Print Media Clippings June & July 2022

World's first liquid-mirror telescope for astronomy comes to India

PAGE 1
ANCHOR

ANJALI MARAR
PUNE, JUNE 2

INDIA'S FIRST liquid-mirror telescope, which will observe asteroids, supernovae, space debris and all other celestial objects from an altitude of 2,450 metres in the Himalayas, has seen its first light. It has now entered the commissioning phase and will start scientific observations some time in October this year.

Established on the campus of the Devasthal Observatory of the Aryabhatta Research Institute of Observational Sciences (ARIES) in Nainital, the International Liquid Mirror Telescope (ILMT) is the only liquid-mirror telescope operational anywhere in the world. It will also hold the unique tag of being the maiden liquid-telescope globally to be designed exclusively for astronomical purposes.

The Devasthal Observatory campus in Uttarakhand. ILMT is seen at the bottom left. *Source : ARIES*

ILMT will be the third telescope to be operating from Devasthal after the 3.6-metre Devasthal Optical Telescope (DOT) — the largest in India commissioned in 2016 — and the 1.3-metre Devasthal Fast Optical Telescope (DFOT) inaugurated in 2010.

"Devasthal is considered as one of the best sites for astronomical observations," Professor Dipankar Banerjee, director of ARIES, told *The Indian Express* on Thursday. This international telescope facility is the result of collaborative work between astronomers from ARIES, Institute of Astrophysics and Geophysics, Liège University, Belgium; the Canadian Astronomical Institutes from Vancouver, University of British Columbia; Laval University, University of Montreal, University of Toronto, University of Victoria, York University, Poznan Observatory, Poland, Ulugh Beg Astronomical Institute of Uzbek Academy of Sciences and the National University of Uzbekistan.

The telescope was designed and built at the Advanced Mechanical and Optical Systems Corporation and the Centre Spatial de Liege, Belgium. The major instrumentation funding was jointly provided by Canada and Belgium while India will be responsible for the operations and upkeep of the telescope.

CONTINUED ON PAGE 6

Published Date:	9 Jun 2022	Publication:	The Hindu Business Line [New Delhi]
Journalist:	Haripriya Sureban	Page No:	10

Technology Development Board to launch ₹1,000-crore start-up fund

HARIPRIYA SUREBAN

Bengaluru, June 8

The Technology Development Board (TDB), a statutory body under the Department of Science and Technology is set to launch a ₹1,000-crore start-up fund under a public private partnership (PPP) model.

The fund will be launched in two phases and will be live in a month. In the first phase, a corpus of ₹400 crore will be set up, of which ₹200 crore will be contributed by a private company. In the later phase, TDB will partner with more companies to raise and invest money.

Early-stage start-ups

Rajesh Pathak, Secretary, TDB, told *Businessline*, "The new fund will also invest in early stage start-ups rather than just the ones which have reached the commercialisation stage, as it has in the past." The fund is sector agnostic and is looking to invest in start-ups that aim to solve a problem with strong technical solutions and has a wider use case. The TDB will guide them to improve marketing abilities and provide technical training and skill development.

Indian researchers develop reusable, recyclable N95 mask

New Delhi: Researchers from Amity University (Haryana) have developed a reusable, recyclable, washable, odourless, non-allergic and anti-microbial N95 mask by using 3D printing technology. The four-layer mask whose outer layer is made up of silicon has a shelf life of more than 5 years depending upon the use, the union ministry of science and technology said. **PRIYANKA SHARMA**

Published Date:	3 Jun 2022	Publication:	The Pioneer [New Delhi]
Journalist:	Bureau	Page No:	4

Asia's largest liquid mirror telescope atop Devasthal hill to help survey sky

PIONEER NEWS SERVICE ■
NEW DELHI

A first-of-its-kind Asia's largest liquid mirror telescope in the country atop Devasthal hill in Uttarakhand's Himalayan range will now help in surveying the sky making it possible to observe several galaxies and other astronomical sources just by staring at the strip of sky that passes overhead.

The telescope will keep a watch on the overhead sky to identify transient or variable objects such as supernovae, gravitational lenses, space debris, and asteroids. It is built by astronomers from India, Belgium and Canada.

The novel instrument employs a 4-meter-diameter rotating mirror made up of a thin film of liquid mercury to collect and focus light. It is located at an altitude of 2450 metres at the Devasthal Observatory campus of Aryabhatta Research Institute of Observational Sciences (ARIES), an autonomous institute under the Department of Science and Technology (DST) in Nainital, Uttarakhand. Prof. Paul Hickson (University of British Columbia, Canada), an expert on liquid mirror technology, said , "The rotation of the earth causes the images to drift across the camera, but this motion is compensated electronically by the camera. This mode of operation increases observing efficiency and makes the telescope particularly sensitive to faint and diffuse objects."

"ILMT is the first liquid-mirror telescope designed exclusively for astronomical observations installed at the Devasthal Observatory of ARIES," said Prof. Dipankar Banerjee, Director, ARIES.

Prof. Banerjee mentioned that Devasthal Observatory now hosts two four-meter class telescopes – the ILMT and the Devasthal Optical Telescope (DOT). Both are the largest aperture telescopes available in the country.

Published Date:	3 Jun 2022	Publication:	The Telegraph [Kolkata]
Journalist:	G S Mudur	Page No:	3

Country's largest optical telescope

G.S. MUDUR

New Delhi: An international telescope in the Himalaya, India's largest optical telescope and the first with a liquid mirror, has opened for observations of diverse targets — from asteroids in the solar system to exploding stars to distant galaxies.

Astronomers from Belgium, Canada and India built and installed the instrument at the Devasthal campus of the Nainital-based Aryabhatta Research Institute of Observational Sciences (ARIES), about 2,450 metres above sea level.

The International Liquid Mirror Telescope (ILMT) uses a four-metre diameter rotating mirror made of a thin film of liquid mercury to collect and focus light, scientists at the institute said. This makes it larger than the 3.6-metre optical telescope also at Devasthal, hitherto the largest in the country.

"The ILMT is now the largest but it comes with a disadvantage and several advantages because it uses a liquid mirror instead of a conventional mirror," Dipankar Banerjee, the Institute's director told **The Telegraph**.

Since the liquid mirror is a rotating thin film of mercury, Banerjee said, the telescope cannot be pointed at will anywhere in the sky but will always observe the same part of the sky, the zenith as observed from Devasthal.

Such telescopes depend on the Earth's rotation to observe different sections of the sky. As the Earth turns and the telescope returns to the same section of the sky, astronomers could use it to track the same set of objects each night.

"Because it is a large telescope, it will allow us to detect faint objects and because we return to the same objects every night, it will allow us to pick changes in brightness or other features," Banerjee said.

The ILMT collaboration includes astronomers from the Nainital observatory and the University of Liege and Royal Observatory in Belgium, five universities in Canada, and academic institutions in Poland and Uzbekistan.

"The telescope has just become operational and we're now fine-tuning the performance," said Kuntal Misra, project investigator for ILMT at the Institute. "The way it works allows us to survey a strip of the sky each night. Our plan is to make the data from the sky survey available to the global astronomy community," she said.

Since the ILMT became operational on April 29, astronomers have captured several hundred images of the sky on clear nights at Devasthal. The institute released an image showing two galaxies and stars in the foreground to the media on Thursday.

Liquid mirror telescopes take advantage of the fact that the surface of a rotating liquid has a parabolic shape which is ideal for focusing light. The reflected light passes through a sophisticated multi-lens optical corrector that produces sharp images over a field of view.

An image of the sky, captured by the ILMT, featuring two galaxies — one near the top right corner and the other near the lower left corner

The Devasthal campus

Published Date:	2 Jun 2022	Publication:	The Hindu [Mumbai]
Journalist:	Bureau	Page No:	3

A device to turn wastewater into energy

IIT Guwahati claims that it could be used for obtaining clean energy economically

SPECIAL CORRESPONDENT
GUWAHATI

Researchers at the Indian Institute of Technology in Guwahati have developed a microbial fuel cell (MFC), a bio-electrochemical device that can generate "green energy" by treating wastewater.

The researchers said the device offered a dual benefit – generation of bioelectricity and waste management – by converting chemical energy contained in organic substrates into electrical energy through microbes.

The Department of Science and Technology supported the research led by Mihir Kumar Purkait and his Ph.D student Mukesh Sharma of IIT Guwahati's Department of Chemical Engineering.

Indian Institute of Technology Guwahati • FILE PHOTO

The IIT Guwahati claimed the device could be used for obtaining clean energy from municipal wastewater economically.

"MFC is a bio-electrochemical reactor system that utilises electrons liberated in the biochemical oxidation of organic substrates catalysed by anaerobic microbes. A conventional MFC reactor comprises an anaerobic biotic anode chamber, an aerobic biotic or abiotic cathode chamber, and a separator such as a proton exchange membrane (PEM)," Mr. Purkait explained.

The active biocatalyst in the anodic chamber anaerobically oxidises organic matter present in wastewater to produce electrons and protons.

Protons are transported to the cathodic chamber through the PEM. The external circuit conducts the electrons to the cathode, completing the electrical circuit.

At the cathode, electrons and protons react in the presence of oxygen (or another electron acceptor), which get reduced to water, the researchers said.

