

MECHNOTIMES



**CGC
LANDRAN**

Building Careers. **Transforming Lives.**

Written By: Avery Davis

Discover the latest breakthroughs, trends, and ideas shaping the future of engineering, from cutting-edge technology to sustainable solutions.

Newsletter

**Volume 9
Issue IV**

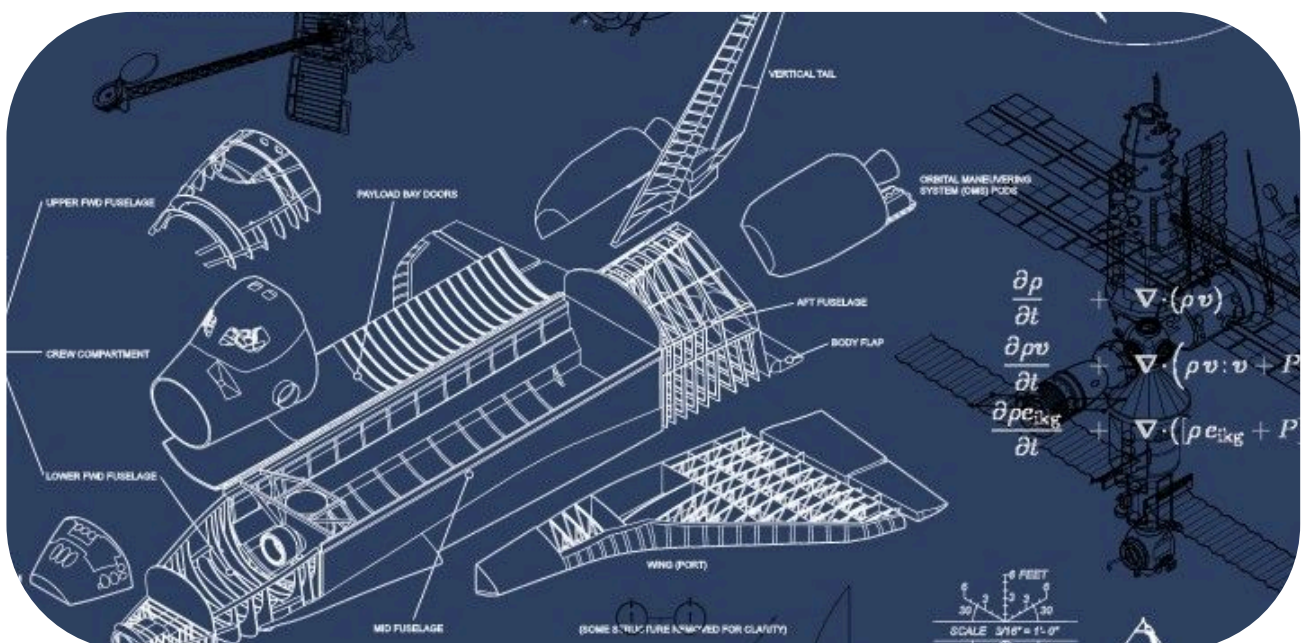
APRIL-JUNE 2025

VISION OF CHANDIGARH ENGINEERING COLLEGE-CGC, LANDRAN

To become a leading institute of the country for providing quality technical education in a research-based environment for developing competent professionals and successful entrepreneurs.

MISSION OF CHANDIGARH ENGINEERING COLLEGE-CGC, LANDRAN

1. To provide state of the art infrastructure and engage proficient faculty for enhancing the teaching learning process to deliver quality education.
2. To give a conducive environment for utilising the research abilities to attain new learning for solving industrial problems and societal issues.
3. To collaborate with prominent industries for establishing advanced labs and using their expertise to give contemporary industry exposure to the student and faculty.
4. To cater opportunities for global exposure through association with foreign universities.
5. To extend choice-based career options for students in campus placements, entrepreneurship and higher studies through career development program.



Department of Mechanical Engineering



Vision Of Department

To emerge as centre of quality education for creating competent mechanical engineers catering to the ever-changing needs of industry and society.

Mission of Department

M1: To provide quality education by constantly updating departmental resources and using effective teaching & learning methodology.

M2: To promote research practices in the field of mechanical engineering in pursuit of academic excellence and for the benefit of society.

M3: To establish industrial collaborations for imparting contemporary knowledge to keep pace with the technological challenges in the interdisciplinary and core areas of mechanical engineering.

M4: To provide opportunities to the students for global exposure through international collaborations.

M5: To nurture students through pre-placement training programs to succeed in campus placements and to provide guidance for entrepreneurship and higher studies.

