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# ASPIRE

ACHIEVEMENTS IN SPORTS, PROJECTS, INDUSTRY, RESEARCH AND EDUCATION

MONTHLY NEWSLETTER OF
THE 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 happy to share the December edition of Aspire!!

We profile Anne Lhuillier, who was awarded the Nobel Prize for her pathbreaking work in the field of laser physics. It's an honour to be part of the Shiv Nadar Foundation, where our founder Shiv Nadar is recognized as the leading philanthropist in our country in the fields of education, arts, and culture. Prof. Fujimura, Waseda University, Japan visited the SSN campus to discuss on scholarships for higher studies.

On the placement front we had companies like Fresh works and JGC recruit our students, while publication in good impact factor journals in manufacturing stream were important faculty contributions to strengthen the research outcomes.
Our faculty actively engage with industry seeking mutual collaborations in Green Energy and Hydrogen projects, inviting industry to deliver guest lecture on entrepreneurship, as Jury members in Hackathon and delivering guest lecture. II-year Mech students visited FORT Chennai, a technological innovation company in forging solutions. I had the opportunity to share my knowledge on soft skills with I year students.

Students share their experience in NPTEL course and the Go-kart journey. Alumni shares his journey in higher studies in France and our best outgoing student as a GET In Technip.

Warm December to All!!

Best Wishes,
KSV
vijaysekarks@ssn.edu.in

# Anne L’Huillier: Revolutionizing Laser Physics

Anne L'Huillier, a distinguished physicist, has been honored with this year's Nobel Prize for her groundbreaking contributions to the field of laser physics.

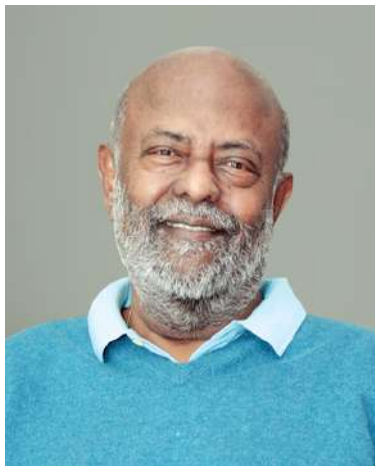
Her pioneering research has revolutionized our understanding of ultrafast laser pulses and their applications. Throughout her career, L'Huillier has focused on unraveling the mysteries of laser-matter interactions at the atomic and molecular levels. Her studies have led to significant advancements in the field, particularly in the area of attosecond science. Attosecond pulses, which are extremely short bursts of light lasting only a billionth of a billionth of a second, allow scientists to observe and control electron behavior in real-time.

L'Huillier's work has opened up new avenues for exploring the fundamental processes that govern the behavior of matter and light. Her research has also paved the way for numerous applications, ranging from ultrafast spectroscopy to precision surgery techniques. Beyond her scientific achievements, L'Huillier is also recognized for her dedication to mentoring and fostering the next generation of scientists. Her passion for education and her collaborative spirit have inspired countless researchers around the world. With her well-deserved Nobel Prize, Anne L'Huillier stands as an inspiration to scientists everywhere.

Her innovative contributions to laser physics have not only expanded our knowledge but also have the potential to shape the future of various scientific disciplines.

# India’s leading Philanthropist

Shiv Nadar, the co-founder of HCL, became India’s leading philanthropist, for having donated a staggering Rs 2,042 crore, approximately Rs 5.6 crore every day in 2023, according to the annual EdelGive Hurun India Philanthropy List 2023. Mr Nadar’s philanthropic focus areas include education, art, and culture. Truly and indeed a proud moment for the entire college.



# Ventura 2023

Ventura 2023 was conducted by the Entrepreneurship Development Cell of the college - SSN LAKSHYA. This effervescent event was held on the 24th November 2023. Having a vibrant response from the students, this event soared to success. The event was fractionalized into two rounds. Sagent being the official sponsor for the event, presided over as the judging panel.

The event kickstarted with the introductory address by the presiding judges for the event. Progressing forward round 1 was done then round 2.

Round 1 was all about creating venture. Students were asked to create their own brand, product, its logo and flyers.

Round 2 was shipwreck. The selected teams were sent into the Ventura airplane and only 3 ideas got sold out. Pitch were given by the teams and the winners were selected based on the panels' judging criteria.