Published Date:	3 Jun 2022	Publication:	The Hindu [New Delhi]
Journalist:	Shubashree Desikan	Page No:	15

Liquid mirror telescope in Devasthal sees first light

Once trained using AI tools, the telescope can help track transients such as supernovae, space debris and meteorites

SHUBASHREE DESIKAN
CHENNAI

The four-metre International Liquid Mirror Telescope (ILMT) saw the first light recently, gazing out from its vantage on Devasthal, a hill in Uttarakhand, into the deep sky.

The telescope, staring at the sky overhead, will make sky surveys possible and obtain images that can help observe transient phenomena such as supernovae and record the presence of space debris or meteorites – basically, watch the skies.

The telescope has been built by a collaboration of scientists from Canada, Belgium and India. It is located at an altitude of 2,450 metres on the Devasthal Observatory campus of the Aryabhata Research Institute of Observational Sciences (ARIES) in Nainital district, an autonomous institute under the Department of Science and Technology, Government of India.

A large pool of mercury placed in a vessel is spun around so fast that it curves into a parabolic shape. Since mercury is reflective, this shape helps in focusing the reflected light. A thin sheet of mylar protects the mercury from the wind.

The primary mirror of the International Liquid Mirror Telescope at Devasthal.

"It was thrilling to see the formation of the primary mirror. Nearly 50 litres of mercury, weighing close to 700 kilograms, is spun hard to form a paraboloid mirror of just 4 mm thickness and a diameter of about 4 metres," says Kuntal Misra, Project Investigator at ARIES. She has worked in this project since January 2020.

First image

The first image made by the telescope consisted of several stars and a galaxy, NGC 4274, which is 45 million light years away.

The telescope, having a primary mirror that is liquid, cannot be turned and pointed in any direction. It "stares" at the zenith and watches the sky as the earth rotates, thereby giving a view of different objects.

This property can be used to scan and survey the sky, observe transients and moving objects such as meteorites.

It will work in tandem with the existing 3.6-metre Devasthal Optical Telescope.

Once it starts making observations, the telescope will collect gigabytes of data, which will need to be analysed using artificial intelligence and machine learning (AI and ML) tools.

"In a night's observation, it will make thousands of images which cannot be analysed by just looking at them. We will need to develop and train AI and ML tools to do this," says Dipankar Banerjee, Director of the ARIES Observatory.

With the monsoon expected soon in the area, the real observations may start only in October, after the rains, according to Dr. Banerjee.

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Journalist:	Shubashree Desikan	Page No:	11

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Published Date:	3 Jun 2022	Publication:	The Hindu [Chennai]
Journalist:	Shubashree Desikan	Page No:	16

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Reusable, anti-microbial N95 mask made with 3D tech

PNS ■ NEW DELHI

The Researchers from Amity University in Haryana and University of Nebraska, USA have jointly developed a reusable, odourless and anti-microbial N95 mask by using 3D printing technology. The four-layer mask whose outer layer is made up of silicon with a shelf life of more than five years can also be used by workers where they are exposed to high volumes of dust, cement and paint fumes.

It can be modified by changing the filter configuration according to the place in which it will be used and can help prevent severe lung diseases such as Silicosis, said a statement here.

A trademark and a patent have also been filed for the mask called Nano Breath.

A 4-layer filtration mechanism has been provided in the mask wherein the outer and first layer of the filter is coated with nanoparticles. The second layer is a high-efficiency particulate absorbing (HEPA) filter, the third layer is a 100 µm filter and the fourth layer is a moisture absorbent filter. The mask has been developed under the project funded by the Department of Science & Technology (DST), Union Ministry of Science and Technology.

THE TIMES OF INDIA

Mumbai

U'khand boasts of Asia's largest liquid-mirror telescope

New Delhi: India has commissioned a unique liquid-mirror telescope atop in the Himalayan region that will help identify transient or variable objects such as space debris, asteroids, supernovae and gravitational lenses. It is the country's first and Asia's largest liquid-mirror telescope. The telescope will help in surveying the sky, making it possible to observe several galaxies and other astronomical sources just by staring at the strip of sky that passes overhead. It is located at an altitude of 2,450 metres at the Devasthal Observatory campus of Aryabhatta Research Institute of Observational Sciences in Nainital district. TNN

India's lst liquid-mirror telescope in U'khand

TIMES NEWS NETWORK

New Delhi: India has commissioned a unique liquid-mirror telescope atop a mountain in the Himalayan region that will keep a watch on the skies to identify transient or variable objects such as space debris, asteroids, supernovae and gravitational lenses.

It is the country's first and Asia's largest liquid-mirror telescope. The telescope will help in surveying the sky, making it possible to observe several galaxies and other astronomical sources just by staring at the strip of sky that passes overhead. The telescope, built by astronomers from India, Belgium and Canada, is located at an altitude of 2,450 metres at the Devasthal Observatory campus of Aryabhatta Research Institute of Observational Sciences (ARIES) in Nainital district, Uttarakhand. "I am hopeful that this project will attract and motivate several young minds from scientific and engineering backgrounds to take up challenging problems," said Dipankar Banerjee, director, ARIES, while referring to new facilities at the observatory that now hosts two four-meter class telescopes – International Liquid-Mirror Telescope (ILMT) and Devasthal Optical Telescope (DOT).

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First autonomous navigation facility launched at IITH

DC CORRESPONDENT
HYDERABAD, JULY 4

Union minister of state for science & technology Dr Jitendra Singh inaugurated the TiHAN Testbed for autonomous navigation at IIT Hyderabad on Monday and said it would be the destination for safe, sustainable and smart mobility solutions.

Speaking at the event, the minister said India's first test-bed for autonomous navigation would provide a platform for industries, R&D labs, and academia to drive collaborative research in autonomous navigation, thus making India a global leader in these technologies.

"TiHAN - IITH will be the source of futuristic technology generation for autonomous vehicles while the TiHAN-IITH Testbed on autonomous navigation will allow us to test the next generation autonomous navigation technologies accurately and allow faster technology development and global market penetration," Dr Singh said.

Tech that! IITH-made drone can carry humans

SPECIAL CORRESPONDENT
HYDERABAD

IIT-Hyderabad students with the drone that is capable of carrying humans. • MOHD. ARIF

Pushing ahead in its research and development (R&D) activity, Indian Institute of Technology-Hyderabad (IITH) unveiled a driver-less vehicle, drones that can carry humans and an autonomous moving cycle. India's first test-bed for autonomous navigation, meant for both ground and aerial vehicle testing, was also inaugurated.

Union Minister of State (independent charge) Science & Technology Jitendra Singh inaugurated the TiHAN test-bed for autonomous navigation on Monday and said it will be the destination for next-generation safe, sustainable and smart mobility solutions. TiHAN of IITH is recognised as a Scientific and Industrial Research Organisation by the department of Scientific and Industrial Research.

The department of Science and Technology (DST) is setting up grammes to make India a destination for futuristic technologies, he added. IITH has been named 'Technology Innovation Hub in 'Autonomous Navigation and Data Acquisition Systems', a multi-disciplinary initiative.

DST Secretary S. Chandrasekhar said, "Today, IIT-H director B.S. Murty and professor Rajalakshmi have shown how drone size can be increased so that even humans can be carried in it. This drone and autn-

TiHAN-IITH to become global player for next gen smart mobility technologies : Jitendra Singh

Union Minister Dr. Jitendra Singh Minister inaugurates the TiHAN Testbed for Autonomous Navigation at IIT Hyderabad to promote innovation in mobility sector

ABN ఆంధ్రజ్యోతి

పరిశోధనల్లో ఐఐటీ-హెచ్ అగ్రగామి

మానవ రహిత వ్యవస్థల అభివృద్ధి అద్భుతం

» కేంద్ర శాస్త్ర సాంకేతిక సహాయ మంత్రి జితేంద్రసింగ్ ప్రశంసలు

» టీహాన్ అంశమయిన్ టెస్ట్‌బెడ్‌ను ప్రారంభించిన కేంద్ర మంత్రి

ప్రోత్సహిస్తున్న కేంద్ర మంత్రి జితేంద్ర సింగ్, ఎంపీ కొత్త ప్రభాకర్ రెడ్డి

మానవరహిత యుద్ధ వాహనాలు

అగ్నిమాపక డ్రోన్

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ఐఐటీ-హెచ్‌లో డ్రోన్ల సందడి

ఫ్లైయింగ్ బిగ్ బ్యాగ్ డ్రోన్

Date : 05/07/2022 EditionName : Nizamabad PageNo : 15

states and organized Congress, and that is the greatness of the Congress party.

