

ISSUE 9 | SEPTEMBER 2024

ASPIRE

ACHIEVEMENTS IN SPORTS, PROJECTS, INDUSTRY, RESEARCH AND EDUCATION



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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 September edition of Aspire!

We profile Denis Mukwege who was awarded the Nobel Peace Prize in 2018 for his seminal work in providing critical medical care to survivors of war-hit zones.

HCL celebrated its 48th Foundation Day, planting over 48,000 saplings across India under the theme "48 Years, Impact for Infinity. The movement symbolized the collective commitment of HCL to nation-building.

It's placement season for the outgoing 2025 batch and it's heartening to see top-notch companies like Amazon, Caterpillar, Technip, and Wood take our students in. We also have an international placement where our student Yuvalakshmi got placed in Rapyuta Robotics and is leaving for Japan this month. Best wishes to the placed students, the CDC Placement team, and the department coordinators for this unified effort.

SSN incubation in association with TANSAM conducted seven-day training on new product development using NX, for the mechanical team, which was received well. The department organized a guest lecture on the Future scope for Mechanical Engineers with an Industry expert.

Mech students share their internship and in-plant training experiences at Neyveli thermal power station and UD Trucks. Alumni share their journeys to IIM Bombay and DOW chemicals.

Best Wishes for a great September,
KSV
vijaysekarks@ssn.edu.in



DENIS MUKWEGE: A CHAMPION FOR SURVIVORS OF CONFLICT AND NOBEL LAUREATE

Denis Mukwege, born in 1955 in Bukavu, Democratic Republic of Congo, is a renowned gynaecologist, human rights advocate, and a Nobel Peace Prize laureate. His tireless work in providing medical care to survivors of sexual violence in conflict zones has earned him international recognition and the 2018 Nobel Peace Prize. Mukwege is widely respected for his dedication to healing the physical and emotional scars of those affected by the atrocities of war. Mukwege's journey began with a deep sense of compassion, inspired by his father, who was a Pentecostal minister.

After studying medicine in Burundi, Mukwege pursued advanced training in gynaecology and obstetrics in France. Upon his return to the DRC, he founded the Panzi Hospital in Bukavu in 1999, which quickly became a sanctuary for women who were victims of sexual violence, particularly in the context of the ongoing conflict in the eastern part of the country. At Panzi Hospital, Mukwege and his team have treated tens of thousands of survivors of rape and other forms of sexual assault. His approach is holistic, combining medical treatment with psychological and legal support. Mukwege has also been a vocal advocate on the global stage, raising awareness of the use of sexual violence as a weapon of war and calling for justice and accountability for the perpetrators.

He has worked tirelessly to draw international attention to the plight of Congolese women, speaking at the United Nations and other international forums. His activism has, at times, placed his life in danger, including an assassination attempt in 2012. Despite the risks, Mukwege continues his work, undeterred in his mission to restore dignity to survivors of violence. Denis Mukwege's achievements have been recognized globally, with numerous awards highlighting his humanitarian efforts. The Nobel Peace Prize in 2018, shared with Nadia Murad, honoured his unwavering commitment to ending sexual violence in conflict zones. Mukwege's profound impact on both the medical and human rights fields continues to inspire many, cementing his legacy as a beacon of hope and resilience in the face of unimaginable suffering.

HCL FOUNDATION'S 48th foundation day: A COMMITMENT TO A GREENER FUTURE.

In celebration of HCL's 48th Foundation Day, the HCL Foundation completed a remarkable two-week mission, planting over 48,000 saplings across India under the theme "48 Years, Impact for Infinity." This initiative was more than a mere plantation drive; it symbolized the collective commitment of the HCL community to environmental sustainability.

The plantation drive spanned various districts, including Gautam Buddha Nagar, Bengaluru, Chennai, and more, with participation from over 2,000 HCLTech employees, their families, NGO partners, community volunteers, and students. In Noida, HCL's Chairperson, Ms. Roshni Nadar Malhotra, and Dr. Nidhi Pundhir personally joined the efforts, underscoring the importance of this cause.

Each sapling planted serves as a beacon of hope, representing the shared dedication to creating a greener, more sustainable future. The HCL Foundation extends heartfelt gratitude to everyone involved, ensuring that this mission leaves a lasting impact on our planet.



