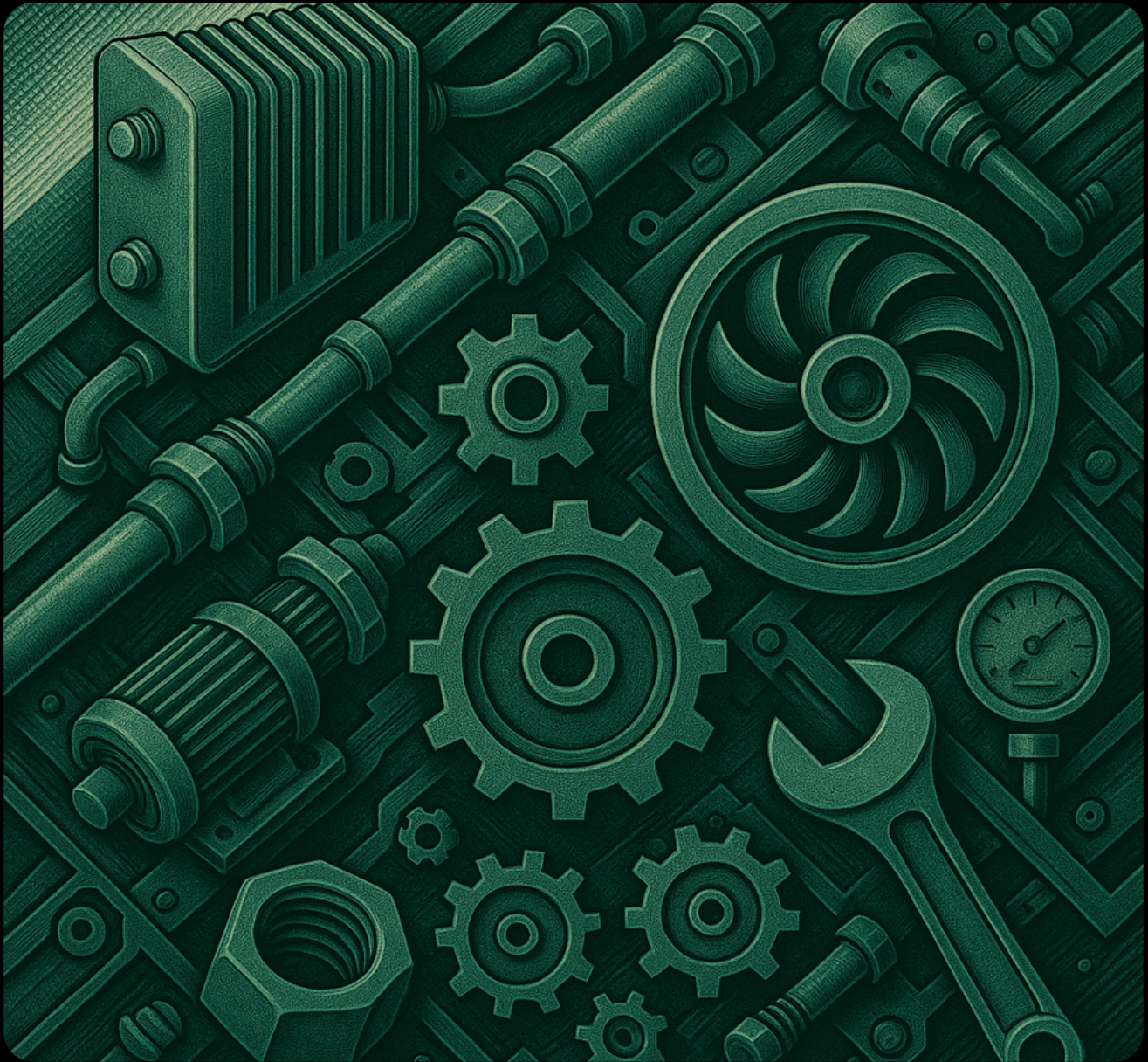


Issue 3 | Volume 1 | Feb 2025

THE MECHAZINE



DEPARTMENT OF MECHANICAL ENGINEERING

NATIONAL ENGINEERING COLLEGE

(An Autonomous Institution Affiliated to Anna University, Chennai)

K.R. Nagar, Kovilpatti - 628503



From the HoD's desk.....