Editor's Column

In the ever-evolving world of mechanical engineering, each new development builds upon a foundation of dedication, curiosity, and a drive to make a meaningful difference. This publication captures not just the highlights of our department's academic and extracurricular journey, but also the essence of who we are—innovators, educators, and lifelong learners.

As we chart our course forward, we remain committed to nurturing talent that will shape the technologies and solutions of the future. The stories and achievements featured here are a testament to the passion of our students and the commitment of our faculty.

We invite you to explore this issue with pride and anticipation. Let it remind us all of the power of shared knowledge and the importance of continuing this tradition of communication and inspiration. May this newsletter remain a lasting reflection of our collective pursuit of excellence.



Aishna Mahajan

Editor-in-Chief
MECHNOTIMES

From The Editorial Board

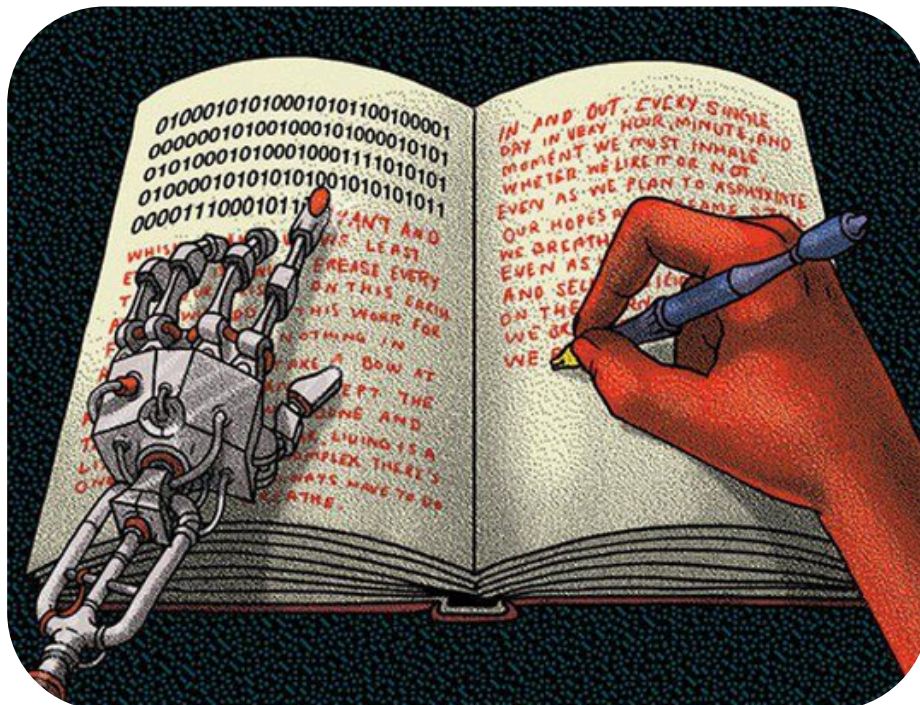
Welcome to our latest edition of Mechnotimes of Mechanical Department

Newsletter of Chandigarh Engineering College-CGC, Landran for APRIL-JUNE 2025.

As we navigate the expanding universe of engineering and technology, we are acutely aware of the immense potential and the responsibility it brings. In this editorial, we turn our focus to the crucial roles of creativity and sustainable thinking in driving the mechanical engineering field forward.

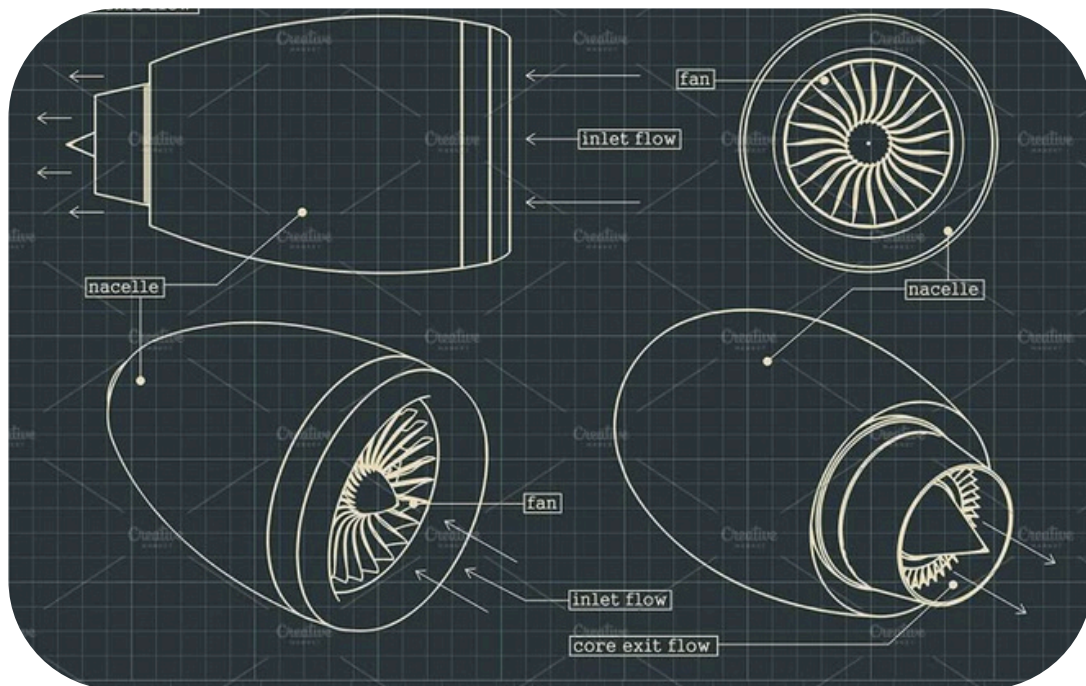
Throughout history, innovation has been the cornerstone of engineering advancement. From the industrial revolution's steam engines to the emergence of electric mobility, it has continuously reshaped how we live and operate in the modern world. Each invention has not only solved existing challenges but also opened the door to new possibilities, setting the stage for future breakthroughs.

