160 (2025):111841.

doi: <https://doi.org/10.1016/j.engappai.2025.111841>



In pursuit of global efforts to mitigate climate change and achieve net-zero carbon emissions by 2050, alcohol-based fuels are gaining attention as low-carbon alternatives for combustion engines. This study presents a novel application of Artificial Intelligence (AI) to predict the spray characteristics, specifically spray cone angle and penetration length, for a wide range of alcohol fuels and operating conditions. A robust Artificial Neural Network (ANN) model was developed using the Keras Application Programming Interface (API) on the TensorFlow platform, trained on a comprehensive dataset combining in-house experimental data for ethanol, octanol, and published data for methanol and butanol fuels. Spray behaviour was captured using shadowgraph techniques under varied injection pressures (20–239 bar) and chamber pressures (9–21 bar). The ANN model demonstrated high predictive accuracy, with mean square error and coefficient of determination (R^2) of 1.7189 and 0.9841 for spray penetration, and 6.3734 and 0.9163 for spray angles, respectively. The unified modeling framework effectively captures the complex interactions of different alcohol fuels and operating conditions, enabling advanced, accurate simulations of spray behaviour. This AI-driven approach could be a valuable tool for predicting the spray behavior of alcohol fuels, facilitating advanced modeling of low-carbon fuel combustion processes.

GUEST LECTURE BY DR. N. GNANASEKARAN

Title of the Lecture: Understanding Fluid Flow and Heat Transfer Through Porous Structures

Speaker: Dr. N. Gnanasekaran

Associate Professor, Department of Mechanical Engineering
Indian Institute of Technology Tirupati



Date & Venue: 18 August 2025, 10:00 AM

Seminar Hall, Department of Mechanical Engineering, SSN College of Engineering

Dr. N. Gnanasekaran began the lecture by outlining his major research domains, which include microchannels, compact heat exchangers, phase change materials (PCM) for energy storage, additively manufactured lattice structures and the use of wire mesh and metal foams for thermal management. He explained the fundamentals of porous media, classifying them into metal-based and non-metal-based structures, and emphasized the unique advantages of metal foams such as high conductivity, strength, and large surface area density, while also pointing out challenges like flow resistance and pressure drop. The applications of these materials in real-world systems were discussed with examples ranging from cooling in heat sinks and solar receivers to heat removal in fuel cells and high-performance heat exchangers. On the modeling front, Dr. Gnanasekaran elaborated on the limitations of Navier–Stokes equations for microscale analysis and introduced alternative approaches including pore-scale and REV-scale modeling, Darcy’s law, and Forchheimer’s extension, while also presenting validation of numerical simulations with experimental results that showed less than 3% deviation. He further highlighted key research observations, such as the strong influence of porosity and pore density on both heat transfer and flow resistance, noting that higher porosity increases the Nusselt number while lowering flow resistance, and that Forchheimer’s extended Darcy model is better suited for higher velocity flows. Finally, he introduced the optimization methodology TOPSIS (Technique for Order Preference by Similarity to Ideal Solution), demonstrating its usefulness in balancing multiple objectives and showcasing case studies that illustrated trade-offs between maximizing heat transfer and minimizing pressure drop.

The guest lecture by Dr. N. Gnanasekaran was highly insightful and impactful, enriching the audience’s understanding of porous structures in thermal engineering. His expertise in combining theoretical models, experimental techniques, and numerical simulations inspired students and faculty alike.

The Department of Mechanical Engineering sincerely thanks Dr. N. Gnanasekaran for delivering this valuable lecture and sharing his research knowledge with the SSN community.

REPORT ON PLACEMENT PREPARATORY SESSIONS FOR CATERPILLAR, ASHOK LEYLAND & MCDERMOTT INTERNATIONAL RECRUITMENT DRIVES

In line with our department's commitment to facilitating excellence in placements and ensuring our students are industry-ready, a series of structured placement preparatory sessions were conducted during August 2025 under the able guidance of Dr. Vijay Sekar K S, Head of the Department, and Dr. Divya Zindani, Faculty Placement Coordinator. These sessions were strategically designed to equip our students with technical expertise, practical insights, and first-hand knowledge of the recruitment processes of Caterpillar, Ashok Leyland, and McDermott International.