Union Minister Dr. Jitendra Singh Minister inaugurates the TiHAN Testbed for Autonomous Navigation at IIT Hyderabad to promote innovation in mobility sector

04.07.2022 (Mon) Minister of State (I/C) Science & Technology, Minister of State (I/C) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh today inaugurated TiHAN Testbed for Autonomous Navigation at IIT Hyderabad to promote collaborative research for next-generation mobility solutions both at national and global level. Dr Jitendra Singh said, giving a mega push to Prime Minister Modi's Technology Innovation, Technology Innovation Hub on Autonomous Navigation Foundation (TiHAN)-IITH has already taken many forward looking initiatives to promote innovation in mobility sector. He said, TiHAN Testbed will provide a unique platform for high quality research between academia, industry and R&D labs both at the national and international level, thus making India a global leader in autonomous navigation technologies. Dr Jitendra Singh said, the vision of TiHAN-IITH is to become a global player for next generation smart mobility technologies that utilize reliable and efficient autonomous navigation and data acquisition systems for terrestrial and aerial vehicles. He said, TiHAN focuses on systems like unmanned aerial vehicles (UAVs) and remotely operated vehicles (ROVs) and was established by DST. Dr Jitendra Singh informed that TiHAN in collaboration with IIT Hyderabad has established a New Interdisciplinary 2-year M.Tech program on Smart Mobility, which is first of its kind in the country. He also added that TiHAN -IITH is supporting entrepreneurship and skill development activities in this area of autonomous navigations. Dr Jitendra Singh said, India's mobility sector is one of the world's largest markets and the TiHAN - IITH will be the source of futuristic technology generation for autonomous vehicles. He also added that the TiHAN-IITH testbed on Autonomous Navigations (Aerial & Terrestrial) will allow us testing the next generation autonomous navigation technologies accurately and allows faster technology development and global market penetration.Dr Jitendra Singh informed that limited testbeds or proving grounds exist worldwide to investigate the operation of unmanned and connected vehicles in a controlled environment by simulating various scenarios that may occur in real-life traffic operations, ranging from frequently occurring to extreme cases. A few examples include Millbrook Proving Grounds in the UK, M-City in the USA, CETRAN in Singapore, K-City in South Korea, JARI in Japan, etc. In India, there is presently no such testbed facility for assessing autonomous vehicle performance, and hence the need for the TiHAN Testbed, the Minister added.Dr Jitendra Singh reiterated that the nation has progressed a long way technologically under the leadership of our visionary Prime Minister Shri Narendra Modi and many programs have been launched to make India a leader and destination for futuristic technologies. One such several initiatives is the setting up of 25 Technology Innovation Hubs by the Department of Science and Technology (DST) across the country under National Mission on Interdisciplinary Cyber Physical Systems (NM-ICPS). The Minister said, specifically, TiHAN is developing and deploying a real-time CPS system utilizing autonomous UAVs and ground/surface vehicles for many application sectors of the national importance of this decade. He said, this testbed includes simulation platforms that allow for non-destructive testing of algorithms and prototypes. Also, several real-world scenarios can be simulated on the testbed. In terrestrial systems, a few examples of these scenarios are Smart Cities, Signalized Intersections, Autonomous Vehicle Interactions with Cyclists and Pedestrians, Wireless Networking among vehicles and Road Side Units, etc. The autonomous vehicle testbed also provides dummy sightseers, pedestrians, overpasses, and bikers to test all real-world conditions. Secretary, Department of Science and Technology, Dr. Srivari Chandrasekhar informed that the aiding facility also includes an airstrip, soft landing area, hangar for keeping drones, a Ground control station (GCS), Telemetry Station for Performance Evaluation.

मिलाप
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Tue, 05 Jul-22; Daily Milap - Hyderabad; Size : 22 sq.cm.; Circulation:44300;
Page : 8

ड्राइवर रहित कार का परीक्षण किया आईआईटी हैदराबाद ने

हैदराबाद, 4 जुलाई-(मिलाप ब्यूरो)

भारतीय प्रौद्योगिकी संस्थान-हैदराबाद (आईआईटी-एच) में आज चालक रहित इलेक्ट्रिक वाहन (स्वायत्त वाहन) का परीक्षण किया गया। केंद्रीय विज्ञान और प्रौद्योगिकी राज्य मंत्री डॉ. जितेंद्र सिंह, मेदक के सांसद कोत्ता प्रभाकर रेड्डी और अन्य ने परीक्षण के दौरान वाहन में यात्रा की।

मेट्रो स्टेशन और अन्य परिवहन प्रणालियों से आगे की यात्रा के लिए परिवहन प्रदान करने के उद्देश्य से आईआईटी-एच के शोधकर्ताओं ने एक चालक रहित साइकिल भी विकसित की है। जब भी कोई मोबाइल एप्लिकेशन पर साइकिल बुक करता है, तो यह जीपीएस लोकेशन को ट्रैक करते हुए यात्री तक पहुँच जाती है। शोधकर्ताओं ने सोमवार को टेस्ट बेड पर साइकिल के लिए टेस्ट रन का भी आयोजन किया।

प्रौद्योगिकी नवाचार हब की परियोजना निदेशक प्रो. राज्यलक्ष्मी ने कहा है कि उन्होंने स्वायत्त वाहनों के विकास में महत्वपूर्ण प्रगति हासिल की है। उन्होंने अपने काम के बारे में विस्तार से बताते हुए कहा कि वे स्थलीय के साथ-साथ हवाई स्वायत्त वाहनों पर काम कर रहे हैं। वे अगस्त से छात्रों को ले जाने के लिए परिसर में चालक रहित वाहन संचालित करने पर काम कर रहे हैं। उन्होंने कहा कि वे भारी माल पहुँचाने के लिए हवाई वाहनों को संचालित करने की योजना बना रहे हैं।

आईआईटी-एच परिसर में स्वायत्त वाहनों पर अनुसंधान कार्य से प्रभावित होकर केंद्रीय मंत्री जितेंद्र सिंह ने कहा है कि केंद्र सरकार ऐसे नवोन्मेषकों को सभी समर्थन देगी। उन्होंने कहा कि केंद्र सरकार भारत को भविष्य की प्रौद्योगिकियों में अग्रणी बनाने के लिए प्रतिबद्ध है। अवसर पर विज्ञान और प्रौद्योगिकी विभाग के सचिव डॉ. श्रीवरी चंद्रशेखर, निदेशक मंडल आईआईटी-एच बीवीआर मोहन रेड्डी, आईआईटी-एच के निदेशक प्रोफेसर बीएस मूर्ति, डीन अनुसंधान और विकास प्रोफेसर किरण कुप्पी और अन्य उपस्थित थे।

DECCAN Chronicle

Tue, 05 Jul-22; Deccan Chronicle - Hyderabad; Size : 172 sq.cm.; Circulation:43099; Page : 3

First autonomous navigation facility launched at IITH

DC CORRESPONDENT
HYDERABAD, JULY 4

Union minister of state for science & technology Dr Jitendra Singh inaugurated the TiHAN Testbed for autonomous navigation at IIT Hyderabad on Monday and said it would be the destination for safe, sustainable and smart mobility solutions.

Speaking at the event, the minister said India's first test-bed for autonomous navigation would provide a platform for industries, R&D labs, and academia to drive collaborative research in autonomous navigation, thus making India a global leader in these technologies.

"TiHAN - IITH will be the source of futuristic technology generation for autonomous vehicles while the TiHAN-IITH Testbed on autonomous navigation will allow us to test the next generation autonomous navigation technologies accurately and allow faster technology development and global market penetration," Dr Singh said.

Union minister Dr Jitendra Singh inaugurates the TiHAN Testbed for autonomous navigation at IIT Hyderabad on Monday. — *DC*

- గతకొద్ది సంవత్సరాలుగా దీర్ఘకాలిక పరిశోధనలు
- అన్నీ అనుకూలిస్తే త్వరలోనే ప్రజలకు అందుబాట్లోకి..
- ఐఐటీ హైదరాబాద్ వేదికగా చివరి దశకు పరిశోధన
- తొలి టెస్ట్ డ్రైవ్‌ను ప్రారంభించిన కేంద్రమంత్రి డాక్టర్ జితేంద్రసింగ్

3 లో..

మార్కెట్‌లోకి డ్రైవర్ రహిత వాహనాలు

వాహనం నడవాలంటే డ్రైవర్ కావాలి.. కానీ లేకుండా వాహనం నడిస్తే.. ఇది వినడానికి ఆశ్చర్యంగా ఉన్నా ఇదే నిజం.. మనిషికి ఊహ తెలిసినప్పటి నుంచి ఒక సైకిల్, లేదా మరే వాహనమైన ఎక్కడికైనా ప్రయాణించాలంటే ముందుగా వాటిని నడిపేందుకు ఓ వ్యక్తి కావాలి.. కానీ డ్రైవర్ అవసరం లేకుండా వాహనాన్ని నడిపేందుకు సంగారెడ్డి జిల్లాకి ప్రతిష్టాత్మకమైన కందిలోని ఐఐటీ హైదరాబాద్‌లో డిపార్ట్‌మెంట్ ఆఫ్ ఎలక్ట్రిక్, ఇంజినీరింగ్ విభాగానికి చెందిన ప్రొఫెసర్ రాజ్యలక్ష్మి నేతృత్వంలో విద్యార్థులు కొద్ది సంవత్సరాలుగా పరిశోధనలు చేస్తున్నారు. ఈ పరిశోధనలు ప్రస్తుతం చివరి దశకు చేరుకోవడంతో పాటు కొత్తగా తయారు చేసిన డ్రైవర్ రహిత ప్యాసింజర్ వాహనాన్ని సోమవారం లాంఛనంగా టెస్ట్ డ్రైవ్ చేశారు. ఈ డ్రైవ్ విజయవంతం కావడంతో త్వరలోనే ప్రజల ముందుకు తీసుకువచ్చేందుకు సన్నాహాలు చేస్తున్నారు.