Harshit Rana(2422072),SEM V
Nakul(2422074),SEM V



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Student Achievements:

Team Rudraksh secured 1st position at Robo Mania, Next Quantum 2.0 Hackathon

Mechanical Students of 6th semester- Team Rudraksh from Chandigarh Engineering College-CGC, Landran secured 1st position in the event Robo Mania, Next Quantum 2.0 Hackathon, held on 4th -5th April 2025 at Gulzar Group of Institutions, Khanna, Punjab.



Mechanical Students secured 1st position at Robo Mania, Next Quantum 2.0 Hackathon, CGI ,Khanna

Faculty Coordinator, AICTE IDEA Lab, CEC- CGC attended 5 Days FDP at DCRUST, Murthal

CEC-CGC has received grant for establishment of AICTE- IDEA Lab. Dr Rachin Goyal, HoD Mechanical Engineering and Faculty Coordinator AICTE approved IDEA Lab attended 5 days Faculty Development Program in connection with the establishment of the IDEA Lab at Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Sonapat, Haryana, from 05/05/25- 09/5/25. This program provided the real time specific information about establishment of the IDEA LAB and implementation of the scheme in our institute.



Dr Rachin Goyal, Faculty Coordinator AICTE-IDEA Lab attending FDP on
IDEA LAB at DCRUST, Murthal

Students participated in National Conference & Exhibition on Emerging and Innovative Trends in Engineering Technology at Government College of Engineering and Technology, Jammu.

Mechanical Students of 6th semester- Team Rudraksh from Chandigarh Engineering College-CGC, Landran participated in the National Conference & Exhibition on Emerging and Innovative Trends in Engineering Technology, held on 22nd -23rd April 2025 at Government College of Engineering and Technology, Jammu. The team showcased their innovative project titled "ResQ-Bot | Dynamic Rescue Assist Mechanism".



Mechanical Students participating at National Conference & Exhibition on Emerging and Innovative Trends in Engineering Technology, at Government College of Engineering and Technology, Jammu.

Innovations around the world:

A nonflammable battery to power a safer, decarbonized future:

Lithium-ion batteries are the workhorses of home electronics and are powering an electric revolution in transportation. But they are not suitable for every application.

A key drawback is their flammability and toxicity, which make large-scale lithium-ion energy storage a bad fit in densely populated city centers and near metal processing or chemical manufacturing plants.

Now Alsym Energy has developed a nonflammable, nontoxic alternative to lithium-ion batteries to help renewables like wind and solar bridge the gap in a broader range of sectors. The company's electrodes use relatively stable, abundant materials, and its electrolyte is primarily water with some nontoxic add-ons.

"Renewables are intermittent, so you need storage, and to really solve the decarbonization problem, we need to be able to make these batteries anywhere at low cost," says Alsym co-founder and MIT Professor Kripa Varanasi.

The company believes its batteries, which are currently being tested by potential customers around the world, hold enormous potential to decarbonize the high-emissions industrial manufacturing sector, and they see other applications ranging from mining to powering data centers, homes, and utilities.

"We are enabling a decarbonization of markets that was not possible before," Alsym co-founder and CEO Mukesh Chatter says. "No chemical or steel plant would dare put a lithium battery close to their premises because of the flammability, and industrial emissions are a much bigger problem than passenger cars. With this approach, we're able to offer a new path."