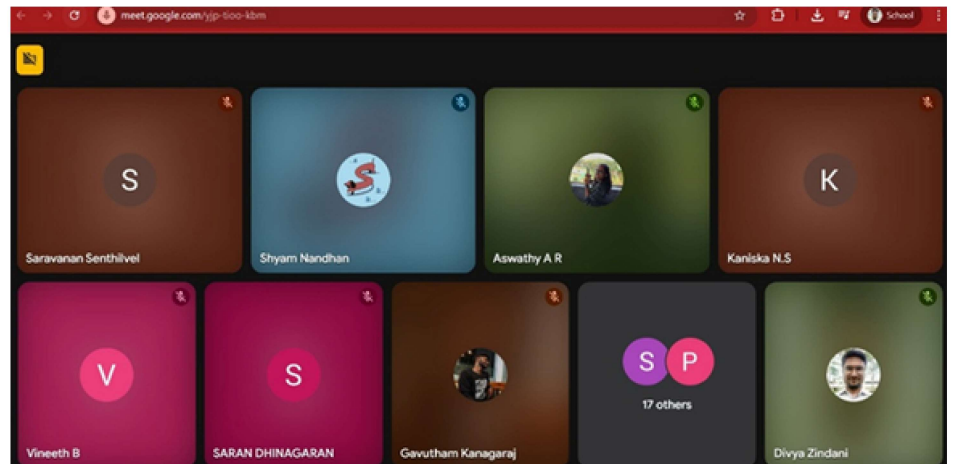
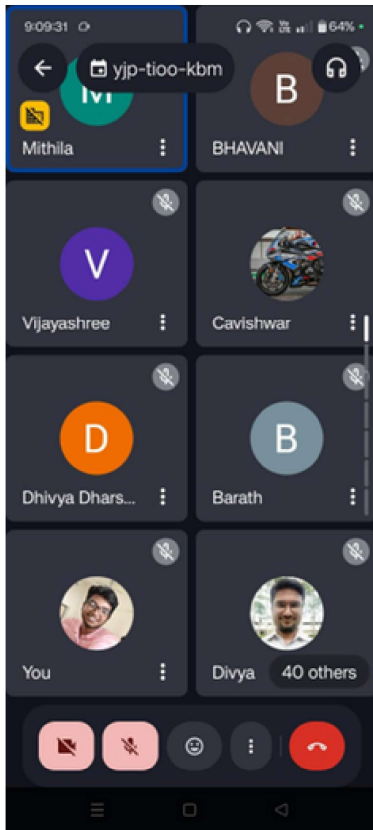
Phase I: Alumni Interaction Sessions

As a precursor to the preparatory sessions, the department organized interactive alumni sessions to bridge the gap between student expectations and industry demands. These sessions were instrumental in providing real-time insights into recruitment processes, preparation strategies, and effective approaches to succeed in core-company interviews.

Alumni interactions were conducted as follows:

- For Caterpillar (11th August 2025)
 - Mr. Cavishwar
 - Ms. Bhavani
 - Ms. Mithila
- For McDermott International (19th August 2025)
 - Mr. Hari Shankar M
 - Mr. Vaitheeshwaran
- For Ashok Leyland (20th August 2025)
 - Mr. Saran D
 - Mr. Shyamnandhan

These sessions were highly interactive and provided the shortlisted students an excellent opportunity to gain first-hand insights directly from alumni who had successfully cleared these very recruitment processes.



Phase II: Core Subject Preparatory Sessions

Based on guidance from our alumni and understanding the specific skill requirements of these companies/job description, targeted preparatory sessions were meticulously planned and executed by expert faculty members from the department:

- Dr. S Suresh Kumar: Strength of Materials and Fundamentals of Engineering design
- Dr. M. Suresh : Fundamentals of Thermal Engineering
- Dr. S A Srinivasan: Fundamentals of Automobile Engineering

These sessions focused on strengthening the students' technical foundations and preparing them for both written assessments and technical interviews.





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Achievements

As a result of these well-structured sessions and collaborative efforts between the faculty, alumni, and students, the following students successfully secured placements with

Caterpillar:

1. Mani Mathesh Mohan
2. Muthulakshmi Dhanasekar
3. Balasubramaniam K S
4. Gavutham K (Internship)
5. Mohamed Javed A

Ashok Leyland:

1. Aadhitya Subramoniam
2. Shrinivas R M
3. Hemanth P
4. Kaniska N S

McDermott International: Results yet to be announced.