Roshni Nadar named IAA BUSINESS LEADER OF THE Year 2024

Roshni Nadar Malhotra, Chairperson of HCLTech, has been awarded the prestigious IAA Business Leader of the Year title at the 2024 IAA Leadership Awards held in Mumbai. Recognized for her visionary leadership, Roshni has played a pivotal role in driving innovation and digital transformation across global markets, steering HCLTech to new heights of success. Her relentless focus on efficiency, innovation, and excellence has not only fueled the company's growth in diverse markets but has also significantly enhanced HCLTech's global reputation. Under her stewardship, HCLTech has emerged as a leader in technology, setting new industry benchmarks. This recognition reflects her outstanding contributions to shaping the future of technology, cementing her legacy as one of the most influential leaders in the industry.

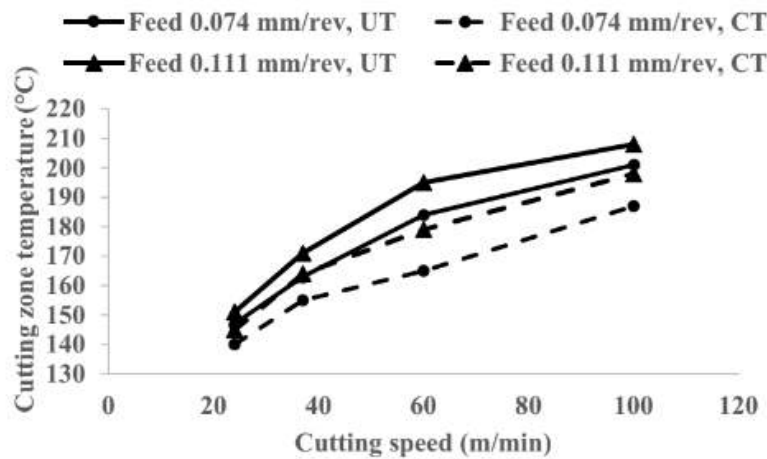


International Journal Publication - SCI /Clarivate Indexed



M. Dhananchezian. "Investigate the comparative performance of dry turning Monel 400 alloy by untreated and cryotreated AlTiN carbide tools." *Advances in Materials and Processing Technologies*. 10(3), pp. 1869 - 1887.

Clarivate Impact Factor: 2



SCOPUS PUBLICATIONS

Anush Lakshman, S. Akash, J. Cynthia, R. Gautam & D. Ebenezer. "Architecture and Applications of IoT Devices in Socially Relevant Fields." *SN Computer Science*. Volume 5, article number 837, pp: 1-25. Scopus impact factor:0.47.

DEPARTMENT OF MECHANICAL ENGINEERING CLASS OF 2025

PLACEMENT UPDATE

Wood India Engineering and Projects Private Limited

A VIGNESHWAR
ANURAAG M NAIR
R S SHRI SABARISH
VEDHANTH KESHAV MANOHAR

Caterpillar India Pvt Ltd

NEELA MEGA BHAVANI
BHAVANI K
ANISHA B
SHAKILA FATIMA

Amazon (Internship)

ANANTHA NARAYANANN RAMESH
MURALI KRISHNAN
SHRUTHI PREMRAJ
TAMILKUMARAN S
UVARAJ G S

Rapyuta Robotics Pvt. Ltd.

YUVALAKSHMI N N

Technip Energies

SAURABH GUPTA
MUPPALLA VENKATA SIRI

7-DAY WORKSHOP ON NEW PRODUCT DEVELOPMENT USING NX

SSN Incubation Foundation in association with TANSAM organized 7-DAY TRAINING ON NEW PRODUCT DEVELOPMENT USING NX from 06.08.2024 to 13.08.2024 at the Centre of Excellence-Industry4.0, CSE Department. This training was coordinated by Dr.R.Seyezhai, P/EEE, and Mr.J.Dheepan, SSN iFound. Mr. S.Vinoth facilitated this program from TANSAM, who brought his vast experience to guide the participants in the latest intricacies of product design and modern development. The following members attended the training: Dr.G.Satheeshkumar, ASSP/Mech Mr. Arunkumar, Research scholar) Mr. Blessing Samraj (Research scholar), Shruthi Premraj, and Naren K (Final Year Mech). The program highlights were the Advanced Modelling Techniques: Students learned the most advanced modeling methods and became experts in those techniques, greatly enhancing their design capabilities. Training in validation and design optimization provided first-hand experience, preparing the students for real-world challenges. Under the guidance of Mr. S. Vinoth, participants gained deep insights into recent tools and techniques used in product development.



