SSIPMT RAIPUR

SHRI SHANKARACHARYA INSTITUTE OF PROFESSIONAL MANAGEMENT & TECHNOLOGY, RAIPUR (C.G.)

ME

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MECHANICAL EXPRESS

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From the Editor-In-Chief's Desk :

Welcome readers!

We are very happy to introduce the bi-yearly departmental newsletter: MECHANICAL EXPRESS. As we all know, a newsletter mirrors its department- its vision and mission. It also highlights the event, activities, academic progress and achievements of its students as well as the contribution of teachers towards the departments growth. In this edition, we have tried to capture the last semester worth of activities, starting from the January 2022, and upto June 2022. I do hope that the newsletter encourages many more including students to use it as a platform to express their creativity and that it proves to be a source for everyone to not only catch up the ongoings of the department but also as an oasis to satiate their curiosity about the field of mechanical engineering.

Ananya Shukla
4th sem

Motion Based Massage Conveyer for Paralytic/Disable

Dr. Mayank Sharma
Asst. Prof.

The changing situation of the world, the increasing population of India and the tug-of-war going on between various superpowers at the international level, in such circumstances, India will have to focus on both its security and its development. If you look at the past few years, then you can easily understand that the wars in the future will be fought on the basis of technology and that country will prove to be the winner, which is better in technologyTo make any nation technologically empowered, the scientists and engineers of that nation have the most important role. As an engineer, it is our responsibility to keep pace with the changing times and contribute to nation building.

Motion Based Massage Conveyer for Paralytic/Disable

Mrs Neha Verma
Asst. Prof.

Motion Based Massage Conveyer for Paralytic/Disable People
In this system, we have proposed a monitoring and facilitation system based on IOT. There are numerous system which help to monitor the patients but there aren't many system which help to communicate with them. Our system help the paralyzed patients to convey their message just by moving their fingers to display the required message. This system works when the patient moves their body where the device is mounted. Our system works when the patient moves and the device starts reading the movement so that according to which it sends message to the receiver. We have used different directions to convey the different types of messages. We have used accelerometer to read the direction of motion. The microcontroller processes the information and displays it on the LCD screen. It also consist of a buzzer along with messages and an RF receiver and transmitter are used to decode the message before passing it to the microcontroller so that it can send it directly to the receiver end.

MECHANICAL ENGINEERING ASSOCIATION

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Yamini Sahu

Mentor's Wisdom:

Mechanical Engineering Association

(Estd. 2008)

"The mind is not vessel to be filled but a fire to be ignited."

Mechanical Engineering Association (MEA) is an organization belong to department of mechanical engg. Formed by the students which firmly believes that every individual is blessed with certain qualities and MEA endeavors to best out of an individual. The basic aim of MEA is to enrich the students with different qualities to add dimensions to their personality so that every students emerges as a multi-functional engineer who is globally recognized. MEA strongly believes on developing competence to one's personality.

Mr Manish RK Sahu
Asst. Prof.