Secudern

1. Jeyasurya Venkatraman
2. Ankit Ram Samant

Psiog digital

1. Bahawin Duhe D
2. Yaswanth Karthick Arumuga Saravanan
3. Deva Darshan G K

This success reflects the proactive measures undertaken by the department and the relentless support provided to students throughout the recruitment process.

Faculty Contributions & Leadership

The entire initiative was steered under the visionary leadership of Dr. Vijay Sekar K S, whose strategic guidance ensured seamless coordination and resource allocation.

Dr. Divya Zindani, Faculty Placement Coordinator, played a pivotal role in planning, executing, and monitoring the preparatory activities, liaising effectively with alumni, students, and faculty to ensure maximum benefit for the participants. The cohesive teamwork between faculty, alumni, and students set a benchmark for structured placement preparation within the department.

Student Voices – In Their Own Words

Placement Experience – Caterpillar

BALASUBRAMANIAM K S FROM 4TH YEAR WRITES ABOUT HIS CATERPILLAR RECRUITMENT EXPERIENCE...

Having recently attended the recruitment process for Caterpillar, I would like to share my GD and interview experience with you all. The selection process began with a Group Discussion (GD) round, where our topic was “AI vs Human Intelligence.”



The discussion was highly engaging, and I contributed by highlighting the differences between IQ (Intelligence Quotient) and EQ (Emotional Quotient), emphasizing that while AI excels in analytical speed and accuracy, it lacks the emotional depth and empathy unique to humans. I also pointed out the exponential growth of AI, its potential to revolutionize industries, and how human intelligence still plays a crucial role in ethical decision-making and creativity.

Following the GD, I progressed to the technical interview round with the Detailing, Checking, and Release (DCR) Division. The interview lasted around 40 minutes, and the panel focused more on practical knowledge rather than in-depth project discussions. I was briefly asked about my internship, after which the interview primarily revolved around core mechanical concepts.

Some of the key areas I was questioned on included:

- Drawing 1st angle and 3rd angle projections of components.
- Explaining and sketching GD&T control symbols, with a detailed discussion on Runout and Total Runout with real-world examples.
- Identifying suitable welding methods for given components.

Designing a simple component with dimensions, assigning appropriate material and manufacturing processes, and justifying cost-effective and efficient production methods, tying back to my interest in DFM (Design for Manufacturing).

Overall, this experience was a significant learning milestone. The GD round helped me sharpen my critical thinking and communication skills, while the interview tested my ability to apply theoretical knowledge to practical scenarios. I am grateful for this exposure as it gave me confidence in handling both technical and non-technical aspects of campus recruitment and reaffirmed my interest in pursuing a career in product design and manufacturing.

Student Voices – In Their Own Words



Placement Experience – Caterpillar

MUTHULAKSHMI DHANASEKAR FROM 4TH YEAR SHARES HER CATERPILLAR RECRUITMENT EXPERIENCE...

The interview panel adopted a resume-driven approach, focusing entirely on projects, competition participation, and technical skills without asking generic questions.

·Project-Based Questions:

- o Asked to sketch and explain the design and working principles of her Internal Funded Project within 5 minutes.
- o Given 6 minutes to draw the design of her Design & Fabrication Project, explaining its working mechanism, novelty, and technical aspects. A working model video was also reviewed.

·Caterpillar Tech Challenge 2025:

- o Discussed MY participation and addressed technical questions related to the problem statement.
- o Requested to draw the proposed design submitted during the competition.

·Practical Component Analysis:

- o Given a mechanical component to draw 1st and 3rd angle projections.
- o Faced basic GD&T-related questions to test design knowledge.

The interview was highly technical and application-oriented, assessing design capability, conceptual clarity, and problem-solving skills.

Student Voices – In Their Own Words

Placement Experience – Ashok Leyland

HEMANTH FROM 4TH YEAR WRITES ABOUT HIS ASHOK LEYLAND RECRUITMENT EXPERIENCE...