"The intent was to light up the homes of at least 1 billion people around the world who either did not have electricity, or only got it part of the time, condemning them basically to a life of poverty in the 19th century," Chatter says. "When you don't have access to electricity, you also don't have the internet, cell phones, education, etc."

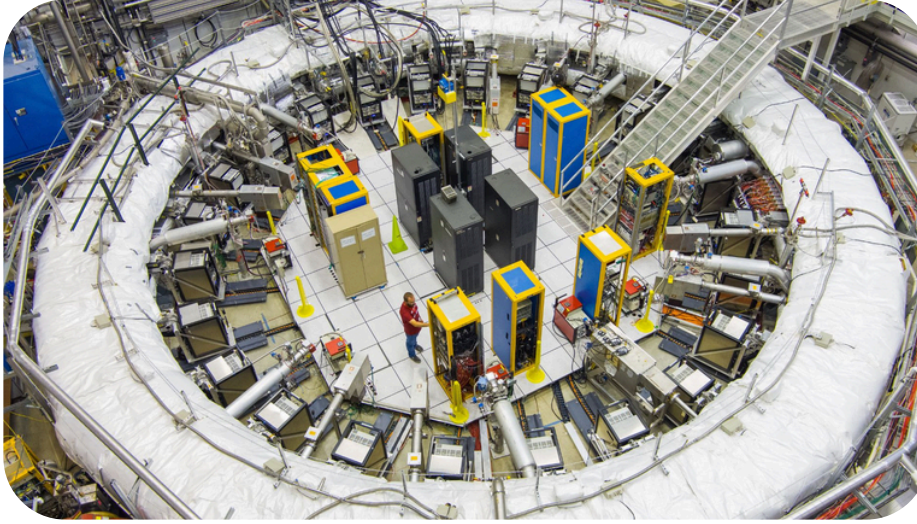
To solve the problem, Chatter decided to fund research into a new kind of battery. The battery had to be cheap enough to be adopted in low-resource settings, safe enough to be deployed in crowded areas, and work well enough to support two light bulbs, a fan, a refrigerator, and an internet modem.

At first, Chatter was surprised how few takers he had to start the research, even from researchers at the top universities in the world.



New force of nature discovered by scientists at Fermilab

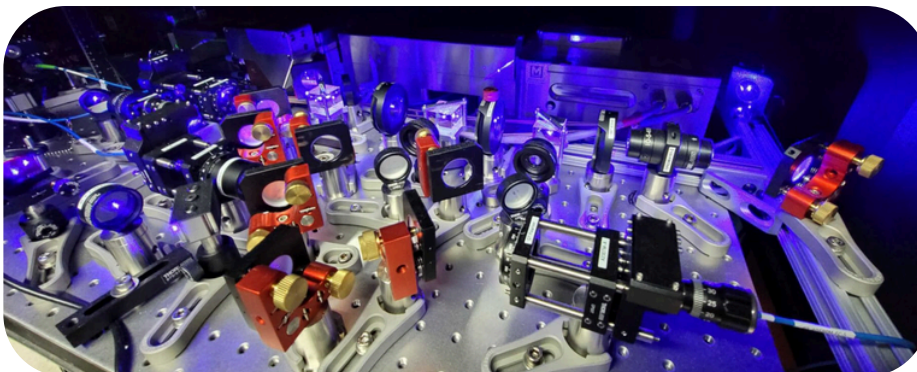
Scientists at a particle accelerator near Chicago may have found evidence of a new force of nature that could revolutionize our understanding of the universe. The international team of scientists working on the Muon g-2 experiment at the Fermi National Accelerator Laboratory announced an updated measurement on Thursday that shows muons, tiny sub-atomic particles, are not behaving as expected by the current physics theory. Muons are similar to electrons but about 200 times as massive, and their tiny internal magnet wobbles in the presence of a magnetic field. However, the results of the g-2 experiment showed that the muons wobbled faster than the standard model theory predicted, creating a significant conflict between theory and experiment after 20 years of work.




Submitted by-Karan Tayal(2337674)

US-backed quantum knights achieve error free computing breakthrough

Researchers within DARPA's ONISQ program have achieved a groundbreaking milestone in quantum computing, successfully demonstrating a machine capable of operating 48 logical qubits. Researchers utilized hardware developed by QuEra and were able to identify and correct errors, significantly improving the accuracy of calculations. The team utilized Rydberg qubits based on neutral atoms, which offer superior resilience against errors and the ability to dynamically reconfigure the qubit architecture. This achievement represents a significant step towards realizing the immense potential of quantum technology and its ability to revolutionize data analytics and financial simulations.



Submitted by-Harshit(2422071)



**"Scientists dream about doing
great things. Engineers do
them."
- James A. Michener**