With this the event was concluded. Truly this proved to be one of SSN LAKSHYA’S lively and memorable events.

# Japanese Professor visits SSN

Prof. Fujimura, Waseda University, Japan visited the SSN campus on 23rd November 2023 to address students about the Scholarship available for higher studies at Waseda University for doing master's course. The scholarship is fully supported by Government of Japan. There was a presentation by the HOD's on the highlights of each department followed by an interaction with potential higher studies students.

# Mechanical Engineering - Class of 2024

## Badri Prasad got placed in Hibiz Consulting Private Limited

Hibiz Solutions is an IT Services company headquartered in San Ramon, California (San Francisco Bay Area) with delivery center in Chennai, India. At Hibiz, they specialize in bringing targeted efficiencies to their customers' businesses by combining their technology expertise and business insight.

## Vijayadarshan Mohan got placed in Freshworks

Freshworks designs ridiculously easy-to-use software for businesses of all sizes, making it effortless for them to delight their employees and their customers. Affordable, quick to implement and designed for the end user, more than 50,000 companies worldwide use Freshworks software-as-a-service to enable a better customer experience (CX, CRM) and employee experience (ITSM, HRSM).

## Harikrishnan and Harvind got placed in JGC India Private Limited

Harikrishnan M

JGC Holdings Corporation is a leading international EPC company in the field of Oil, Gas, Renewable Energy and Infrastructure.

Havind M P

## Sudarson and Tamilarasan got placed in Online Solutions (Imaging) Private Limited

Sudarson S

Online Solutions (Imaging) Pvt. Ltd., Chennai carries a wide range of products in the field of PC based Imaging, Vision, and video. It is direct distributor for different top brands like DALSA, BASLER etc.

Tamilarasan Ramalingam

## International Journal Publication - SCI /Clarivate Indexed

Praveen, R., SR Koteswara Rao, G. Selvakumar, and R. Damodaram. "High-Velocity Projectile Impact Behaviour of Friction Stir Welded AA7075 Thick Plates." Defence Technology (2023). Clarivate Impact Factor: 5.1

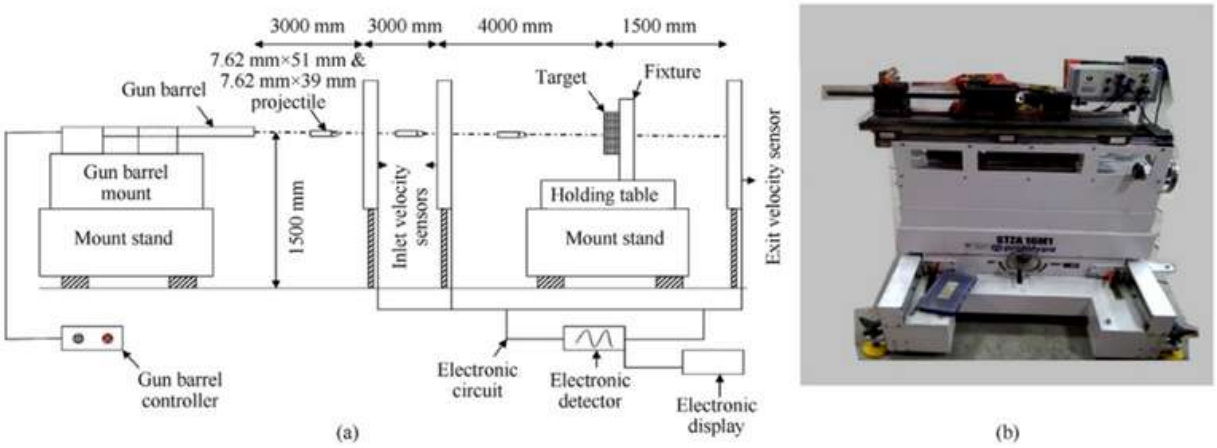



**Fig. 2.** (a) Schematic experimental ballistic test setup; (b) Photo view of an automated gun barrel.

## International Journal Publication - SCI /Clarivate Indexed

Santiagu, Cyril Joseph Daniel, Damodaram Ramachandran, Manogna Karthik Gangaraju, and Koteswara Rao Sajja Rama. "Friction deposition additive manufacturing of alloy 718: Effect of post-heat treatment on microstructures and mechanical properties." The International Journal of Advanced Manufacturing Technology 128, no. 9-10 (2023): 3901-3919. Clarivate Impact Factor: 3.4