The participants extend their sincere gratitude to Dr. K.S.Vijay Sekar, Professor and Head of the Mechanical Engineering Department, for his invaluable support and for facilitating smooth execution of the event. The participants conveyed their appreciation to SSN iFound for sponsoring their registration fees.

GUEST LECTURE ON FUTURE SCOPE FOR MECHANICAL ENGINEERING

Mr Balakrishnan, Chairman, Viruksa Manufacturing Solutions private ltd gave a guest lecture on the future scope for Mechanical Engineers. The talk lasted for one hour and around 25 slides were presented in the format-overview, impact and future trends. The guest lecture was organized by Dr.D.Ananthapadmanaban and Dr.S.Santosh on 26/08/2024 at Mechanical Seminar Hall, for the third year (B section) students.

Topics covered were predictive and sustainable manufacturing, Advanced data analysis for heavy machines, Industrial IoT, Advanced Composites, and Collaborative Robots. The scope for jobs in all these areas was discussed and case studies in the Indian scenario were explained. his company has scope for internship and final-year projects, and we need to collaborate with them.



SCHOLAR INFO

29/07/2024	Dr. KS Vijay Sekar, Prof/MECH conducted the Synopsis DC meeting for his full time research scholar - D Arunkumar on 29.07.2024
05/08/2024	Dr. K.S. Vijay Sekar, Prof/MECH conducted the Fourth DC Meeting (to discuss the examiner's reports) for his full-time research scholar, Aarthi R on 05.08.2024
06/08/2024	Dr. KS Vijay Sekar, PROF/MECH attended an online DC Meeting for Anna University registered research scholar of SJCE on 06.08.2024
12/08/2024	Dr. L Poovazhagan, ASP/Mech conducted the Synopsis DC Meeting for his full-time research scholar, Mr M Mariyappan on 12.08.2024.

PROJECTS APPLIED

08/08/2024	The project titled “Methodology to enhance quality of research papers” has been applied for a funding of 10.2 lakhs to the Department of Science & Technology with Dr KS Vijay Sekar as PI and Dr S Santosh as Co-PI.
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NON-TEACHING STAFF ACTIVITIES

<p>16/08/2024</p>	<p>Mr. Balasundaram P / Assistant Lab Instructor / Mechanical / learned Dobot magician robot 4-axis direction with Dobot studio software following application 1. Suction cup 2. Pen letter writing 3. Laser engraving.4. Linear rail it is most useful in Manufacturing. 2ndsemester robotics & automation lab 16.08.2024</p>
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INTERNATIONAL JOURNAL PUBLICATION

<p>14/08/2024</p>	<p>M.Dhananchezian has published a paper titled “Investigate the comparative performance of dry-turning Monel 400 alloy by untreated and cryo-treated AlTiN carbide tools” in the journal ‘Advances in Materials and Processing Technologies’.</p>
<p>28/08/2024</p>	<p>S. Anush Lakshman, S. Akash, J.Cynthia, R. Gautam & D. Ebenezer have published a paper titled “Architecture and Applications of IoT Devices in Socially Relevant Fields” in the journal ‘SN Computer Science’.</p>

PANNEERSELVAM R from third year writes...

I recently had the opportunity to intern at Neyveli New Thermal Power Station (NNTPS) from 16th July 2024 to 29th July 2024, gaining valuable hands-on experience in the field of mechanical engineering. My internship focused on the "Turbines and Its Auxiliary," where I was deeply involved in understanding and practicing maintenance procedures.

During this period, I learned about preventive maintenance, which plays a crucial role in ensuring the longevity and efficiency of turbines. I also gained insights into breakdown maintenance, where I observed how unexpected failures are handled and how quick, effective repairs are essential to minimize downtime. Additionally, I was introduced to the overhauling procedures and plans, which are vital for the periodic restoration of the turbine's performance and reliability.

This internship provided me with practical exposure to the complexities of maintaining and overhauling turbines, reinforcing the theoretical knowledge I have gained in my mechanical engineering studies. It has significantly enhanced my understanding of power station operations and the importance of meticulous maintenance planning in ensuring continuous and efficient power generation.



Nivesh varsan r FROM the third YEAR WRITES...

I am Nivesh Varsan R, a 3rd-year student from the Department of Mechanical Engineering, and I recently had the opportunity to undergo industrial training at UD Trucks India. This experience provided me with invaluable hands-on knowledge in vehicle maintenance and assembly, significantly enhancing my technical skills. During my time at UD Trucks, I actively participated in various essential tasks such as Pre-Delivery Inspection (PDI) checks, wheel alignment, AC filling, and battery status checks. These activities deepened my understanding of vehicle diagnostics and servicing. I also gained practical insights into routine maintenance procedures like oil changes, filter replacements, and system inspections.