- దిశ, కంది

దిశ Tue, 05 July 2022
https://epaper.dishadaily.com/c/68990904

డ్రైవర్ రహిత వాహనాల తయారీ అద్భుతం

మానవ రహిత అటానమస్ నావిగేషన్ వెహికల్

దేశంలో పెరుగుతున్న స్టార్ట్ అప్ కంపెనీలు

- ఇప్పటికే వ్యవసాయం, ఎమర్జెన్సీకి డ్రోన్ల వాడకం
- నాలుగో తరం ఇన్నోవేషనవ్ భారత్ వేదిక
- కేంద్ర సైన్స్ అండ్ టెక్నాలజీ మంత్రి జితేంద్ర సింగ్
- డ్రైవర్ రహిత వాహనాల టెస్ట్ డ్రైవ్ ప్రారంభం

దిశ, కంది: డ్రైవర్‌రహిత వాహనాల తయారీ అద్భుతమని కేంద్ర సైన్స్ అండ్ టెక్నాలజీ, ఎర్త్ సైన్సెస్ సహాయ మంత్రి (ఇండిపెండెంట్ ఛార్జ్) జితేంద్ర సింగ్ అన్నారు. సంగారెడ్డి జిల్లా కందిలోని ఐఐటీ హైదరాబాద్‌లో టీహాన్ ఫౌండేషన్ ఆధ్వర్యంలో కొత్తగా తయారు చేసిన మానవ రహిత వాహనాల టెస్ట్ డ్రైవ్‌ను ఆయన సోమవారం ప్రారంభించారు. ఈసందర్భంగా మాట్లాడుతూ నాలుగో తరం ఇన్నోవేషన్ భారత్ వేదికగా మారిందని తెలిపారు. ఇటీవల వ్యవసాయరంగంలో పాటు అత్యవసర సమయాల్లో డ్రోన్లను సమర్థంగా వాడుకున్నట్లు పలు ఉదాహరణలు కళ్లముందే ఉన్నాయన్నారు. ఈ కార్యక్రమంలో ఐఐటీ హైదరాబాద్ డిపార్ట్‌మెంట్ ఆఫ్ సైన్స్ అండ్ టెక్నాలజీ సెక్రటరీ డాక్టర్ కె.నారాయణ స్వామి, ఐఐటీ హైదరాబాద్ డైరెక్టర్ బీ.ఎస్.మూర్తి, సంగారెడ్డి మాజీఎమ్మెల్యే చింతాప్రభాకర్ తదితరులు పాల్గొన్నారు.

టెస్ట్ డ్రైవ్‌ను ప్రారంభిస్తున్న జితేంద్రసింగ్

దిశ Tue, 05 July 2022
https://epaper.dishadaily.com/c/68990942

Tue, 05 Jul-22; Eenadu - Hyderabad; Size : 374 sq.cm.; Circulation:48130; Page : 14

డ్రైవర్ లేకుండానే రయ్.. రయ్

● భవిష్యత్ సాంకేతికతపై హైదరాబాద్ ఐఐటీ ప్రయోగాలు ● దేశంలో తొలిసారి వేదిక ఏర్పాటుతో ప్రత్యేక గుర్తింపు

ఈనాడు, సంగారెడ్డి: ఐఐటీ హైదరాబాద్ మరోసారి తన ప్రత్యేకతను చాటింది. దేశంలోనే తొలిసారిగా డ్రైవర్ లేకుండా వాహనాలను నడిపే సాంకేతికతలపై ప్రయోగాలకు వేదికను(టెస్ట్‌బెడ్) అందుబాటులోకి తెచ్చింది. ఆటోమేటివ్ మిషన్‌లో భాగంగా ఇక్కడ సైబర్ ఫిజికల్ వ్యవస్థను అభివృద్ధి చేస్తున్నారు. ఇందుకోసం టీహాన్‌ను ఏర్పాటు చేశారు. ఇందులో భవిష్యత్తు సాంకేతిక వ్యవస్థలతో పాటు మనుషులను మోసుకెళ్లే డ్రోన్లు, తాళ్ళకుండానే వెళ్లే రైళ్లకు రూపొందిస్తున్నారు. డ్రైవర్ లేకుండా వాహనాలు నడిపే సాంకేతికకు దూరునిచ్చే ప్రతులులో అధ్యయనం రాజలక్ష్మి నేతృత్వంలో 40 మందికి పైగా యువ పరిశోధకులు భాగస్వాములవుతున్నారు. ఈ సాంకేతికత అందుబాటులోకి వస్తే రవాణా వ్యవస్థలో గొప్ప మార్పులు వస్తాయని పరిశోధకులు తెలిపారు.

2 కి.మీ. ట్రాక్ ఏర్పాటు

ఇక్కడ ఏర్పాటు చేసిన టెస్ట్‌బెడ్‌లో 2 కిలోమీటర్ల మేర ట్రాక్‌ను రూపొందించారు. సాధారణ రహదారుల మీద ఉండే అన్ని రకాల పరిస్థితులను ఇక్కడ ఏర్పాటు చేసి ఆరు నెలలుగా పరిశోధనలు చేస్తున్నారు. డ్రైవర్ లేకుండా కారును నడిపించి పరీక్షించారు. మనుషులను మోసుకెళ్లే డ్రోన్‌కు ఒక రూపమిచ్చారు. మనుషులు కూర్చునే క్యాబిన్‌ను దానికి అనుసంధానించాల్సి ఉంది. ప్రయోగాత్మకంగా రూపొందించిన ఈ డ్రోన్ బరువును రానున్న రోజుల్లో మరింత తగ్గిస్తామని పరిశోధక విద్యార్థులు తెలిపారు. వ్యవసాయంలో వినియోగించే రకరకాల డ్రోన్ల తయారీకి కృషి చేస్తున్నారు. సోమవారం ఇక్కడికి వచ్చిన కేంద్ర శాస్త్రసాంకేతికశాఖ సహాయ మంత్రి జితేంద్రసింగ్.. పరిశోధనల గురించి తెలుసుకుని ప్రశంసించారు. రెండేళ్లలో ఐఐటీల్లో ఒక్కొక్క ఐఐటీహెచ్ ఆవిష్కరణల రంగంలో దూసుకుపోతున్న తీరును ఆయన అభినందించారు.

డ్రైవర్ సాయం లేకుండానే జీపీఎస్, సెన్సార్, ఇతర సాంకేతిక అంశాల ఆధారంగా రహదారులపై, ఆకాశంలో వాహనాలు, డ్రోన్ల వంటివి పరిశోధనలు చేస్తున్నాం. ప్రభుత్వ పాఠశాలల విద్యార్థులకు దిన్న నాటి నుంచే భవిష్యత్తు సాంకేతికతపై అవగాహన పెంచేలా కొన్ని రకాల కిట్లనూ రూపొందిస్తున్నాం. వాటిని ప్రభుత్వ బడులకు తీసుకెళ్లే ప్రయత్నిస్తున్నాం అని టీహాన్ ప్రాజెక్టు డైరెక్టర్ కె రాజలక్ష్మి తెలిపారు.

డ్రైవర్ లేకుండా పరిశోధకులు సోమవారం రెండు కిలోమీటర్లు నడిపించిన కారు

డ్రైవర్ లేకుండా నడిచే వాహనంలో ప్రయాణిస్తున్న కేంద్ర మంత్రి జితేంద్ర సింగ్, ఐఐటీ డైరెక్టర్ వీఎన్‌మూర్తి, ఎండీ కొత్త ప్రభాకర్‌రెడ్డి, ఎన్.చంద్రశేఖర్, వీసీఆర్ మోహన్‌రెడ్డి ★ టీహాన్‌లో పక్షి రూపంలో రూపొందిస్తున్న డ్రోన్‌ను పరిశీలిస్తున్న కేంద్ర మంత్రి జితేంద్రసింగ్ తదితరులు

ఐఐటీహెచ్‌లో స్వయం చాలక వాహన వేదిక ప్రారంభం

ఈనాడు, సంగారెడ్డి: దేశంలోనే తొలిసారి డ్రైవర్ రహిత వాహనాల సాంకేతిక అభివృద్ధికి ఐఐటీ హైదరాబాద్‌లోని టీహాన్‌లో ప్రయోగ వేదికను (టెస్ట్ బెడ్) సిద్ధం చేశారు. సోమవారం కేంద్ర శాస్త్రసాంకేతిక శాఖ సహాయ మంత్రి జితేంద్రసింగ్ దీనిని ప్రారంభించారు. అనంతరం డ్రైవర్ లేకుండా నడిచే వాహనంలో 50 మీటర్ల దూరం ప్రయాణించారు. ఈ పరిశోధనలకు కేంద్రం రూ.135 కోట్లు కేటాయించినట్లు ఐఐటీ డైరెక్టర్ వీఎన్‌మూర్తి తెలిపారు. కార్యక్రమంలో కేంద్ర శాస్త్ర సాంకేతిక శాఖ కార్యదర్శి ఎస్. చంద్రశేఖర్, ఐఐటీ బోర్డ్‌ఆఫ్ గవర్నర్స్ అధ్యక్షుడు వీసీ అర్ మోహన్‌రెడ్డి, మెయిట్ ఎండీ కొత్త ప్రభాకర్‌రెడ్డి, ఆచార్యులు పి రాజలక్ష్మి, పరిశోధన, అభివృద్ధి విభాగం డీన్ ఆచార్య కిరణ్‌కుమార్ తదితరులు పాల్గొన్నారు.