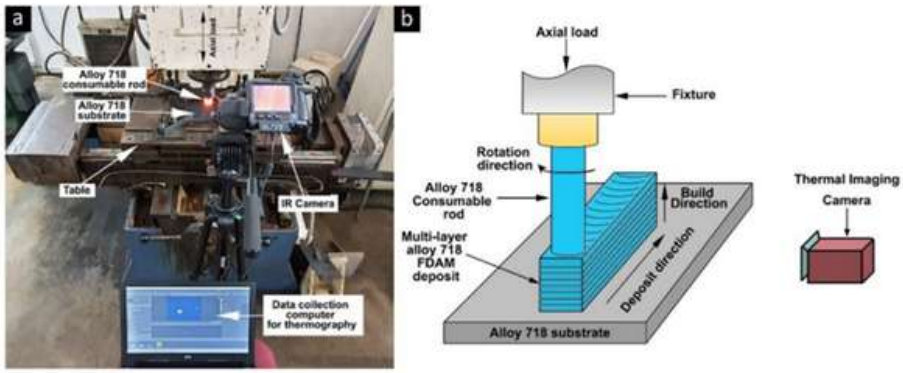



**Fig. 1** (a) Machine setup of FDAM process with thermal imaging camera and (b) schematic of multilayer deposition

# HTSE Conference

Dr. D. Ananthapadmanaban, Faculty Advisor, Students chapter, Sri Siva Subramaniya Nadar College of Engineering was invited to the International Conference on Heat treatment and surface Engineering during 28th September to 30th September, 2023 as an organizer. Two other ASM students chapter members also played a role in the conference. The event was a mega event with 500 + delegates,141 presentations and 65 stalls in the exhibition.26 posters were presented for evaluation in fact, there was a problem of plenty, which was unusual.

One of our students Mr Venkatanathan was already involved in the Conference and his report is given separately. During the inaugural ceremony, Venkatanathan was given a special mention.



The inaugural ceremony was graced by Dr Kamachi Mudali, Vice Chancellor Homi Bhabha National Institute. Dr Navin Manjooran, Global Vice President, ASM International spoke on the occasion. Mr Bhuvan Anandakrishnan, Director, Caterpillar also addressed the gathering.

As an organizer scum delegate, the 3-member team of Dr Ananthapadmanaban. Mr Venkatanathan and Mr Mohammad Akmal helped out during registrations and also attended the conference. Hence, it was a dual role for all of us.

**Events of Day 1**

• Dr Navin Manjooran gave a keynote highlighting on learning from earlier disasters like the Challenger disaster.
• Dr Vivek Singhal from Fluidtherm spoke about the benefits of thermal processing on properties of materials.
• Dr Tapan Rout Rout from Tata Steel mentioned about the use of grapheme in coatings.
• Dr Santanu Manda; from CUMI highlighted the collaboration between CUMI and ISRO.
• Dr.S.Marya gave a holistic approach on additive manufacturing.

**Events of Day 2**

• Low pressure Carburizing was explained by Kamil Seidlikei from Poland
• Dr Ramachandra Rao from IIT Madras spoke on the exciting prospects of Diamond as a super material in the future. Government of India has sanctioned 242 crores to IITM to promote research on Diamond.
• Dr Martin spoke on economic and ecological aspects of plasma-based surface treatment.
• Prof Pellizari gave a talk on heat treatment of additively manufactured tool steels.
• Dr Zavenin spoke on global solutions for rust prevention.
• Dr Ramaseshan dwelt on FCC Titanium obtained by serendipity methods.

**Events of Day 3**

• Dr I.A.Palani spoke on biomedical applications of Nickel Titanium.
• Dr Balmurali dwelt on special steels and its role in future.
• Dr Ing Pradeep spoke on nanoprecipitates in multi component steels.
• Dr Aruna dwelt on coatings for aerospace and energy applications.

**Learnings from the Conference**

• Spending three days in a world-renowned Professional environment was very inspiring and rewarding and I thank the Department and the college Management for

• ASM is active worldwide doing lot of Professional work and it is up to us to tap into their activities on a regular basis.

• Being part of the organizing team, along with two of our students gave us more energy to contribute more to our college and society as a whole.