It is my pleasure to introduce this magazine **MECHAZINE**, a testament to the NEC, Mechanical Engineering Association's unwavering dedication to fostering innovation, collaboration, and excellence in our field. As the Head of the Department of Mechanical Engineering, I am honoured to witness the Association's continuous efforts in promoting cutting-edge research, knowledge sharing, and community building. This technical magazine will provide a glimpse of student and faculty contributions made during academic year 2024-2025.

This publication embodies our department's mission to inspire and empower the next generation of mechanical engineers, equipping them with the skills, expertise, and vision required to tackle complex global challenges. The Association's commitment to promoting interdisciplinary dialogue, industry partnerships, and student engagement is truly commendable.

I extend my gratitude to the Mechanical Engineering Association's leadership, members, and contributors for their tireless efforts in making this magazine a reality. Your passion and commitment to advancing our field are invaluable.

I invite you to explore this magazine, and I am confident that it will inspire thought-provoking discussions, spark new ideas, and strengthen our community's resolve to shape a better future through mechanical engineering. At the end, I would like to thank editorial board members and hope that our collective efforts stimulate further progress in this domain of activity with strong determination at both national and international levels.

We welcome you for any suggestion and contribution for the betterment of this magazine in the forthcoming editions.

Sincerely,
Dr S IYAHRAJA,
Head of the Department/Mechanical Engineering,
National Engineering College,
K R Nagar, Kovilpatti - 628503

VISION:

- Producing globally competitive Mechanical Engineers with social responsibilities.

MISSION:

- Imparting quality education by providing excellent Teaching-Learning environment.
- Inculcating qualities of continuous learning, professionalism, team spirit, communication skill and leadership with social responsibilities.
- Promoting leading-edge research and development through collaboration with academia and industry.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs):

- PEO1: Graduates will have successful profession in Mechanical/Allied Industries or Research/Academics or Business Enterprise.
- PEO2: Graduates will be able to broaden their horizons beyond Mechanical Engineering to address the societal and environmental concerns.
- PEO3: Graduates will have the attitudes and abilities of leaders to adapt the changing global scenario.

PROGRAMME SPECIFIC OUTCOMES (PSOs):

- PSO1: Apply the concepts of Engineering Design to design, analyze and develop the mechanical components and systems using the different analytical/CAD/experimental tools.
- PSO2: Apply the concepts of Thermal Engineering to design, analyze and develop the flow and energy systems using the different analytical/experimental/software tools.
- PSO3: Apply the concepts of Production, Industrial Engineering and Management for analysis, optimization and development of mechanical systems.

JOURNAL PUBLICATIONS

Heartfelt congratulations to the distinguished faculty members of the Mechanical Engineering Department for their remarkable contributions to research, as evidenced by their recent journal publications. These scholarly works exemplify the department's unwavering commitment to academic excellence, innovation, and the advancement of engineering knowledge. Such accomplishments not only reinforce our department's reputation within the broader academic and professional communities but also serve as a source of inspiration for our students—encouraging them to pursue research-driven inquiry and innovative problem-solving with renewed vigor.

NAME OF THE FACULTY	JOURNAL NAME	IF SCI, IMPACT FACTOR
Dr. M. Kathiresan	Solar Energy	6
	Materials Letters	2.7
Dr. R. Harichandran	Desalination	8.3
	Physica Scripta	2.6
Dr. A. Andrews	Measurement	5.2

JOURNAL PUBLICATIONS

NAME OF THE FACULTY	JOURNAL NAME	IF SCI, IMPACT FACTOR
Dr. D. Venkatkumar	Surface Review and Letters	1.2
	Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science	1.8
Dr. F. Michael Thomas Rex	Physica Scripta	2.6
Dr.K.Thoufiq Mohammed, Dr. K. Manisekar	Physica Scripta	2.6

Research is to see what everybody else has seen, and to think what nobody else has thought

Alumni Webinar Series Conducted for Students



National Engineering College
(An Autonomous Institution - Affiliated to Anna University, Chennai)
K.R.Nagar, Kovilpatti - 628 503.
Estd : 1984