Additionally, I acquired specialized skills in Frame Boxing and Riveting, Engine Docking, Leaf Spring Attachment, Wheel Fixing on Axle and Frame, and Transmission and Clutch Fork Attachment. These tasks required precision and a strong grasp of mechanical principles, contributing significantly to my technical expertise.

My training was further enriched through e-learning courses offered by UD Trucks. These courses covered critical topics such as UD Brand Heritage, legal compliance, information security, and anti-corruption practices, ensuring that I am well-prepared to navigate the complexities of the automotive industry.

Moreover, I successfully completed eight Standard Operating Procedures (SOPs) for the PVA Build/Workshop, focusing on tools and machinery essential for vehicle assembly and maintenance. This blend of hands-on experience and theoretical knowledge has equipped me with the confidence to tackle future challenges in the automotive industry, ensuring both personal and professional growth.



ANUSKA OF MECH'22 SHARES...

Anuska (Mech22) pursuing M.B.A in IIM BOMBAY



I am thrilled to share that I have been accepted into the prestigious MBA in Sustainable Management program at IIM Mumbai! This opportunity represents a significant milestone in my career journey, and I am eager to embark on this transformative experience.

The MBA SM program at IIM Mumbai is renowned for its rigorous curriculum, world-class faculty, and unparalleled networking opportunities. I am looking forward to honing my skills in strategic thinking, leadership, and management to make a meaningful impact in the corporate world.

I am grateful for the support of my mentors, colleagues, and friends who have been instrumental in this achievement. Your encouragement has motivated me to push boundaries and pursue excellence.

I want to take a moment to express my deepest gratitude to Saint-Gobain for the incredible support and opportunities provided during my time with the company. The experiences and learnings gained have been invaluable and have significantly contributed to my professional growth. Here's to new beginnings, continuous learning, and seizing every opportunity that comes my way!

KAVYA OF BATCH 2023 SHARES...



I am V.S Kavya, a 2023 graduate currently working at Dow, a petrochemical company, as a piping stress engineer. As a recent graduate entering the corporate world on my transition from the academic halls of SSN College to the dynamic corridors of Dow. I am filled with a profound sense of gratitude and purpose, At Dow, the first lesson I learned was the importance of continuous learning and the value of collaborating with colleagues.

Within the piping department, there are three teams, which are Material Team, Design Team, and Stress Analysis Team. I began my career at Dow as a piping material engineer, a role I held for eight months. In simple terms, my job involved selecting the appropriate materials for pipes and other components, considering factors like the plant site, process fluid requirements, and other necessary conditions. This role provided me with a theoretical understanding of plant systems and a clear insight into the criteria for selecting materials for new and existing plants.

Subsequently, I transitioned to the Piping Stress Team. As a stress engineer, my responsibilities include analyzing high-temperature and high-pressure critical pipelines in the plant and providing suitable pipe supports to ensure system integrity. We utilize software called CAESAR II for stress analysis, a common practice in other Contract/EPC companies too serving owner-operated firms like Dow. One aspect of Dow I deeply appreciate is the respect and consideration given to all employees' opinions and choices. I am grateful to our piping department leaders, as great leaders set exemplary standards.

No Competition, No Progress

Altair Simulation Challenge

(Mechanical Association, BMS College of Engineering)

Link: [Register here](#)



Dungeon Tech Quiz

Sri Sairam Institute of Technology (SSIT), Tamil Nadu

Link: [Register here](#)



Asian Paints Alchemy 2024

Asian Paints)

Link: [Register here](#)



From the desk of Ramki – Aspire to Inspire

From Ramki

Happy Morning – Aspire to Inspire

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 for drying. 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 and more we keep building thoughts but do not communicate, and the more and more we feel the emotions but do not express them, the greater becomes the gap 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 persons 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 to be resolved and not to punish you. Emotional stress is purely due to thoughts not being communicated and emotions not being 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. 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 the 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

#WishingMostAndMore

Have a great day & wonderful weekend!

R. Ramakrishnan

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Dr. M S Alphin



Dr. Satheesh Kumar G



Magari Ramasamy



Abirami Subbaih



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Nithish Kumar S



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Mithun Kumar



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