

# THE PULSE OF HBTU

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OCT 15, 2023 SUNDAY

MONTHLY NEWSLETTER



## GANDHI JAYANTI (2nd October, 2023)

On October 2nd, 2023, an event for the celebration of Gandhi Jayanti was organised by the Literary Sub-council. The event began with Saraswati Vandana, followed by a presentation on the life of Mahatma Gandhi. Later, the NSS club of our college portrayed the life of Gandhi through a skit. Speech and poetry competitions were organised on the theme of the principles of Mahatma Gandhi. There were singing and dance performances done by the first-year students. Later, the Dramatics Club presented a drama showcasing some of the revolutionary moments in the life of Bapu. The Vice Chancellor Sir addressed the students and gave a speech highlighting the importance of Gandhi's principles and their implementation in life. Later, he awarded the winners of competitions along with the organisers of the event with certificates. The event ended with a cleanliness drive across the campus organised by the NSS club of our college in which Vice Chancellor Sir, faculty and students participated.



# SCIENCE AND TECHNOLOGY

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## 1 Gaganyaan test flight mission successful, crew escape module splashes down

ISRO scientists, after a two hour delay and nerve-wracking moments as the engine of TV-D1 failed to ignite initially, on October 21 launched the rocket carrying payloads related to crew safety in Gaganyaan mission with precision from Sriharikota. The ISRO announced on X that TV-D1 Mission was fully achieved and that the Crew Escape System performed as intended. The TV-D1 flight which was to demonstrate the performance of the Crew Escape System (CES) was scheduled to lift off at 8 a.m, however it was rescheduled for 8.30 am.

Addressing the media, ISRO Chairman Somanath said, "I am very happy to announce the successful accomplishment of the TV-D1 mission. The purpose of this mission was to demonstrate the Crew Escape System for the Gaganyaan program through a test vehicle demonstration in which the vehicle went up to a Mach number, which is slightly above the speed of sound, and initiated an abort condition for the Crew Escape System to function."

Prime Minister Narendra Modi said that the ISRO's successful launch of a test vehicle as part of its Gaganyaan mission takes India a step closer to realising its first human space flight programme. Simply put, the objective of the mission was to check the safety of the CES for its capabilities to take the CM to safety in case of an emergency that will require ISRO to abort

## 2 Nobel Prize Honors Inventors of 'Quantum Dot' Nanoparticles

The Nobel Prize in Chemistry has been awarded to three researchers who harnessed the quantum behaviors of semiconductor nanocrystals.

a nanocrystal so minuscule that it behaves like an atom. Mounqi G. Bawendi, Louis E. Brus and Alexei I. Ekimov have been awarded the 2023 Nobel Prize in Chemistry for discovering a category of such minute marvels, now known as quantum dots, and for developing a precise method of synthesizing them.

Quantum dots, sometimes called artificial atoms, are precise nanocrystals made of silicon and other semiconductor materials that are just a few nanometers wide. Because electrons can be trapped at certain energy levels within them, the nanocrystals can emit only certain wavelengths of light. By controlling the size of the particles, researchers can program precisely what color the quantum dots will flash when stimulated.

Quantum mechanics predicts that if you take an electron and squeeze it into a small space, the electron's wave function gets compressed, explained Heiner Linke, a member of the Nobel Committee for Chemistry and a professor of nanophysics.

The applications for these nanoparticles range from LED displays and solar cells to imaging in biochemistry and medicine. "These achievements represent an important milestone in nanotechnology," Åqvist said.

If you've ever watched programs on a QLED TV, you've seen these nanoparticles at play. But they're also being put to use in biomedical imaging and lighting. Researchers are still exploring additional applications for these nanoparticles in quantum computing and communications, flexible electronics, sensors, efficient solar cells, and catalysis for solar fuels.

## 3 Nobel Prize 2023: 3 scientists win prize in physics for work on electrons in atom during split seconds

The Nobel Prize in physics was awarded Tuesday to three scientists who look at electrons in atoms during the tiniest of split seconds.

Pierre Agostini of The Ohio State University in the U.S.; Ferenc Krausz of the Max Planck Institute of Quantum Optics and Ludwig Maximilian University of Munich in Germany; and Anne L'Huillier of Lund University in Sweden won the award.

At the moment, this science is about understanding our universe rather than practical applications, but the hope is that it will eventually lead to better electronics and disease diagnosis.