• Collaborations with Professional Societies like ASM is a must to raise our quality of work.

# Dr. Santhosh Graces the Stage as an Invited Guest Lecturer

Dr. S. Santosh was invited as a guest speaker at St. Josephs Institute of Technology as part of their All-India Workshop on '**Advanced Alloys Characterization and its Applications**' in which he gave a lecture on the basic concepts of shape memory alloys, their processing and characterization in detail on the 21st of November 2023.

# Industrial visit to FORT Chennai

FORT Chennai hosted 60 second-year Mechanical engineering students and their Assistant Professors, S. Santosh and R. Sundareswaran, from SSN College of Engineering. The event featured engaging sessions led by Farooq, a Senior Engineer at Forge, who introduced them to Forge's core areas: Technology, Talent, Innovation, and Ventures, emphasizing its impact on industrial transformation. Viswanath, another Senior Engineer, guided students in hands-on scoring for their teleoperated ultrasound robot project using the Forge Innovation Rubric (FIR). Later, Farooq and Viswa showcased Forge's advanced technology labs, displaying such as additive manufacturing, industrial automation, cobots, and electronics design. The students were particularly intrigued by Forge's innovative products like the sitting posture monitoring system and gait scribe. This visit encouraged innovation and knowledge exchange, making a positive impression on all attendees.

# Collaborative Research Endeavor: Engaging with Industry Experts for a Joint Venture

As a part of Industrial Collaboration, a meeting was held with Dr. V. Mayilvelnathan, Vice President, M/s. Hild Energy Private Limited, Chennai, Mr.N.Sivasankaran, Director, M/s.Viruksa Manufacturing Solutions Pvt Ltd., Chennai on the 1st of November, 2023 to discuss on the joint research on Green Energy and Hydrogen projects under the Centre of Excellence in Green Hydrogen Technology of SSN.

**In the picture from left**

Dr. S. Radha, VP/SSNCE, Dr. V. Rajini, Head/EEE, Dr. K. Sathish Kumar, Head/Chemical, Dr. V. Mayilvelnathan, Hild Energy, Dr. V. Anandaraj, Asso.Prof/Chem, Mr.N.Sivasankaran, Viruksha, Mr.Balakrishnan, Viruksha, Dr. S. A. Srinivasan, AP/Mechanical

The meeting was convened by Dr.S.Radha, Vice Principal and was represented by the departments of Mechanical, Chemical and EEE. Preliminary discussion on the green energy projects was carried out and the industries expressed their willingness to collaborate with SSN through an inter-departmental collaborative research proposal. The industry collaboration initially aims at working on joint research projects, scaling up of research proposals, and industrial consultancies. Several insights on the on-going hydrogen projects, research areas to focus were shared by the industrial pioneers during the discussion.

# Dr. KSV Imparts Insightful Wisdom on Soft Skills to Freshmen Students

It was a pleasant occasion to present an interactive talk on ” On developing Soft Skills ” to a cross section of first year students on the 6th of November, 2023, at the mini auditorium. Dr Martha was kind enough to give me this opportunity and it was an engaging session with the inquisitive students.

I stressed on the importance of Strong Work Ethic, Positive Attitude, Good Communication Skills, Time Management, Acting as a Team Player, Flexibility/Adaptability, and Self-confidence as the seven key attributes needed to build one’s soft skills, which is mandatory for securing good placements in today’s competitive environment. Despite good technical knowledge, students with weak soft skills miss out on the placement front, which was the emphasis laid before them. I am sure the students will continue to learn the nuances of these skills going forward.

# Envision Hackathon

The IT Department of SSN College of Engineering had conducted an Envision Hackathon on the 16th of November 2023. Dr. Vimal Sam Singh and Dr. Anirudh V K were invited from the Mechanical Department as Jury members for the hackathon. The hackathon was an excellent platform to promote innovation and bring about creative ideas amongst students. Students from several colleges and universities participated in this hackathon. Both hardware and software ideas were presented during this hackathon. Below are certain pictures of the event.


# Expert Discourse: Insightful Lecture by Guest Speaker

Mr. T Karthikeyan Thiyakarajan, the founding member of Value Ingredients Private limited delivered a lecture talk to the students of our department on 6 th November 2023. After a lunch meeting in SACE block to discuss the joint projects in Industry 4.0 this guest lecture was planned to provide the benefit of listening to his entrepreneurial journey, for our students. He has completed chemical engineering in 1987-91 batch from Annamalai University.