Tue, 05 Jul-22; Namaste Telangana - Hyderabad; Size : 190 sq.cm.;
Circulation:70387; Page : 6

ఐఐటీ హైదరాబాద్ తయారు చేసిన డ్రైవర్‌రహిత వాహనంలో ప్రయాణిస్తున్న కేంద్ర మంత్రి జితేంద్రసింగ్

డ్రైవర్‌రహిత వాహనాలదే భవిష్యత్తు

- వాటిపై మరిన్ని పరిశోధనలు జరుగాలి
- కేంద్ర శాస్త్రసాంకేతికశాఖ మంత్రి జితేంద్రసింగ్

సంగారెడ్డి, జూలై 4 (నమస్తే తెలంగాణ): భవిష్యత్తు రవాణా అవసరాల్లో డ్రైవర్ రహిత (ఆటానమస్) వాహనాల పాత్ర కీలకంగా ఉంటుందని కేంద్ర శాస్త్ర సాంకేతికశాఖ మంత్రి జితేంద్రసింగ్ పేర్కొన్నారు. సోమవారం సంగారెడ్డి జిల్లా కంది మండలంలోని ఐఐటీ హైదరాబాద్‌లో దేశంలోనే మొట్టమొదటి ఆటానమస్ నావిగేషన్ బెడ్‌ను ఆయన ప్రారంభించారు. టెక్నాలజీ ఇన్నోవేషన్ హబ్ ఆన్ ఆటానమస్ నావిగేషన్ అండ్ డాటా ఇక్విజేషన్ సిస్టమ్(టీ హాన్) తయారు చేసిన డ్రోన్ ప్యాసింజర్, డ్రైవర్‌రహిత వాహనం, ఆటానమస్ సైకిల్‌ను పరీక్షించారు. ఆ వాహనంలో కొద్దిసేపు కేంద్రమంత్రి ప్రయాణించారు. ఈ సందర్భంగా ఐఐటీ డైరెక్టర్ బీఎస్ మూర్తి, ప్రొఫెసర్లు రాజ్యలక్ష్మి, కిరణ్‌కూచి, టీహాన్ విద్యార్థులను ఆయన అభినందించారు. అనంతరం జరిగిన సమావేశంలో జితేంద్ర సింగ్ మాట్లాడుతూ.. డ్రైవర్‌రహిత వాహనాలు అందుబాటులోకి వచ్చేలా మరిన్ని పరిశోధనలు జరుపాలని సూచించారు. దేశ్యాప్తంగా 25 కొత్త టెక్నాలజీ ఇన్నోవేషన్ హబ్‌లను ఏర్పాటు చేసినట్లు తెలిపారు. గతంలో ఐఐటీ మద్రాస్‌కు ప్రత్యేక గుర్తింపు ఉండేదని, ఇప్పుడు ఐఐటీ హైదరాబాద్ సరికొత్త పరిశోధనల ద్వారా విశేష గుర్తింపు పొందుతున్నట్లు చెప్పారు. ఐఐటీ డైరెక్టర్ బీఎస్ మూర్తి మాట్లాడుతూ.. ఐఐటీ హైదరాబాద్‌లో రూ.135 కోట్లుతో రెండు కిలోమీటర్ల మేర ఆటానమస్ నావిగేషన్ టెస్ట్ బెడ్‌ను ఏర్పాటు చేసినట్లు తెలిపారు. దేశంలోనే ఇది మొట్టమొదటి టెస్టుబెడ్ అని వెల్లడించారు. కార్యక్రమంలో మెదక్ ఎంపీ కొత్త ప్రభాకర్‌రెడ్డి, శాస్త్ర సాంకేతిక శాఖ కార్యదర్శి శ్రీవారి చంద్రశేఖర్, ఐఐటీ గవర్నింగ్ బోర్డు చైర్మన్ బీవీఆర్ మోహన్‌రెడ్డి, ఐఐటీ ప్రొఫెసర్లు, విద్యార్థులు పాల్గొన్నారు.

సాక్షి సంగారెడ్డి

మంగళవారం | 5 | జూలై | 2022

'పట్టు'దలతో పుట్టెడు లాభాలు

అధికారుల సూచనతో మల్బరీ సాగు చేస్తూ లక్షలోఆదాయం సాధిస్తూ అందరికీ ఆదర్శంగా నిలుస్తున్నాడు ముబరాస్‌పూర్‌కు చెందిన రైతు చక్రపాణి. 8లో

సమావేశాలంటే నిర్లక్ష్యమా?

సభలో లేవనెత్తిన సమస్యలను పరిష్కరించకుండా అధికారులు నిర్లక్ష్యంగా వ్యవహరిస్తున్నారని అందోల్ మండల సమావేశంలో సభ్యులు ఆగ్రహం వ్యక్తం చేశారు. 9లో

జిల్లా వ్యాప్తంగా మంగళవారం వాతావరణం చల్లగా ఉంటుంది. అక్కడక్కడ వర్షం పడే అవకాశం ఉంది.

ఐఐటీ హైదరాబాద్‌లో టీహాన్ భవనానికి శంకుస్థాపన చేస్తున్న కేంద్ర మంత్రి జితేంద్ర సింగ్, పక్కన ఎంపీ కొత్త ప్రభాకర్‌రెడ్డి తదితరులు

పరిశోధనలకు నెలవు ఐఐటీ హైదరాబాద్

అధునాతన సాంకేతికతను అందిపుచ్చుకుంటూ రకరకాల పరిశోధనలు చేస్తూ ఎప్పుడూ సరికొత్త ఆవిష్కరణకు వేదిక అవుతోంది ఐఐటీ హైదరాబాద్. కొన్ని సందర్భాల్లో మనుషులు వెళ్లలేని చోటుకు మానవ రహిత సైకిళ్లు, వాహనాలు వెళ్లేలా కృషి చేస్తున్నారు. ప్యాసింజర్లను తీసుకెళ్లేందుకు డ్రోన్లను అభివృద్ధి చేస్తున్నారు. వీటిని సాధ్యమైనంత త్వరగా వినియోగంలోకి తీసుకువచ్చేందుకు టీహాన్ ఐఐటీహెచ్ ఆధ్వర్యంలో నిరంతరం శ్రమిస్తున్నారు. అందులో భాగంగా సోమవారం ప్యాసింజర్లను తీసుకెళ్లే డెమో డ్రోన్‌ను, మానవ రహిత వాహనాన్ని, సైకిల్‌ను కేంద్ర మంత్రి జితేంద్రసింగ్ పరిశీలించారు. ఐఐటీ డైరెక్టర్ ప్రొఫెసర్ మూర్తి, ప్రాజెక్ట్ డైరెక్టర్ రాజ్యలక్ష్మి కేంద్రమంత్రికి వీటి పని తీరు, లాభాల గురించి వివరించారు.

- సాక్షి స్టాఫ్ ఫొటోగ్రాఫర్, సంగారెడ్డి

Tue, 05 Jul-22; Sakshi - Hyderabad; Size : 376 sq.cm.; Circulation:313771;
Page : 14

తొక్కకున్నా వెళ్లిపోయే సైకిల్

ట్రాఫిక్‌లో ఎగిరే వాహనం!

పరిశోధనల్లో ఐఐటీహెచ్ ముందంజ.. కేంద్ర మంత్రి జితేంద్రసింగ్ కితాబు

దేశంలోనే తొలి అటానమస్ నావిగేషన్ టెస్ట్‌బెడ్ ప్రారంభం.. డ్రైవర్ రహిత వాహనాల్లో ప్రయాణం

→ మెట్రోరైలు దిగే స్టేషన్ పక్కనే ఉన్న సైకిల్ స్టాండ్ నుంచి ఓ సైకిల్ తీసుకుని ఇంటికి చేరుకోవడం, తర్వాత ఆ సైకిల్ ఎవరి ప్రమేయం లేకుండా దానంతట అదే తిరిగి మెట్రోస్టేషన్ చేరుకోవడం.. వింతగా ఉంది కదా.

→ ట్రాఫిక్‌లో ఇరుక్కున్న మన వాహనం ఉన్న ఫళంగా గాలిలోకి ఎగిరి ముందున్న వాహనాలను దాటుకుంటూ గాలిలో అలాలలా వేవిపోతూ గమ్యస్థానానికి చేరుకుంటే ఎంత బాగుంటుంది..

→ గమ్యస్థానం ఫేడ్ చేస్తే చాలు.. డ్రైవర్ ప్రమేయం లేకుండా కారు దానంతట అదే మరన్ని మరం చేరుకోవాల్సిన చోటుకు తీసుకెళుతుంది. ఊహించుకోవడానికే ఎంత బాగుంది కదా..