The physics prize comes a day after Hungarian-American Katalin Karikó and American Drew Weissman won the Nobel Prize in medicine for discoveries that enabled the creation of mRNA vaccines against COVID-19.

The laureates are invited to receive their awards at ceremonies on Dec. 10, the anniversary of Nobel's death. The prestigious peace prize is handed out in Oslo, according to his wishes, while the other award ceremony is held in Stockholm.

# IN AND AROUND

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## AUTOROB CLUB: THREE IN ONE WORKSHOP

Autorob club of HBTU conducted a Robosoccer workshop which proved out to be a great success. Apart from robosoccer, the bots prepared could be also used for robowrestling and roborace which made it a 3 in 1 bot workshop. This workshop was held on October 7, 2023 in Shatabdi Bhawan under the guidance of Prof. Sanjeev Kumar Singh Yadav who is the mentor of the Autorob Club.

Prof. Krishna Raj (dean School of Engineering), Prof. Raghu raj (Dean Planning and resource generation) and Prof. Sanjeev Kumar Singh Yadav were also invited as guests and gave their words of motivation to the students. An enormous participation from first year was seen. More than 400 students were present in the Shatabdi Bhawan including the management team.

All the first-year students were divided into groups of five members each and each team was assigned a mentor. Each mentor was assigned with 3-4 team. The mentors were second year team members who taught them the basics and guided them on how to make the bots. The toolkits prepared by the management team were distributed to each team. The toolkit included all the necessary tools to make the bots like metallic chassis, geared motor, wheel, DPDT, male and female jack, SMPS, 2 pin plug wire, screw and screw driver. The refreshments were also provided to the students.

The whole bot making was divided into two parts namely testing and soldering. All the bots that passed the testing stage were soldered by the management team. At the end of the workshop, all the teams tested their bots and got their pictures clicked with their mentors. Moreover, the students were excited about the new changes that they could do themselves in the bot.

An extension of this workshop was also held in Mechanical Engineering department. It was a free workshop session for all those students who couldn't attend the previously held workshop due to some genuine reasons.

# EDITORIAL

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## ‘Hostaged’ into PEACE.....

The world has set into commotion, a debate or rather a war over ‘The right’ and ‘The wrong’. A predecided ‘winner’, a self-acclaimed ‘nobler’ against the EVIL . Clashes over different beliefs, religions, topographic position or state boundary infested the society with terrorism. The solution to winning a disagreement is violence. Peace for a developed nation comes at the cost of a crumbling third world country. A bunch of rocket launchers, tanks and ammo is the menial bid for cheap import, labor, resources or compromised human rights. The life of under privileged is a collateral damage for the greater good. Let’s ask ourselves, who decided this price? Who chose the sides?

Terrorism has emerged as a raging problem for the world. Under the façade of religion, economic development or relief forces, nations have meant to siege emerging powers to counteract resistance to their monopoly over peace, over democracy and human rights. With Russia and Ukraine at each others’ throat, Israel in a tussle with its neighbors and militant groups plundering in all of middle east, Africa and India; thousands of innocent fall victim to this tug of war. Tension among countries



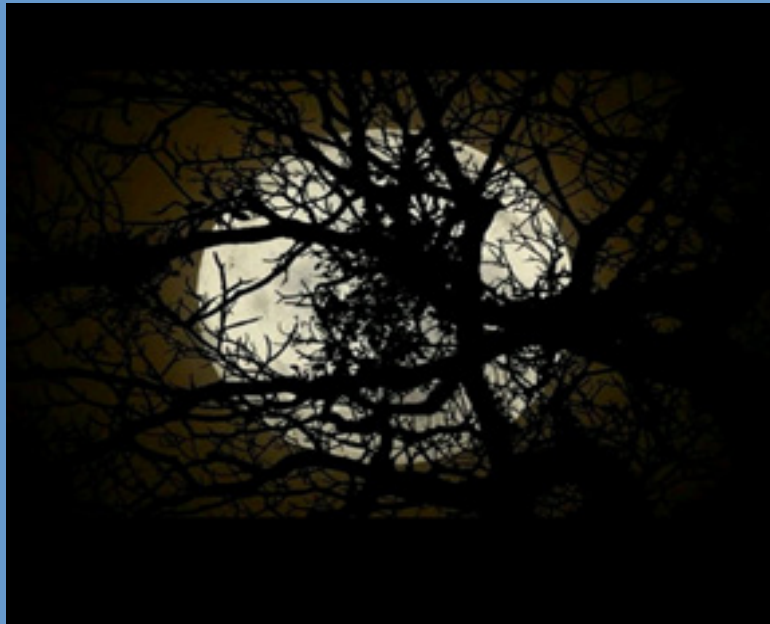
has left its citizens stranded and confused. Stripped of home, motherland and a life as human; they are treated as cattle, facing prejudice and poor living conditions. What should we see of the system which was once established for the living, the boundaries that were supposed to protect the living and the leaders that promised the interests of the living when there’s all left are corpse.