He mentioned that he got selected in the campus for Asian Paints and worked with their Cuddalore Penta division as Process Engineer for 5 years. Later he moved from Fine chemical Industry to Food Ingredients Industry in Cochin in 1996 and continued to work with Kancor Ingredients Ltd, VKL spices and Olam International, Omniactive health trachnologies for 22 years in various functions and at Business Head level.

With all these rich experiences, he started the entrepreneurial Venture, Value Ingredients Private limited in the year 2015. The company is now into manufacturing Specialised spice ingredients which are customised and sterilised. They are also exporting to US, Europe and Australia mainly apart from other countries and domestic business. He happily shared to the audience that he has grown the company to 106 crores revenue business in FY 22-23 with healthy financial health.

Being a member in All India Spices exporters forum, he also ventured in to Neutraceutical business involving extraction and isolation of Herbal ingredients in the year 22-23 with a new company JIVITA LIFE SCIENCES LLP. And a new project with State of Art Technology is being established near Chennai for manufacturing the Neutraceutical Products. He sprinkled his talk with practical decisions and moments with a touch of fun. The audience seemed to thoroughly enjoy and were benefited from the interaction. Wishing him success!

We would like to thank Dr. Santhosh for coordinating with the students and Dr. Nalla Mohammed for coordinating the arrangements for the guest lecture .

# Non Teaching Staff Activities

| | |
|---|---|
| **20/11/2023** | Mr. Balasundaram. Palanisamy / Assistant. Lab Instructor / Mechanical / Completed Alison course of Fundamentals in cognitive Robotics on 07.10.2023 at 9 am. |
| **20/11/2023** | Mr. Balasundaram. Palanisamy / Assistant. Lab Instructor / Mechanical / attended the workshop on Building a simple IoT system on 14.10.2023 at 10.0 am to 11.30 am conducted by Department of ECE. SSNCE |

# Industrial Visits

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|---|---|
| **02/11/2023** | Dr. B. Anand Ronald, Assoc. Prof/ Mech., accompanied around 30 IV-year Mech Additive manufacturing elective students to 3D Monotech, Ambattur Industrial Estate. |

# International Journal Publications

| | |
|---|---|
| **15/11/2023** | Praveen R, Koteswara Rao SR, Selvakumar G, Damodaram R published a paper titled "High-velocity projectile impact behaviour of friction stir welded AA7075 thick plates" in the journal **Defence Technology**. |
| **22/11/2023** | Cyril Joseph Daniel Santiagu, Damodaram Ramachandran, Manogna Karthik Gangaraju,Koteswara Rao Sajja Rama published a paper titled "Friction deposition additive manufacturing of alloy 718: Effect of post-heat treatment on microstructures and mechanical properties" in **The International Journal of Advanced Manufacturing Technology**. |

# Book Chapters Published

| | |
|---|---|
| **30/10/2023** | Dr. S. Santosh published a book chapter titled '**Laser Machining of Difficult-to-Cut Novel Materials**', S. Santosh, J. Kevin Thomas, M. Pavithran, G. Nithyanandh, J. Ashwath in the book Laser Applications in Manufacturing, CRC Press |
| **25/11/2023** | Dr. Divya Zindani published a book chapter titled '**Engineering Materials Characterization**', Kaushik Kumar, Divya Zindani by the publisher Walter de Gruyter GmbH & Co KG |

# FDP Attended

| | |
|---|---|
| **26/11/2023** | Dr A S Ramana, Associate Professor successfully completed NPTEL-AICTE FDP on Accreditation and Outcome Based Learning during Aug-Oct 2023. |

# Projects applied

| | |
|---|---|
| **08/11/2023** | Dr A S Ramana/ASP/Mech applied for a project titled “Experimental Investigations on Novel Solar Drying of Agricultural Produce” sanctioned by the **Tamil Nadu State Council for Science & Technology**. |
| **08/11/2023** | Dr. K L Harikrishna applied for a project titled “Fabrication, Mechanical and Corrosion properties of Magnesium Metal Matrix Composites for aerospace applications” sanctioned by the **ER & IPR - DRDO**. |
| **22/11/2023** | Dr. M Nalla Mohamed applied for a project titled “Development and Testing of environment friendly Metastable Interstitial Composites (MICs) as energetic materials for pyrotechnic applications” sanctioned by the **Extramural Research & Intellectual Property Rights (ER&IPR)-DRDO**. |

# Successful Completion of an NPTEL Course: A Personal Journey

*By: Aniruth S, Third Year*

Hello all!