హాని ఈ ఆలోచన్ని హైదరాబాద్ ఐఐటీకి చెందిన ప్రత్యేక పరిశోధన విభాగం.. టీఐహబ్‌మొబిలిటీ ఇన్నొవేషన్ హబ్ ఇన్ ఆటానమస్ నావిగేషన్ (టీహాస్) గుణం చేస్తోంది. కలలు సాకారం చేస్తోంది. మానవ ప్రమేయం లేకుండా నిర్దేశిత ప్రాంతానికి వెళ్లే సైకిల్‌ను రూపొందించింది. రోడ్డుపై వెళుతూ అవసరమైతే గాల్లోకి ఎగిరిపోయే ప్యాసింజర్ కార్గో డ్రోన్ (కారు రూపంలో వాహనం)పై కూడా పరిశోధనలు చేస్తోంది. రోడ్డు సౌకర్యం ఉండని కొండ ప్రాంతాలకు సరుకులు, అత్యవసరమైన మందులు చేరవేయడం వంటి అవసరాలకు వినియోగించే ఆటానమస్ డ్రోన్‌లపై పరిశోధన కొనసాగిస్తోంది. దీనికి రిమోట్ గానీ, ఆపరేటర్ గానీ అవసరం లేదు. గమ్యస్థానాన్ని ఫీడ్ చేస్తే అదే రీచయితుంది. అలాగే డ్రైవర్ అవసరం లేని ఆటానమస్ వాహనంపై కూడా ప్రయోగాలు చేస్తోంది. ఐరాంటి వాటికి స్టడీకో కేంద్రంగా మారిన హైదరాబాద్ ఐఐటీలో మానవ రహిత వాహనాలపై పరిశోధనల్లో భాగంగా టీహాస్ ఏర్పాటు చేసిన ఆటానమస్ నావిగేషన్ టెస్ట్ బెడ్‌ను (డ్రైవర్ రహిత వాహనాల ప్రయోగాత్మకంగా నడిపే రోడ్డు) కేంద్ర కార్య, సాంకేతిక శాఖ మంత్రి డాక్టర్ జితేంద్రసింగ్ సోమవారం ప్రారంభించారు. ఈ సందర్భంగా ఆయన డ్రైవర్ రహిత వాహనాల్లో ప్రయాణించారు. అనంతరం ఏర్పాటు చేసిన సమావేశంలో మాట్లాడారు.

నూతన ఆవిష్కరణలకు వేదిక

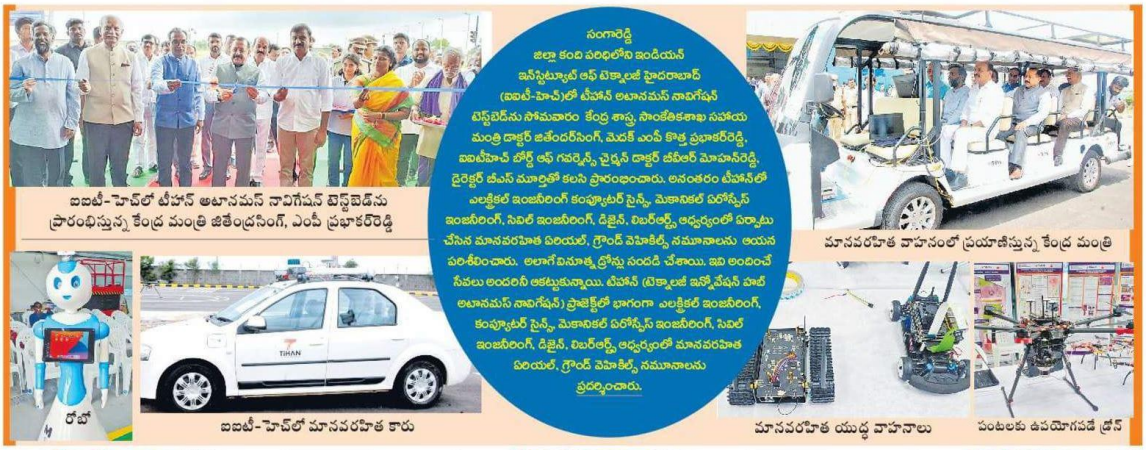
భవిష్యత్ సాంకేతిక ఆవిష్కరణలకు భారతదేశం ఒక గమ్యస్థానంగా మార్చేందుకు కేంద్ర ప్రభుత్వం కృషి చేస్తోందని జితేంద్రసింగ్ ఈ సందర్భంగా పేర్కొన్నారు. ప్రధానమంత్రి నరేంద్రమోదీ నేతృత్వంలో 'నేషనల్ మిషన్ ఆన్ ఇంటర్‌డిసిప్లినరీ సైబర్ ఫిజికల్ సిస్టమ్స్'పథకం కింద దేశ విజ్ఞానిక ఇన్నొవేషన్ పాలసీని (సాంకేతిక ఆవిష్కరణ కేంద్రాలు) ఏర్పాటు చేసినట్లు తెలిపారు. ప్రపంచంలో నాలుగో తరం నూతన ఆవిష్కరణలకు భారత్ వేదికైందన్నారు. వ్యవసాయం, అత్యవసర రంగాల్లో అప్పటికీ డ్రోన్‌లు వాడుతున్నారని, డ్రైవర్ లేకుండా ఆటానమస్ నావిగేషన్ ద్వారా వాటిని ఇవే తమ గమ్యస్థానాలకు చేరుకునేలా పరిశోధనలు జరిపిన హైదరాబాద్ ఐఐటీని ఆయన ప్రశంసించారు. దేశ వ్యాప్తంగా కొత్తగా ఏర్పాటు చేసిన ఐఐటీల్లో హైదరాబాద్ ఐఐటీ పరిశోధనల్లో ముందు వరుసలో ఉందని చెప్పారు.

దేశంలోనే తొలి అటానమస్ వెహికల్ టెస్ట్‌బెడ్

హైదరాబాద్ ఐఐటీలో ఏర్పాటు చేసిన ఆటానమస్ నావిగేషన్ టెస్ట్ బెడ్ (ఏటియబీ అండ్ టెరస్ట్రియల్) దేశంలోనే మొదటిదని ఐఐటీ డైరెక్టర్ బీవీఎస్ మూర్తి అన్నారు. సుమారు రెండు కిలోమీటర్ల పొడవున్న ఈ టెస్ట్‌బెడ్‌పై మానవ రహిత వాహనాల పరీక్ష నిర్వహించినట్లు తెలిపారు. భారత దేశంలో ఉన్న పరిస్థితులు ఇండి.. గ్రామీణ ప్రాంత రోడ్లు, మట్టి రోడ్లు, వర్షం పడుతున్నప్పుడు.. ఇలా రకరకాల పరిస్థితుల్లో ఈ డ్రైవర్ రహిత వాహనాల పనితీరుపై పరీక్షలు చేస్తామన్నారు. మానవ రహిత ప్యాసింజర్ డ్రోన్‌లు సుమారు 1.50 కిలోమీటర్ల దూరాన్ని సరుకులను మోయడానికి అవసరమని చెప్పారు. ఈ కార్యక్రమంలో మెడక్ ఎంపీ కొత్త ప్రభాకర్‌రెడ్డి, కేంద్ర సైన్స్ అండ్ టెక్నాలజీ శాఖ కార్యదర్శి శ్రీవారి చంద్రశేఖర్, ఐఐటీ పాలకమండలి చైర్మన్ వీవీఆర్ మోహన్‌రెడ్డి, టీఐహబ్‌మొబిలిటీ ప్రోగ్రామ్ డైరెక్టర్ ప్రొఫెసర్ రాజ్యలక్ష్మి తదితరులు పాల్గొన్నారు.

- పాశి ప్రతినిధి, సంగారెడ్డి

ABN
ఆంధ్రజ్యోతి



సంగారెడ్డి జిల్లా కంది పరిధిలోని ఇండియన్ ఇన్‌స్టిట్యూట్ ఆఫ్ టెక్నాలజీ హైదరాబాద్ (ఐఐటీ-హెచ్)లో టీహాన్ అటానమస్ నావిగేషన్ టెస్ట్‌బెడ్‌ను సోమవారం కేంద్ర శాస్త్ర, సాంకేతికశాఖ సహాయ మంత్రి డాక్టర్ జతేందర్‌సింగ్, మెడక్ ఎంపీ కొత్త ప్రభాకర్‌రెడ్డి, ఐఐటీహెచ్ బోర్డ్ ఆఫ్ గవర్నెన్స్ చైర్మన్ డాక్టర్ బీవీఆర్ మోహన్‌రెడ్డి, డైరెక్టర్ బీఎస్ మూర్తితో కలసి ప్రారంభించారు. అనంతరం టీహాన్‌లో ఎలక్ట్రికల్ ఇంజనీరింగ్ కంప్యూటర్ సైన్స్, మెకానికల్ ఏరోస్పేస్ ఇంజనీరింగ్, సివిల్ ఇంజనీరింగ్, డిజైన్, లిబర్‌ఆర్ట్స్ ఆధ్వర్యంలో ఏర్పాటు చేసిన మానవరహిత ఏరియల్, గ్రౌండ్ వెహికిల్స్ నమూనాలను అయన పరిశీలించారు. అలాగే ఐనూత్న డ్రోన్లు సందడి చేశాయి. ఇవి అందించే సేవలు అందరినీ ఆకట్టుకున్నాయి. టీహాన్ (టెక్నాలజీ ఇన్నోవేషన్ హబ్ అటానమస్ నావిగేషన్) ప్రాజెక్టులో భాగంగా ఎలక్ట్రికల్ ఇంజనీరింగ్, కంప్యూటర్ సైన్స్, మెకానికల్ ఏరోస్పేస్ ఇంజనీరింగ్, సివిల్ ఇంజనీరింగ్, డిజైన్, లిబర్‌ఆర్ట్స్ ఆధ్వర్యంలో మానవరహిత ఏరియల్, గ్రౌండ్ వెహికిల్స్ నమూనాలను ప్రదర్శించారు.