THIRUVALLUVAR INSTITUTE OF EDUCATION & TECHNOLOGY
THIRUVALLUVAR
1926 - 2019



41
1984 - 2025
YEARS OF ACADEMIC EXCELLENCE

NEC ALUMNI ASSOCIATION

Organizes

Online Webinar on

INDUSTRY 4.0 & IOT

Registration link -
<https://alumni.nec.edu.in/events>



Resource Person
Mr. M. Bagavatheswaran
2010 batch EIE Dept
Manager - process & factory Automation
Birla Opus, Chennai, Tamil Nadu

25/01/25 & 01/02/25

11:30 am - 12:30 pm

Seminar Hall [Mech. Dept.]

K.R. Innovation Centre DST-ITBI nif 2024 Engineering Band 151-200 NBA Tier-1 NAAC A GRADE 4 STAR THEQA Counselling Code 4962



National Engineering College
(An Autonomous Institution - Affiliated to Anna University, Chennai)
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41
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NEC ALUMNI ASSOCIATION

Organizes

Online Webinar on

Enterprise Asset Management Systems

Registration link -
<https://alumni.nec.edu.in/events>



Resource Person
Mr. P. Kasirajan
2003 batch MECH Dept
IT Business controller
Emirates Flight Catering, Dubai

22/02/2025


11:30 am - 12:30 pm

Seminar Hall [Mech. Dept.]





K.R. Innovation Centre DST-ITBI nif 2024 Engineering Band 151-200 NBA Tier-1 NAAC A GRADE 4 STAR THEQA Counselling Code 4962

Celebrating Student Excellence in Industry Engagement

The Department of Mechanical Engineering proudly congratulates its students for securing internships at several esteemed organizations, including prestigious Government Public Sector Undertakings (PSUs) and leading private enterprises. These internship opportunities reflect the students' academic diligence, technical competence, and proactive engagement with industry expectations. By earning positions in such reputable institutions, our students have demonstrated their ability to bridge classroom learning with real-world applications. These experiences not only enhance their professional development but also contribute to building a robust foundation for future careers in engineering and innovation. We commend their dedication and commendable achievement, which continues to uphold the department's tradition of excellence and reinforces our strong industry-academia interface. Their success stands as an inspiration to their peers and underscores the effectiveness of our curriculum in preparing students for the evolving demands of the engineering sector.

NAME OF THE STUDENT	ORGANIZATION
KARUNAKARAN M, JOHANAN S A, PRABOD ARJUN KUMAR S, NICKNESAN ANTO A, VISHNU K	 Indian Space Research Organization (ISRO)



Celebrating Student Excellence in Industry Engagement

NAME OF THE STUDENT	ORGANIZATION
<p>NITHIN IVAN A, MAHESHKUMAR M</p>	 <p>Combat Vehicle Research and Development Establishment (CVRDE)</p>
<p>JOHANAN S A, PRABOD ARJUN KUMAR S</p>	 <p>Kudankulam Nuclear Power Plant (KKNPPP)</p>
<p>SHEIK IRFAN S, SURESH K, MOHAMED ANAS K, KEERTHI KUMAR M,</p>	 <p>Daimler India Commercial Vehicles Pvt. Ltd.</p>
<p>GURUSANKAR RAJA N, ESAKKIAPPAN A, KRISHNAVENI N, PRANAUV RAAM K, SOMA HARIHARA SUDHAN G, KARTHICK S, MITHUN BHARATHI M, MAHA NAVEEN KUMAR K, VIMAL RAJ S</p>	 <p>Dhrangadhra Chemical Works Limited (DCW) Thoothukudi</p>


Celebrating Student Excellence in Industry Engagement

NAME OF THE STUDENT	ORGANIZATION
KARANN S, SATHYA SEELAN G, DEEPAK KUMAR M, BENIAL RAVEN D	 AXISCADES Technologies Pvt Limited
VINOOTH KUMAR A	 Hyundai Motors India Limited
KAVEN RAAJ S, SUBRAMANI G, MARAGATHA GURU R, MOHAMED HAMEED FROZKHAN M	 Rane Engine Valves Pvt Ltd, Trichy
NAVIN JEYANTH P, SANJAY P, PRASATH P, MITHUN SUNDAR N T, JEEVANANTHAM P,	 C.R.I. PUMPS Pumping trust. Worldwide.