This is Aniruth from 3rd year, writing here my experience of completing the “Work System Design” NPTEL Online Certification Course. The course was handled by Dr. Inderdeep Singh, from Indian Institute of Technology Roorkee covered the detailed concepts of the mechanical design of the real life objects in original scale. This 12-week course has got 3 credits in our curriculum.

This courses deeply delves into the concepts of productivity, work study, method study and techniques to measure the work and method study. Work System Design deals with the systematic examination of the methods of doing work with an aim of finding the means of effective and efficient use of resources and setting up of standards of performance for the work being carried out.

This course also aims at understanding the concepts of human ergonomics and the techniques to measure the ergonomics such as anthropometry. The course also covers a bunch of case studies such as design of car seat, tower crane seat and assembly line. I deeply believe that this course will help our fellow people to understand the concepts of work system design in a much detailed manner through this course.

# From Concept to Competition: Team Precisio's Journey in the 7th Season of FKDC

*By: Nagul, Third Year*

After our seniors showcased an impressive performance in the Endurance event during the 10th season of GKDC in mid-April, the decision was made to pass the team's reins to us juniors. They imparted valuable lessons and one clear directive: uphold the team's legacy at all costs. A swift assembly of a new team comprising twenty-five 3rd years and five 2nd years ensued, tasked with the challenge of constructing a new kart from the ground up.

Development began in mid-June amidst hectic laboratory exams and brainstorming sessions in the garage, finalizing dimensions, materials, welding techniques, the engine, steering type, brakes, and driver ergonomics. With the design report deadline coinciding with an end-semester exam, we spent countless evenings in the garage to meet Gantt chart deadlines while simultaneously documenting everything for the design validation plan.

Fabrication commenced in late August, post our semester break. Starting with raw material and component procurement from several markets in Ambattur and Pudupet, we outsourced manufacturing to various micro-scale industries across SIDCOs in the city. The subsequent weeks involved further purchase of components and their assembly, with constant adjustments to ensure driver comfort and documenting the DFMEA. Just as we geared up for kart testing, last-minute rulebook changes and an engine malfunction threw us off course. The garage became a hub of relentless work as we tackled issues one by one, ultimately ensuring the kart was ready to roll.

Heading to the competition, the kart needed minor adjustments post-testing. On reaching Kumaraguru College of Technology, we found other teams' karts in perfect condition, contrasting with ours requiring some final tweaks. On DAY-0, though a little overwhelmed by our competitors, we diligently addressed pending tasks. Returning on DAY-1, eager to clear Cost evaluation and Technical Inspection, we succeeded in the former but faced setbacks in the latter due to engine wiring issues and failed welds. DAY-2, armed with advice from seniors, we overcame hurdles, successfully cleared Technical Inspection, and aced the braking test. DAY-3 featured the acceleration event for the 11 TI-cleared teams. DAY-4 included the Skid-pad, Autocross, and the eagerly awaited Endurance event, concluding with prize distribution and the closing ceremony.


Team Precisio secured the **runners-up position** in the Sales Presentation event, **3rd place** in Fuel-Economy and **7th place** in the Endurance event. We claimed an overall **9th spot** among 17 teams in the combustion vehicle category, marking a commendable performance on our journey.

To sum up, it's important to note that our journey was driven by the passion we all had for the work we engaged in. From sketching a basic chassis on paper to making the kart track-worthy, we gained insights into teamwork, perseverance, time management, cost-effectiveness, and other valuable lessons that extend beyond classroom teachings. Many instances reminded us of Oppenheimer's words that "**Theory will only take you so far**."

# Exploring Industries: A Comprehensive Report on our Industrial Visit

*By: Indhumathi, Second Year*


- The industrial visit was organized by Professors Dr. Sundareswaran and Dr. Santosh for second-year Mechanical A-section students on October 4, 2023.
- We commenced our journey from the college campus at 8:30 AM, traveling via our college bus. A total of 60 students, accompanied by 2 professors, participated in this visit.
- The primary objective of this visit was to gain insights into the process of creating sustainable products, a vital aspect of a prosperous society.