Arm Wrestling Competition

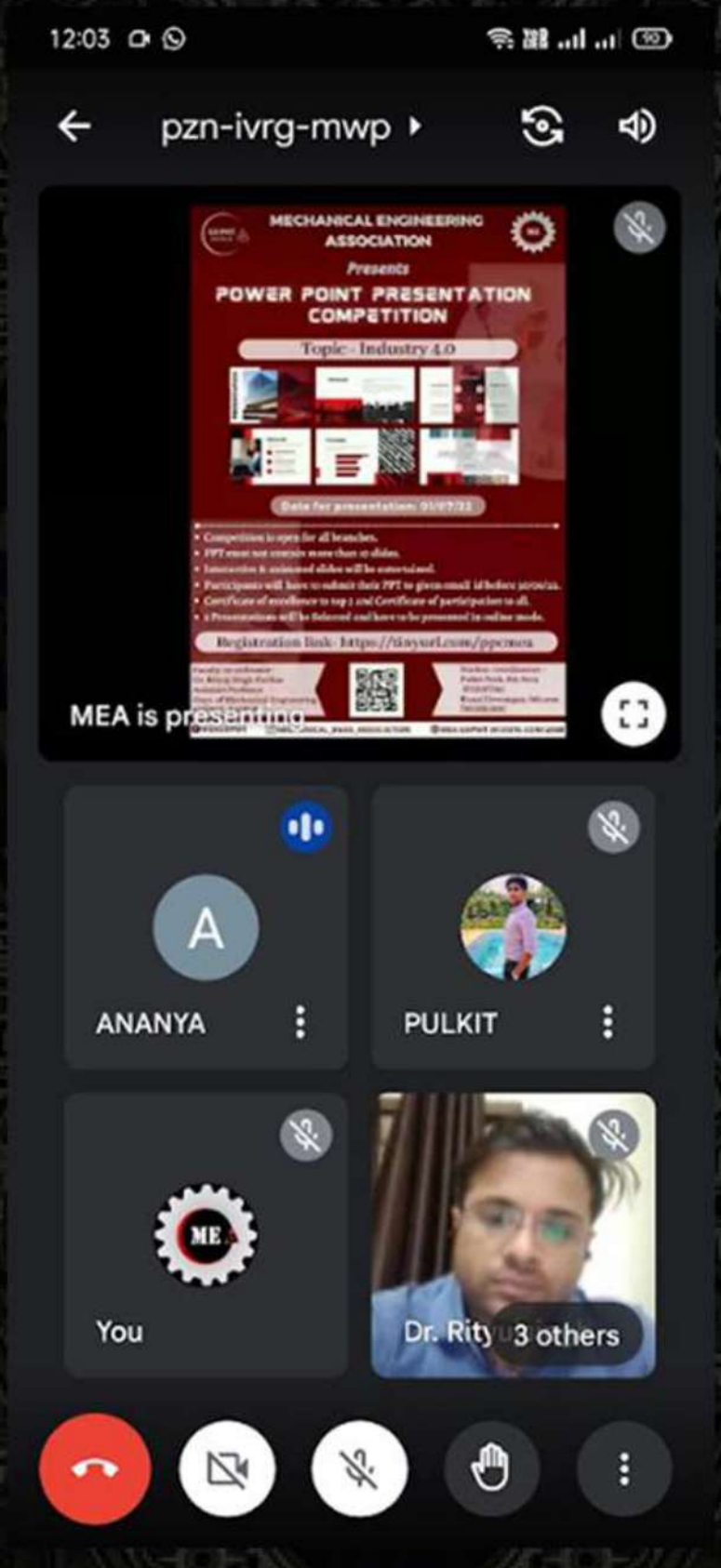
Date of Event: 19th & 20th April, 2022

Blood Donation Camp

Date of Event: 14th May, 2022

PPT Competition

Date of Event: 1st July, 2022



Star Fuel- The Future Of Energy

Ananya Shukla
4th sem

When two light weight nuclei fuse together to form a singular heavy nucleus, a large amount of energy is released in accordance with Einstein's mass-energy equivalence. This energy, if harnessed, can single-handedly solve the ongoing crisis in a clean and sustainable manner.

The first venture into this was during World War II for the development of thermonuclear weapons, and in the following decades many attempts to tap into the energy generated by nuclear fusion with a more peaceful end goal in mind were made. The latter led to the formation of the nuclear reactor.

Even today, with the rate of technological advancements increasing exponentially, we have yet to come up with a way to amplify the energy produced during fusion to a level that is far more than what is required to control and stabilize the burning plasma needed for the reaction.

This is where the International Thermonuclear Experimental Reactor comes into play. Currently under construction in Cadarache, France, it is a joint ongoing project which was conceived in 1985. The current contributors to this project include the United States, Russia, China, Japan, South Korea and India among other European Countries.

To combat the previously mentioned problem of lack of energy produced, the scientists are developing highly power-efficient and powerful magnets. One such magnet developed by General Atomics is a part of this experimental reactor. The ITER, when finished and if successful, wil be the world's largest tokamak which is a device that uses powerful magnetic field to confine hot plasma in the shape of a torus.

The goal of ITER however is not to produce electricity, but to show that a nuclear reactor can generate enough energy to sustain itself, and thus pave the way for future technologies to tap into this mega power source, as well as to prove the viability of nuclear fusion fuel.

Robotics And Automation

Ayush Chowdhary
3rd sem, Mechanical

Robotics and automation are two closely related fields that are transforming industries around the world. Robotics involves the design, construction, and operation of robots, while automation refers to the use of technology to perform tasks without human intervention. Together, these fields are driving the development of new technologies that are changing the way we work and live.

Robots are becoming increasingly common in manufacturing, healthcare, and logistics, among other industries. They are capable of performing repetitive tasks with precision and speed, making them valuable tools for increasing productivity and efficiency. For example, robots can be used to assemble products, package goods, and transport materials, freeing up human workers to focus on more complex tasks.

Automation, on the other hand, involves the use of technology to streamline processes and reduce the need for human intervention. Automated systems can be used to control machines, monitor production lines, and manage inventory, among other tasks. This helps companies to reduce costs and improve efficiency, while also reducing the risk of human error.

Together, robotics and automation are transforming the way we work and live. They are making it possible to automate many of the repetitive and time-consuming tasks that were once performed by humans, freeing us up to focus on more creative and strategic work. As these technologies continue to evolve, they will create new opportunities for businesses to improve their operations and compete in an increasingly globalized economy.

At the same time, the growth of robotics and automation is raising important ethical and social questions. As machines become increasingly sophisticated, there is a risk that they will replace human workers, leading to unemployment and social inequality. It will be important for policymakers to work with industry leaders and other stakeholders to ensure that these technologies are deployed in a way that maximizes their benefits while minimizing their negative impacts.

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