Celebrating Student Excellence in Industry Engagement

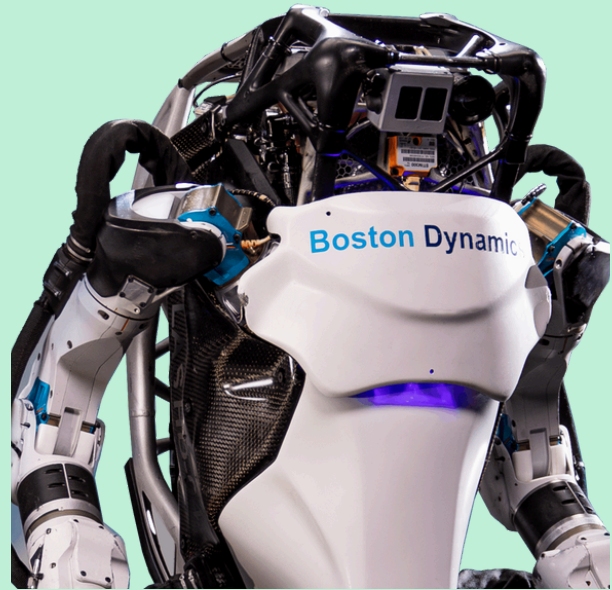
NAME OF THE STUDENT	ORGANIZATION
VADIVESWARAN R	Golden Non-Conventional Energy Systems Pvt .Ltd.
VASANTH SANKAR B	
DHARUN MANIKANDAN S, MOHAMED FAISAL M, PONE SORNA MUGESH P, ABINSASHA P	
AYYALUSAMY S ARUL SUNDARAM L YUVARAJAN T BALAJI P GANAPATHY P PONMAHARAJA S PRITHIVIRAJ N RUDHISH VIJAY S PRAVIN S GURU GANESH RAJ M	Hi-Tech CNC Automation, Coimbatore

Celebrating Student Excellence in Industry Engagement

NAME OF THE STUDENT	ORGANIZATION
SURIYA KUMAR S VISHWA M KAPILESHAN S V RAMESHKANI T	 <p>ಕ.ಪ.ಸಿ. ಪುನಃ ಪ್ರವೇಶಿಸುವ ವಿ.ಓ.ಸಿ. ಪುನಃ ಪ್ರವೇಶಿಸುವ V.O.C Port Authority</p> <p>Global Connect</p>
SARAVANAN M SIVARAM R ANDRUSEN S JOSHI MON S JANE JOPHEN FDO R SELVARAGAVAN S DHANUSH M	<p>Mittra Forge, Hosur</p>
SENDHUR PANDIAN M RAMKUMAR S AKASH S	<p>ATC Tires Private Limited, Tirunelveli</p>

BOSTON DYNAMICS' ELECTRIC ATLAS: A LEAP IN ROBOTIC ENGINEERING

Boston Dynamics recently unveiled its next-gen all-electric Atlas robot, replacing its hydraulic predecessor with a lighter, stronger, and more agile machine. The key innovation lies in its high-efficiency electric actuators, 3D-printed structural components, and AI-driven motion control, enabling fluid, human-like movements.



Unlike traditional industrial robots, Atlas is designed for real-world adaptability capable of handling complex tasks in manufacturing, logistics, and hazardous environments. Hyundai, Boston Dynamics' parent company, plans to integrate this tech into smart factories, signaling a shift toward versatile, AI-powered automation.

With competitors like Tesla Optimus advancing, Atlas represents the future of robotics—where mechanical efficiency meets artificial intelligence to redefine labor and production. As Boston Dynamics puts it: “This is just the beginning of a new era in robotics.”

Inked by

Pone Sorna Mugesh P

3rd Year Mechanical Engineering Department

EDITORIAL TEAM



Benial Raven D
3rd Yr Mech



Sathya Seelan G
3rd Yr Mech



Pone Sorna Mugesh P
3rd Yr Mech



Reffino D
2nd Yr Mech