**Company Profile:**

- FORT, an acronym for "Force of Rapid Transformation," is a Forge-powered SIPCOT Industrial Innovation Centre located in Sriperumbudur, Kancheepuram.
- The center has branches in Hosur, and its factory is situated in Coimbatore. Substations are also located in Salem, Trichy, Madurai, and Tirunelveli.

- This industry actively fosters innovative ideas and offers lab facilities, including aerospace, defense, IoT, to startup companies. Research and analysis are integral to their operations. An integrated incubator makes Fort an advantageous company in this field.
- The Chennai branch houses labs for additive manufacturing, electronics, and pneumatics.

**Itinerary:**

- The visit began with an interactive session where engineers engaged us with insightful questions. The discussion was productive, touching on new technologies and the importance of interdisciplinary collaboration in product development.
- We learned that collaborating across departments is essential to creating a successful product. They elucidated the process of transforming ideas into finished industrial products, emphasizing technological knowledge and innovation. They also highlighted the role of venture partnerships in transitioning prototypes into real-world applications.
- After the introductory session, we participated in an activity called "Forge Innovation Rubric" (FIR). We were given activity sheets with categories like necessity & significance, novelty & originality, customer motivation, strong value proposition, and demonstrated proof of value. Each category had subtopics, and we assessed these elements based on their product, "Pelbc's TORUS" (Tele Operated Robotic Ultrasound system).
- Subsequently, we toured their labs. We visited the Additive Manufacturing lab, which included 3D printing machines and software for creating project cases. Due to the toxicity of certain materials, we were advised not to handle them.
- Next we visited the Manufacturing lab, where we observed various mechanical machines, including lathe machines, vinyl cutters, laser cutting machines, thermocol cutter, heat guns, scroll saws, and bench grinders.

- In the Electronics lab, we saw products like "Gate Scribe" and "Pendant." Gate Scribe helps analyze the walking patterns of paralysis patients to provide records to doctors, making diagnosis easier. The Pendant assists in monitoring accurate heartbeats when worn around the neck.
- We then visited the Pneumatics lab, where we saw a robust pick and place robot capable of lifting 12kg. They are actively developing this robot using Festo and Jira software. Additionally, we observed the servo pneumatic system, integrated with piezoelectric crystals and programmable logic controllers, for precise control over pneumatic systems. Another system, the electro pneumatic system, was also showcased.

**Observations:**

- The industrial visit proved invaluable, offering practical insights and positively influencing our approach to education and technical skill development.

- We gained practical knowledge about the advancements in machine technology.
- We learned about the process of transforming problem statements into user-friendly products.
- We acquired knowledge about advanced pneumatic systems and robotics.
- We understood the importance of multidisciplinary collaboration in successful product development.

**Concluding remarks:**

We extend our heartfelt thanks to engineers Farooq and Viswanath for their patient and informative guidance. Our gratitude also goes to our professors, HOD, and the college management for organizing this enlightening industrial visit at the beginning of our college journey. We look forward to more such informative and enriching experiences in the future.

# Alumni Spotlight

*Featuring: Shreyas Murali, Batch of 2023*

With obeisance to the teaching and non-teaching faculty members and greetings to everyone reading the write-up, I would like to present my journey from my bachelor's degree in mechanical engineering from SSN to my master's degree in aerospace engineering from ISAE-SUPAERO, Toulouse, France. Ever since my childhood, I have always been extremely fascinated by aircrafts. Little did I know back then that I would end up studying aerospace engineering, in the future.

My bachelor's in mechanical engineering gave me the perfect foundation for the same. In my bachelor's, I got extremely interested in subjects like Engineering Mathematics, Fluid Mechanics, Thermodynamics, Heat Transfer and Gas Dynamics and Jet Propulsion and hence, quickly realized that pursuing aerospace engineering would be a great option for me. With this realization, I started taking NPTEL courses related to aerospace and also worked on an RC plane design competition (SAE Aero Design Challenge-2022). I also consider myself lucky to have gotten a couple of good internships related to Aerodynamics and fluid mechanics, which made me exactly understand my role and the expectations of me to pursue aerospace engineering.