The recruitment process of Ashok Leyland was quite unique and stood out at every stage. It began with an online assessment of 100 questions to be completed in 60 minutes, with aptitude being relatively easy and technical questions more time-consuming, especially from Thermodynamics, SOM, and Fluids. Aptitude preparation from IndiaBix and technical basics from R.S. Khurmi's Mechanical Engineering Objective Type were helpful, while time management played a crucial role. The next stage was the Gamification round on Prospect AI, which involved seven games designed to test cognitive abilities where quick thinking and focus were essential, without any need for prior practice.

The Group Discussion was unconventional as instead of a topic, we were shown the short film Piper: A Joy Story and asked to discuss it after two minutes of preparation. Here, initiating the discussion, confidently summarizing, and balancing listening with speaking helped in scoring better. The AI Video Interview was a no-rejection round, where we were given a generic topic, mine being "How will you create a good impression among customers," with 30 seconds to think and one minute to respond.

The final stage was the Technical and HR interview, which lasted about 30–35 minutes with two technical experts and an HR. It began with my self-introduction and internship experience, followed by questions from my areas of interest—Automobile, Thermodynamics, and Fluids. Unlike my earlier Caterpillar interview, where I gave short answers, this time I elaborated and steered the discussion towards my strengths, which proved beneficial.

Overall, the process was well-rounded, testing aptitude, cognition, communication, and technical depth. The alumni interaction before placements organized by the department provided valuable insights that gave a clear picture of what to expect during the process. I would like to sincerely thank our department and faculty members for their constant support and guidance throughout the placement process. Their efforts in volunteering to guide us on technical concepts a day before the interview were especially valuable and played a key role in boosting our confidence and preparation.

Student Voices – In Their Own Words



Placement Experience – Ashok Leyland

SHRINIVAS FROM 4TH YEAR WRITES ABOUT HIS ASHOK LEYLAND RECRUITMENT EXPERIENCE...

When the results were announced, my heart was light and my face brimmed with laughter, I had secured my place at Ashok Leyland, a name every automobile engineer dreams of.

The interview tested not just knowledge, but also confidence. I was meticulously asked about all the processes in IC engines, and it was here that my strong foundation in Automobile Engineering, along with the hands-on experiences I gained from the SAE Club, became my greatest allies.

My time at SSN College gave me the exposure and opportunities to chase this dream. The guidance arranged by Dr. Divya Zindani, together with the mentoring from our alumni Saran and Shyam of Ashok Leyland, provided a clear roadmap of the process and helped me prepare in advance.

To my juniors, I would say this: “Let your knowledge be the engine and your confidence be the fuel, together, they will drive you to your destination.”

Student Voices – In Their Own Words



**Placement Experience –
Ashok Leyland**

**AADHITYA SUBRAMONIYAM
FROM 4TH YEAR SHARES HIS
ASHOK LEYLAND
RECRUITMENT EXPERIENCE...**

I am Aadhitya Subramoniam, final year mechanical student. I am one of the four who got placed at Ashok Leyland. The process consisted of 4 rounds.

The first was an online test which happened at our college during college hours. 100 questions were asked and the time duration was 60 minutes. Half the questions were aptitude and the other were technical. Since the time given was low, it was kinda challenging. The next round was gamification which consisted of 6 games played on the computer.

The next round was group discussion and the final round was the technical and HR interview. Questions from Automobile Engineering, Engines and Strength of Materials were asked. Our college professor's guidance was really useful and the preparatory sessions taken by them played a huge part in providing me knowledge and confidence.

The alumni meet arranged by Dr. Divya Zindani sir was also really helpful as we got quick overview and a glimpse of how the Group Discussion and the interview process would be. We also had the chance to clarify our doubts and talk with our alumni Saran and Shyam. I am really glad that I got placed and I am really grateful to all the professors who made this possible.

Student Voices – In Their Own Words

Placement Experience – Psiog Digital

by YASHWANTH KARTHICK



I got placed in Psiog Digital, an IT services company. Since they had clearly mentioned coding wasn't required, I went in confident with my management and problem-solving skills. The process had three rounds – an aptitude test, a technical interview (focused on management and critical thinking), and finally an HR round. The HR team even told me they liked how I “kept the conversation going,” which made a good impression. Overall, it was a smooth experience. My takeaway is that confidence, clear communication, and quick thinking are just as important as technical skills. My advice to juniors: be confident, think out loud, and keep the interview lively instead of just answering questions.