ఐఐటీ-హెచ్‌లో టీహాన్ అటానమస్ నావిగేషన్ టెస్ట్‌బెడ్‌ను ప్రారంభిస్తున్న కేంద్ర మంత్రి జితేంద్రసింగ్, ఎంపీ ప్రభాకర్‌రెడ్డి

మానవరహిత వాహనంలో ప్రయాణిస్తున్న కేంద్ర మంత్రి

రోబో

ఐఐటీ-హెచ్‌లో మానవరహిత కారు

మానవరహిత యుద్ధ వాహనాలు

పంటలకు ఉపయోగపడే డ్రోన్

Date : 05/07/2022 EditionName : Medak PageNo : 5

Tech that! IIT-H unveils unmanned vehicle, drone to carry humans

SPECIAL CORRESPONDENT
HYDERABAD

Pushing ahead in its research and development (R&D) activity, the Indian Institute of Technology-Hyderabad (IIT-H) has unveiled a driver-less vehicle, drones that can carry humans and an autonomous moving cycle. India's first test-bed for autonomous navigation, meant for both ground and aerial vehicle testing, was also inaugurated.

A big leap: IIT-Hyderabad students with the drone that is capable of carrying humans. ▪ MOHD. ARIF

Union Minister of State (independent charge) Science & Technology Jitendra Singh, who inaugurated the TiHAN test-bed for Autonomous Navigation at IIT-H on Monday, stressed that it will be the destination for next-generation safe, sustainable and smart mobility solutions. TiHAN of IIT-H is recognised as a Scientific and Industrial Research Organisation by the department of Scientific and Industrial Research.

Department of Science and Technology (DST) is setting up 25 tech innovation hubs across the country under National Mission on Interdisciplinary Cyber-Physical Systems, one of the many programmes to make India a frontrunner and destination for futuristic technologies, he added. IIT-H has been named the Technology Innovation Hub in 'Autonomous Navigation and Data Acquisition Systems', a multi-disciplinary initiative.

DST Secretary S. Chandrasekhar said, "Today, IIT-H director B.S. Murty and professor Rajalakshmi have shown how drone size can be increased so that even humans can be carried in it. This drone and autonomous vehicle tech will be the game-changer, specially when you want to send the vehicles to places where humans cannot enter, where some chemical gases are emanating, such as Bhopal tragedy."

Tue, 05 Jul-22; Swatantra Vartha - Hyderabad; Size : 705 sq.cm.; Circulation:229824;
Page : 3

भारत का पहला ड्राइवर-रहित कार परीक्षण आईआईएच हैदराबाद में आयोजित

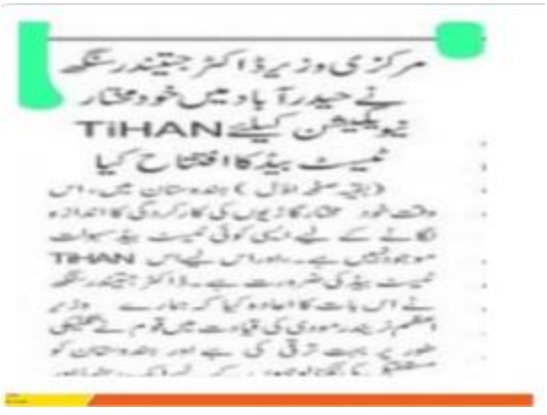
केंद्रीय राज्य मंत्री डॉ. जितेंद्र सिंह ने वाहन में की यात्रा

हैदराबाद, 4 जुलाई (स्वतंत्र वार्ता)। चालक रहित वाहनों के संचालन में एक ऐतिहासिक क्षण में भारतीय प्रौद्योगिकी संस्थान-हैदराबाद ने सोमवार को अपने परिसर में स्वायत्त (चालक रहित) इलेक्ट्रिक वाहन का परीक्षण किया। केंद्रीय विज्ञान और प्रौद्योगिकी विभाग और पृथ्वी विज्ञान राज्य मंत्री डॉ जितेंद्र सिंह, मेदक के सांसद प्रभाकर रेड्डी और अन्य ने परीक्षण के दौरान वाहन में यात्रा की। मेट्रो स्टेशन और अन्य जन परिवहन प्रणालियों से अंतिम समय में परिवहन प्रदान करने के उद्देश्य से आईआईएच परिसर के शोधकर्ताओं ने एक चालक रहित साइकिल भी विकसित की है। जब भी कोई मोबाइल एप्लिकेशन पर साइकिल बुक करता है, तो यह जीपीएस लोकेशन को ट्रैक करते हुए वाडी तक पहुंच जाती है। शोधकर्ताओं ने सोमवार को टेस्ट बेड पर साइकिल के लिए टेस्ट रन का भी आयोजन किया। स्वायत्त नेविगेशन (निहान) के लिए प्रौद्योगिकी नवाचार हब के परियोजना निदेशक प्रो राजलक्ष्मी ने कहा है कि उन्होंने स्वायत्त वाहनों के विकास में महत्वपूर्ण प्रगति हासिल की है। प्रो राजलक्ष्मी ने अपने काम के बारे में विस्तार से बताते हुए कहा कि वे स्थलीय और हवाई स्वायत्त वाहनों दोनों पर काम कर रहे थे। जब वे अगस्त से छात्रों को एक छोर से दूसरे छोर तक ले जाने के लिए परिसर में चालक रहित स्थलीय वाहनों को संचालित करने के लिए काम कर रहे थे, उन्होंने कहा कि वे शुरू में भारी पेलोड माल पहुंचाने के लिए हवाई वाहनों को संचालित करने की योजना बना रहे थे। हालांकि, टीआईएचएएन निदेशक ने कहा कि हवाई यात्री वाहनों का परीक्षण बहुत दूर नहीं था। आईआईएच परिसर में स्वायत्त वाहनों पर शोध कार्य से प्रभावित होकर, केंद्रीय मंत्री जितेंद्र सिंह ने कहा है कि केंद्र सरकार ऐसे नवोन्मेषकों को सभी समर्थन देगी।

उन्होंने आगे कहा कि केंद्र सरकार भारत को भविष्य की प्रौद्योगिकियों में अग्रणी बनाने के लिए प्रतिबद्ध है। विज्ञान और प्रौद्योगिकी विभाग के सचिव डॉ श्रीवरी चंद्रशेखर, निदेशक मंडल आईआईटी-एच बीवीआर मोहन रेड्डी, आईआईटी-एच के निदेशक प्रोफेसर बीएस मूर्ति, डीन अनुसंधान और विकास प्रोफेसर किरण कुची और अन्य उपस्थित थे।

अल्लूरी सीतारामा राजू की जयंती पर दी गई श्रद्धांजलि

हैदराबाद, 4 जुलाई (स्वतंत्र वार्ता)। राष्ट्रीय क्षत्रिय महासभा परिषद, तेलंगाना प्रदेश इकाई एवं बोंदिली राजपूत वेलफेयर एसोसिएशन, तेलंगाना प्रदेश के संयुक्त तत्वावधान में रैंकबंड स्थित अल्लूरी सीतारामा राजू जी की 125वीं जन्म जयंती एवं स्वामी विवेकानन्द जी की पुण्यतिथि पर दोनों कार्यक्रमों में भाग लेकर श्रद्धांजलि अर्पित की गई। इस अवसर पर ठाकुर रामेश्वर सिंह बैस, राष्ट्रीय कार्यवाहक अध्यक्ष, राष्ट्रीय क्षत्रिय महासभा परिषद, भारत व प्रदेश अध्यक्ष, बोंदिली राजपूत वेलफेयर एसोसिएशन, तेलंगाना प्रदेश, शैलेंद्र सिंह, प्रदेश अध्यक्ष, गणेश सिंह, अध्यक्ष ग्रेटर हैदराबाद, रघुनंदन सिंह पटेल, ट्रस्टी, क्षत्रिय राजपूत ट्रस्ट बोर्ड, राजेंदर सिंह राजन, अध्यक्ष, संगारेड्डी जिला, विधजीत सिंह राजपूत, संगठन मंत्री, ज्ञानेश्वर सिंह ठाकुर, मंत्री, राम सिंह ठाकुर, प्रचार मंत्री, बिनेक सिंह सत्री, उपाध्यक्ष, आर. आर. जिला, मल्हेर आदि सदस्यों ने पुष्प समर्पित किये।



مرکزی وزیر ڈاکٹر جتیندر سنگھ
نے حیدرآباد میں خودمختار
نیویگیشن کیلئے TiHAN
ٹیسٹ بیڈ کا افتتاح کیا

THE HANS INDIA

Tue, 05 Jul-22; The Hans India - Hyd; Size : 68 sq.cm.; Circulation:-; Page : 5

Jitendra Singh unveils 'Autonomous Navigation' facility at IITH

HYDERABAD; Union Minister of Telangana for Science and Technology Dr Jitendra Singh on Monday inaugurated "Autonomous Navigation" facility to develop unmanned ground and aerial vehicles in the IIT Hyderabad campus.

The minister also interacted with Startups developing unmanned ground motor vehicles like driver-less self-driven motor cars, driver-less self-driven bicycles and unmanned aerial vehicles including drones in different shapes and sizes. Funded by the Union Ministry of Science and Technology at a budget of Rs 130 crore, the "Technology Innovation Hub on Autonomous Navigation" is a multidisciplinary initiative, which will make India a global player in the futuristic and next generation "Smart Mobility technology".

THE HINDU

Tue, 05 Jul-22; Hindu - Hyderabad; Size : 137 sq.cm.; Circulation:191215;
Page : 2

Tech that! IITH-made drone can carry humans

SPECIAL CORRESPONDENT
HYDERABAD

Pushing ahead in its research and development (R&D) activity, Indian Institute of Technology-Hyderabad (IITH) unveiled a driver-less vehicle, drones that can carry humans and an autonomous moving cycle. India's first test-bed for autonomous navigation, meant for both ground and aerial vehicle testing, was also inaugurated.