To pursue my master's, I started searching for various options when I came to know about ISAE-SUPAERO in France. The institute had extraordinary research facilities and a great collaboration with a lot of major aerospace companies all over the world. The above reasons motivated me to apply to ISAE-SUPAERO. Since I fixed my mind upon a master's at a very early stage, I took the IELTS exam 6 months before applying to various universities which gave me a Head start during the application process.

The applications were primarily judged based on 3 factors: Motivation Letter, Curriculum Vitae and Recommendation Letters, and I deem myself to be blessed and extremely lucky to have been considered a suitable candidate for their institute. At this juncture, I would like to thank Profs. Dr. K.S. Vijay Sekar sir and Dr. N. Lakshmi Narasimhan sir for providing their recommendation letters for me, which played a huge part in my selection.

I observe that the master's program that I am pursuing is structured to be intellectually demanding and is designed to derive the best of the student's capabilities. The fact that I have shifted my domain from Mechanical to Aerospace Engineering further adds to the difficulty, but I strongly believe that it is a worthy pursuit and enduring it would leave me with a lot of take-aways, not only academically, but also on a personal front.

To those aspiring to pursue a master's, feel free to reach out to me if you have any doubts, through my SSN mail ID:shreyas19101@mech.ssn.edu.in and I'd be glad to help with my limited knowledge and experience.

I would like to end the writeup with a hearty Thanks for giving me the opportunity to express myself through the Alumni Writeup section.

Merci Beaucoup!

# Alumni Spotlight

*Featuring: Rufus Derrick, Batch of 2023*

Hi guys, my name is Rufus (2023 Passed out Batch). I am working as a GET in Technip Energies. I would like to elucidate the months I have been here in Technip.

Technip Energies is an oil and gas, fertilizer, ammonia, chemical synthesis like phosphates or poly propylene EPC (Engineering, Procurement and Construction) Service provider. Basically, in any oil and gas refineries or ammonia synthesis or fertilizers plants, they require huge tanks/ pressure vessels to produce huge MMTA (Millions Metric Tonnes per annum) of products for efficient running of plant in all economic perspectives. To construct a plant, Basic engineering, a conceptual phase, detail engineering (understanding the processes involved like the pressure and temperature), procurement, erection, and construction, this is done by our company Technip Energies.

I was inspired by the concepts of how the raw material is converted into finished products that too present in a huge scale to face the demand (Like Distillation of crude oil). This demand requires huge tanks, pipelines for commutes, big reactors for boiling, power generation etc. As GETS, we had Induction programs, and special rotational Training, Site Trainings to smoothen the transition from college to corporate life.

Green Hydrogen (Hydrogen from Splitting of Water), Carbon Sequestration, Carbon Capture, and Energy Transition are the Global Agenda for safer environment, to provide standard solutions to the needs of the power/energy. Our company is taking a huge step to dive deep into this concept, explore the plethora of opportunities present to us. These are the modern solutions for the ever-existing problems. Glad to be a part of this change, with these ideologies I believe I took my first step in the right place.

## *No Competition, No Progress*

**Shaastra Smart City Challenge:**

Link : Register here

**Trading Titans**

Link : Register here

# Corporate Wisdom

*From the desk of Ramki -– Aspire to Inspire*

From Ramki
Happy Morning – Aspire to Inspire

The law of life is " When the lower is pushed , the higher delights". For example when the body is pushed beyond its perceived limits, the mind delights. When the body tells you " I can't walk one more block, I can't run another lap , I can't trek any more , and then when it is pushed beyond its perceived limits and it walks that additional block, runs another lap and treks further- the mind delights.

Against the pleading of your body when you do a few more push-ups or a few more reps of the bicep curls or another dozen squats- the mind delights. When the lower- the body is pushed, the higher- the mind delights.

There is always this inner intellectual conflict between our instincts and conscience. Our instincts ask us to follow the path of " Pain & Pleasure" while our conscience demands us to follow the path of " Right & Wrong". It is this that causes the intellectual split in us.

What we call as guilt is nothing but the disapproval of the " Knower" in us to an act of the" Doer" in us; that is when the conscience doesn't endorse the instincts.

Resolving this split and living as an integrated person is the struggle of the intelligence, but it is the delight of the higher- Emotional Personality.

#WishingMostAndMore

Have a great day & wonderful weekend

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