Placement Experience – Securden by JEYASURYA



I am glad to share that I got placed in Securden. The recruitment process consisted of two rounds of interviews where the focus was mainly on communication skills and problem solving ability. Coming from a mechanical engineering background, the process was quite different from what I had expected, but it gave me exposure to a new domain. The experience was more about adapting to a non-core opportunity and learning to align my strengths with what the company was looking for.

EXTERNAL RECOGNITION

20/08/2025	On 20th August 2025, an invited lecture on "Overview of Additive Manufacturing: Fundamentals and Evolution" was delivered as part of the AICTE-ATAL sponsored one-week Faculty Development Program (FDP) on Industry 5.0: Generative Design & Additive Manufacturing for Lightweight Structural Components." organized by AVIT, Chennai
05/08/2025 - 07/08/2025	Dr.D.Ananthapadmanaban received certificate of appreciation for his role as a Technical Committee member in the International Conference on Engineering and Innovative Materials held at Fukuoka,Japan from August 5th to 7th,2025
05/08/2025 - 07/08/2025	Dr. Poovazhagan. L, ASP/Mech. invited as Indian examiner cum expert committee member for the PhD public viva-voce examination held at the Department of Manufacturing Engineering, Annamalai University, Chidambaram
05/08/2025 - 07/08/2025	Dr. K. Jayakumar, ASP/Mech., received a certificate of appreciation for his role as a Track Chair (online) in the 14th International Conference on Engineering and Innovative Materials (ICEIM 2025), held at Fukuoka, Japan, from August 5 to 7, 2025

INTERNATIONAL CONFERENCES ATTENDED

Seralathan Sivamani, Micha Premkumar Thomai - Title: Structural Analysis of Different Components of a Conveying System Used in Road Cleaning Vehicles, Journal name: Engineering Proceedings, Volume: 93, ISSN Print: 2673-4591, ISSN Online: 2673-4591, Impact Factor: 0.205, DOI: <https://doi.org/10.3390/engproc2025093001>, Pages: 1-11

Nithin G, R Sathyapriya, G Shreevathsan, Micha Premkumar T - Title: Performance Evaluation Of Gravitational Water Vortex Hydraulic Turbine, Journal name: Third International conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT 2025)

Abirami Subbiah, Akash T, Bhavani K, Micha Premkumar T - Title: Numerical Analysis Of Centrifugal Pump For Portable Left Ventricular Assist Devices, Journal name: Third International conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT 2025)

PATENTS

SNORKEL AND VENT MECHANISM FOR ENGINE SAFETY ,APPLICATION NUMBER: 202441094965 STATUS: PUBLISHED

Dr. T. Micha Premkumar, published the patent titled " Snorkel and Vent Mechanism for engine safety" and its Application Number is 202441094965 on 06-12-2024

SCHOLAR INFORMATION

18/08/2025	Dr. K. Babu, Associate Professor/MECH conducted the Ph.D., viva voce examination for his part-time research scholar, Mr. Karthikeyan B on 18-08-2025
08/08/2025 & 11/08/2025	Dr.D.Ananthapadmanaban ASP/Mech conducted the Presynopsis meeting on 8/08/25 and Doctoral Committee meeting on 11/08/25,for his part time research scholar Mr.Gnanasekaran.
11/08/2025	Dr.M.Nalla Mohamed ASP/Mechanical conducted 4th DC meeting (Review of Examiners Comments) for his part time scholar Mr. Ramesh. R (1513299878) on 11.08.2025 (Monday)
22/08/2025	Dr. L. Poovazhagan, ASP/Mech. conducted the first DC Meeting for his part-time research scholar, Palaniappan K on 22.08.2025
11/08/2025	Dr K. Jayakumar, ASP/Mech. attended a synopsis DC meeting for a PT scholar, Mr. K. Gnanasekaran, working in St. Joseph College of Engineering, Chennai, registered in Anna University, on 11.08.2025

EVENTS ATTENDED

22/08/2025	Dr KS Vijay Sekar, Prof and Head/Mechanical, attended an Invited meeting titled " Building Bridges" organized by Caterpillar Pvt ltd at their Chennai plant
07/08/2025 & 08/08/2025	The Indian Institute of Welding organized the National Welding Meet 2025 on August 7th and 8th, 2025, at the DAE Convention Centre, Anupuram, Kalpakkam. Eminent scientists from across the country presented a total of 70 technical papers. The event also featured three memorial lectures and two industry lectures delivered by leading welding experts. I had a truly memorable experience spending two enriching days with my mentors Dr. G. Madhusudhan Reddy, Former Director, DMRL; Prof. Dr. V. Balasubramanian, Director, CEMAJOR, Annamalai University, Chairman, IIW-Chennai Branch; and Prof. Dr. S. R. Koteswara Rao, Professor, SSNCE during this prestigious meet at Kalpakkam