Sanskriti Shukla  
2nd B.Tech Mechanical Engineering

# EDITORIAL

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## India's Most Haunted

Whether people claim to have seen ghosts, or not, they've persevered for hundreds of years in myths, folklore and epics. They are as real to us in the stories of them as they are in our fears, experiences and imagination.

There's a ghost in every corner of India, from the dark forests to the crowded bazaars - from abandoned forts to lonely village roads - they are there, everywhere.

In Malayalam folklore, Kanjirotu Yakshi occupies the rather unenviable position of a female vampire. She is a courtesan who turned into a Yakshi after being murdered by her palanquin-bearer, waylaying men with her beauty and drinking their blood

If a man dies a bachelor i.e after his Munja (Upanayan) is done but his Sod Munja ritual remains to be done, he is considered to become a Munjya. The spirit is generally resides in the Peepal trees or near a well. The fish-loving Mechho Bhoot of Bengal resides in trees near water bodies in villages, and calls out to fisherfolk on their way to the market and back.

Assam's Puwali bhoot is an army of small ghosts that like stealing food from the hands of children. They are said to have a sweet tooth.

The horror stories of India are varied in nature but they do can scare the daylights out of you! Have you had any horror encounter?

Suyash Joshi  
2nd B.Tech Chemical Engineering

# CREATIVE CLUSTER

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हार (जीत का दूसरा पहलू)....

माना कितुझे बहुत अंदर तक तोड़ा है इस हार ने।  
मगर ये सोच ना जाने कतिने बंधनों को तोड़ा है, तेरे इस एक वार ने।  
इस एक हार की वजह से तू खुदको कमजोर मानता है।  
या फरि मैं ये कहू, कितू खुदको नहीं जानता है।  
आज तेरे पाव डगमगा रहे है ,जनि लोगो के रूठ जाने पर,  
उन्हें फर्क नहीं पड़ता तेरे रहने पर या जाने पर।  
कुछ चंद लोगो की बाते सुनकर खुद को रोकता क्यू है,  
ये क्या बोलेंगे, वो क्या बोलेंगे ये खुदको टोकता क्यू है।  
यहां तो लोग हजार बार गरिकर भी सफल हुऐ है,  
यू कहू तो वे जब तक हर नहीं माने तब तक नहीं वफिल हुऐ है।  
दुनिया की तमाम तानों से बढ़कर तेरा काम है ,  
भीड़ से अलग सबसे ऊपर पहुंचना ही तेरा मुकाम है।  
चल अब भूल भी जा इन खोखली बातों को ,  
जरा याद कर वो बनि सोए ,रोते कटी अंधेरी रातों को।  
उस वक़्त तो मुझे नहीं दखा की ये दुनिया तेरे सरिहाने पर खड़ी है ,  
तो फरि आज तुझे क्यूं इन लोगो की पड़ी है ।

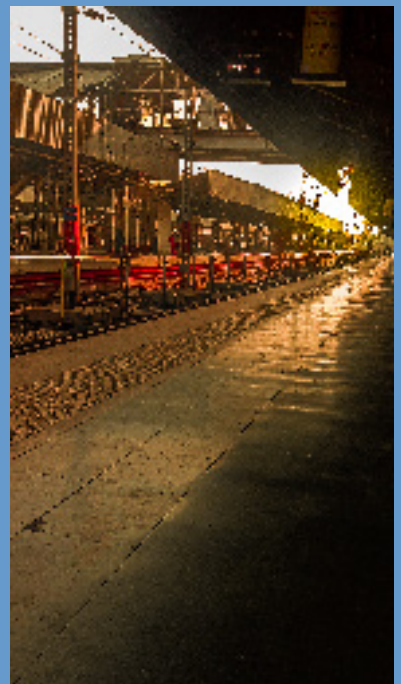
बस तू बढ़ता चल.....

एक समय आएगा ,जब तेरा मेहनत साकार होगा,  
उस वक़्त चारो ओर तेरा ही जय-जयकार होगा ।

HIMANSHU MISHRA  
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