INDUSTRY COLLABORATION

05/08/2025	The monthly review meeting for the Ph.D. interns working on SSNESAB collaborative projects was held on 5th August 2025 at ESAB India Ltd, Ambattur. The meeting was attended by Dr. K. Jayakumar, Associate Professor, Mechanical and Dr. R. Seyezhai, Professor, Department of EEE, SSNCE. During the meeting, discussions centered around interdisciplinary research addressing industrial problems identified by ESAB India Ltd. As part of this initiative, Mr. Sujith G., a first-year PG Manufacturing student, visited ESAB India Ltd. and interacted with the R&D team regarding his internship. Dr. S. Paramasivam, GMR&D, ESAB India Ltd., welcomed the proposal and agreed to provide internship opportunities. He advised Mr. Sujith to strengthen his fundamentals on various welding arcs in preparation for the internship
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NON-TEACHING ACTIVITIES

21/08/2025	Mr.Giridharan M/Lab Instructor/Mechanical involved in orientation programme for First year B.E & B.Tech at Sri Sivasubramaniya Nadar College of Engineering on 21 Aug 2025
06/08/2025	Mr. P.Balasundaram / Assistant lab Instructor Mechatronics & Automation TCP / Mechanical / completed ALISON online course TRAINING OF TRAINERS -TRAINING METHOD ON 06.08.2025 (Wednesday) 3.15 pm
06/08/2025	Mr. P. Balasundaram / Mechanical Assistant Lab Instructor / Mechatronics & Automation laboratory / Completed Alison online course Training of Trainers - Training methods on 06.08.2025. SSN college of Engineering kalavakkam 603110

YASWANTH FROM 4TH YEAR WRITES...

On August 8th, the SSN SAE Team visited Sree Gokulam Public School, Chengalpattu, during an Inter-School Competition that brought together students from various schools across Chengalpattu and Kanchipuram. Seizing this opportunity, our team conducted an engaging workshop on the Engineering Behind Go-Karts.

The session introduced students to the fundamental principles of automobile and mechanical engineering through practical demonstrations. By showcasing our go-kart model, we explained the core concepts behind its design, powertrain, chassis structure, and safety measures. The hands-on experience sparked curiosity and enthusiasm among the students, allowing them to connect classroom learning with real-world applications.

We were delighted to witness the excitement and active participation from the young audience. This initiative by the SSN SAE Team aimed to cultivate interest in engineering at an early stage and to inspire the next generation of innovators.



MANI FROM 4TH YEAR WRITES...

I am Mani Mathesh, a final-year Mechanical Engineering student, and I am delighted to share that I have been placed at Caterpillar for the ROIP role. The preparation journey for this role was a valuable experience, as I carefully studied the requirements and tailored my resume accordingly. My strong foundation in core subjects like Thermodynamics and Strength of Materials helped me tackle the technical questions with confidence. For example, I was asked questions such as “If a fridge is kept open, will the room become hot or cool?” and “What is the efficiency of the Carnot cycle?” These tested not only subject knowledge but also practical understanding. Beyond technical skills, Caterpillar focused heavily on assessing leadership and management abilities, as these are crucial for the ROPI role. This placement experience has reinforced the importance of balancing technical expertise with strong interpersonal and decision-making skills for a successful career.



SHWETHA RAMASWAMY (MECH 24') SHARES...



Hello all!! This is Shwetha Ramaswamy. Currently a Master's student pursuing Aerospace Materials at Cranfield University, UK.

Doing Master's in a different country is a whole new experience. Apart from academics you'll get to learn a lot. Living in hostel for 3 semesters at SSN made my life bit easier when I moved here. Of course I felt homesick. But it all lasted for a month.

Then it was all packed with lectures and assignments. The guidance given by our professors on assignments and project report helped me a lot here. It lessened my struggle. The way of learning is completely different.

I could understand the concepts and lectured really well they were based on what I learnt at SSN.

Almost 70 % of the subjects I studied in Mechanical Engineering at SSN helped me understand my subjects better.

One advice I would give to everyone who wants to pursue Master's in a different country is that, seek advice from professors on report writing. Almost 80% Master's degree are based on that. In my case, it's 100 % as I didn't have any examinations.

All the best for everyone!!

No Competition, No Progress

Smart India Hackathon 2025

[click here to register](#)



CodeQuest - IIIT Bangalore

[click here to register](#)



Tata Imagination Challenge

[click here to register](#)



From the desk of Ramki – Aspire to Inspire

From Ramki

Happy Morning – Aspire to Inspire



8. Thoughts and Feelings

When lived honestly, life heals itself. The truth you resist is the battle you fight.

You have dumped clothes inside a washing machine. The machine has performed its job.

Now the clothes have to be taken out to dry.

The longer you keep the clothes inside the machine, the fouler the odour will be. Do not take it out for a few days, and the stench will become unbearable. So it is similar to our thoughts and emotions.



The more we keep building thoughts but do not communicate, and the more we feel the emotions but do not express them, the greater the gap becomes in the relationship. How long will you sweep things under the carpet? Eventually, it will come out, and when it comes out, it will come out in unmanageable, ugly proportions.

- Thoughts formed but not communicated, and emotions felt but not expressed, become incomplete cycles.

- Incomplete cycles linger alone in the subconscious.

- Metaphorically, the lingering incomplete cycles are like scratches formed on spectacles – anything and everything seen through the spectacles looks scratched.

- It is ironic that the scratches are not on the objects, but in the medium through which the objects are viewed.

- In all, they hamper the vision.

When you do not spontaneously communicate your thoughts and express your feelings, you begin to distort them. You tend to exaggerate or diminish the truth to placate your suppressed feelings. When you cannot face it, you tend to deny it. What you cannot accept, you pretend not to care about. As far as our incomplete cycles are concerned, time, it seems makes a liar out of all of us. It is also important that it is not what you say , but how you say .

The secret of emotional health is to tell the people who hurt you that they hurt you, when they hurt you. Otherwise, these incomplete cycles will reappear sometime in the future and ruin even your good times. The weight of emotional baggage burdens the present. Something in the present will remind you of some unfinished suppression and reawaken old feelings. Those reawakened feelings will lead you to act in a way that may be completely irrelevant to the current context of your life. However, it is important to remember that old feelings resurface in order to be resolved and not to punish you. Emotional stress is purely due to thoughts not communicated and emotions not expressed. Emotional illness is a storage disease.

You are telling me, “Honestly, if I start expressing all my thoughts and feelings, I will hurt the person who matters so much to me.” I am telling you, “If you do not, you will eventually hurt the relationship itself.”

- Let us learn to face the truth, even if it hurts.
- Let those who matter to us the most learn to face the truth, even if it hurts.
- Communicate your thoughts and feelings directly to the person who instigated it.
- Be prompt. Don't wait for ideal conditions.
- Be simple, finish your complaint and let go.
- Do not exaggerate, don't nag; avoid overkill. If the person feels with you, you

have succeeded. If not, understand who you are dealing with. Accept what it is.

From the desk of Ramki – Aspire to Inspire

Forgive and let go of your hurt. Move on...You have nothing to prove.

- Even if we cannot be the solution, let us at least be the solace.
- Even if we cannot help, let us not harm.
- Even if we cannot solve the problem, let us not cause the problem.
- Even if we cannot be the accelerant, let us not be a retardant.

If you can be the pain balm to the battered souls, rather than being the cause of headache, the world will come in search of you.

With compassion in words and actions, help every man to find his solutions and this world will belong to you.

#WishingMostAndMore





Dr. M S Alphin



Dr. Satheesh Kumar G



Nithish Kumar S



Dhivya Dharshini R



Mithun Kumar



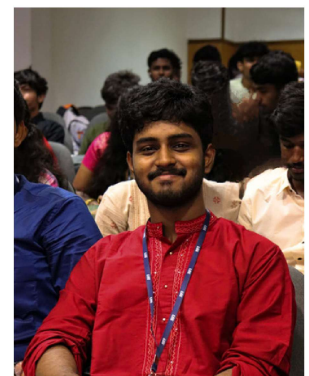
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