Union Minister of State (independent charge) Science & Technology Jitendra Singh inaugurated the TiHAN test-bed for autonomous navigation on Monday and said it will be the destination for next-generation safe, sustainable and smart mobility solutions. TiHAN of IITH is recognised as a Scientific and Industrial Research Organisation by the department of Scientific and Industrial Research.

The department of Science and Technology (DST) is setting up 25 tech innovation hubs across the country under National Mission on Interdisciplinary Cyber-Physical Systems, one of the many programmes to make India a destination for futuristic technologies, he added. IITH has been named Technology Innovation Hub in 'Autonomous Navigation and Data Acquisition Systems', a multi-disciplinary initiative.

IIT-Hyderabad students with the drone that is capable of carrying humans. • MOHD. ARIF

DST Secretary S. Chandrasekhar said, "Today, IIT-H director B.S. Murty and professor Rajalakshmi have shown how drone size can be increased so that even humans can be carried in it. This drone and autonomous vehicle tech will be the game-changer, specially when you want to send the vehicles to places where humans cannot enter."

తిహన్ టెస్ట్‌బెడ్‌ను ప్రారంభించిన కేంద్ర మంత్రి

తిహన్ టెస్ట్‌బెడ్‌ను ప్రారంభించిన కేంద్ర మంత్రి జితేంద్ర సింగ్

సంగారెడ్డి బ్యూరో, జులై 4, ప్రభాతవార్త: సంగారెడ్డి సమీపంలోని ఐఐటీలో సోమవారం నిర్వహించిన కార్యక్రమంలో కేంద్ర సైన్స్ అండ్ టెక్నాలజీ, ఎర్త్ సైన్స్ మంత్రి డాక్టర్ జితేంద్ర సింగ్ పాల్గొని అటానమస్ నావిగేషన్ కోసం తిహన్ టెస్ట్ బెడ్‌ను ప్రారంభించారు. ఈ సందర్భంగా ఏర్పాటు చేసిన సమావేశంలో మంత్రి జితేంద్ర సింగ్ మాట్లాడుతూ ఇది తరువాతి తరం సురక్షితమైన, స్థిరమైన మరియు స్మార్ట్ మొబిలిటీ పరిష్కారాలకు గమ్యస్థానంగా ఉంటుందని నొక్కి చెప్పారు. స్వయంప్రతిపత్తి నావిగేషన్ కోసం భారతదేశం యొక్క మొట్టమొదటి టెస్ట్-బెడ్ పరిశ్రమలు, ఆర్‌అండ్‌బి ల్యాబ్‌లు, విద్యా సంస్థలకు స్వయం ప్రతిపత్తి నావిగేషన్‌లో సహకార పరిశోధనలను నడపడానికి ఒక వేదికను అందిస్తుందని, తద్వారా ఈ సాంకేతికతలో భారతదేశాన్ని ప్రపంచ నాయకుడిగా మారుస్తుందని ఆయన అన్నారు. ఈ కార్యక్రమంలో డీఎస్‌టీ సెక్రెటరీ డాక్టర్ శ్రీవారి చంద్రశేఖర్, బీవోజీ చైర్మన్ డాక్టర్ డివిఆర్ మోహన్‌రెడ్డి, ఐఐటీ డైరెక్టర్ ప్రొఫెసర్ బీఎస్ మూర్తి, సంగారెడ్డి పార్లమెంట్ సభ్యులు కొత్త ప్రభాకర్‌రెడ్డి, తదితరులు పాల్గొన్నారు.

వార్త
Tue, 05 July 2022
https://epaper.vaartha.com/c/689906

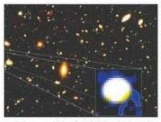
Publication	Amar Ujala	Language	Hindi
Edition	New Delhi	Journalist	Bureau
Date	31/07/2022	Page no	20

भारतीय खगोल वैज्ञानिकों ने देखी अंतरिक्ष में जन्म लेती बौनी गैलेक्सी

एस्ट्रोसैट के जरिए नए तारे बनने की घटनाएं भी कीं दर्ज

तेजपुर (असम)। भारत की पहली खगोलीय वेधशाला 'एस्ट्रोसैट' के जरिए तुनिया के खगोलविदों ने सुदूर अंतरिक्ष में नए तारों के बनने की नायाब खोज की है। वैज्ञानिकों का यह अपनी तरह का पहला शोध है, जिसमें धरती से 3.9 तक अरब प्रकाश वर्ष दूर किसी छोटी (बौनी) गैलेक्सी को बनते हुए देखा।

इस घटना पर प्रतिष्ठित विज्ञान पत्रिका 'नेचर' में इस महीने शोध लेख प्रकाशित हुआ है, जिसके प्रमुख लेखक भारतीय खगोलविद अंशुमान बोरगोहेन हैं। यह इस खोज में अमेरिका और फ्रांस के वैज्ञानिकों के साथ भारत की ओर से शामिल थे। बोरगोहेन तेजपुर विश्वविद्यालय के रूपज्योति गोगोई और पुणे स्थित इंटर यूनिवर्सिटी सेंटर फॉर एस्ट्रोनॉमी एंड एस्ट्रोफिजिक्स के प्रोफेसर कनक साहा की संयुक्त देखरेख में काम करते हैं, जो लेख के सह-लेखक हैं। एजेंसी



एस्ट्रोसैट द्वारा खींची गई बौनी गैलेक्सी की तस्वीर।

गैलेक्सी के विकास का पता लगाने में मददगार होगी खोज

शोध के मुताबिक, अतीत में बौनी गैलेक्सियों के मौजूदा स्वरूप लेने को लेकर स्पष्ट जानकारी नहीं है। सिलाजा, तारों के गठन को कैद करना किसी गैलेक्सी के बनने और उसके बड़े स्वरूप में विकसित होने का पता लगाने की आम कड़ी है। इस कड़ी को ही भारत की पहली सटीक वेधशाला स्पेस ऑब्जर्वेटरी एस्ट्रोसैट ने पकड़ा है। इस यह नयी दुर्लभ से खगोलविदों ने आस्थों प्रकाश वर्ष दूर तारों का निर्माण देखा है। अध्ययन में शामिल अमेरिकी खगोलविद डूस एल्मेग्रीन के मुताबिक, छोटी गैलेक्सी में सक्रिय रूप से तारों का निर्माण एक रहस्य रहा है। मौजूदा खोज से इसे समझने में मदद मिल सकती है।

Publication	Financial Express	Language	English
Edition	New Delhi	Journalist	Vikram Chaudhary
Date	18/07/2022	Page no	8

UPES gets ₹5 crore grant for incubator on campus

VIKRAM CHAUDHARY

THE NATIONAL EXPERT Advisory Committee of the Department of Science and Technology (DST) has recommended the inclusive-tech business incubator (i-TBI) at the UPES university in Dehradun for a funding of ₹5 crore under the NIDHI scheme—the National Initiative for Development and Harnessing Innovations is an umbrella programme pioneered by the DST for nurturing ideas and innovations (knowledge-based and technology-driven) into successful start-ups.

Rahul Nainwal, the CEO of Runway—the incubation cell at the UPES—told FE that the i-TBI at the UPES is the first in the state, and "it seeks to foster a culture of innovation and entrepreneurship in higher educational institutions by creating a thriving innovation ecosystem buoyed by mentorship and funding for creative projects."

The i-TBI, he added, will benefit the entire region. "Uttarakhand is a hilly state and has unique challenges. Many of the state's problems can be solved by providing tech solutions to local and regional challenges," he said. "The UPES i-TBI will focus on innovative ideas that are at the confluence of social, economic and developmental issues and technology, and provide them with the necessary training, mentorship and financial aid to enable them to create scalable solutions."

Runway is a start-up incubator at the UPES Dehradun that offers mentorship, grants and investments, legal and incorporation support, as well as allocation of space to work to start-ups

Runway is a start-up incubator at the UPES that offers mentorship, grants and investments, legal and incorporation support, and allocation of space to work. According to Nainwal, UPES students will also benefit from the i-TBI. "The presence of an incubator on the campus will give students exposure to disruptive thinking and innovative technology. It will also motivate some students to be a part of the i-TBI and work on technological and business problems," he said.

The i-TBI at the UPES is expected to be launched by January 2023, and start-ups in the domain of blockchain, artificial intelligence, machine learning, drones, the Internet of things (IoT), innovative mobility solutions, and manufacturing, amongst others, will be identified for incubation at the i-TBI.

THE TIMES OF INDIA

70,000 Startups & The Helping Hand Of Sarkar

Minister of state, science & technology, argues GoI played a key role in empowering tech entrepreneurs

Jitendra Singh

The number of startups in India was not more than 400 in 2014. But this figure jumped to a whopping 70,000 by this year. This could not have been possible without PM Modi's ability to make decisive policy decisions, including in no-go areas of the past. The most striking example of the latter is the unlocking of the space sector/Isro and opening it up to private players, which was unimaginable even a decade ago.

The PM gave a momentous call for 'Startup India-Standup India' during his Independence Day address from the ramparts of Red Fort on August 15, 2015, which sent a message down the line that the priorities of the government headed by him were witnessing a departure from the status-quoist approach of the past. It is this enabling environment that has led to a vibrant startup movement across the country.

Fuelling the startup boom

The resultant vibrant and mutually supplementing ecosystem has become a role model for the rest of the world. In fact, India today ranks third in the global startup ecosystem, growing at an annual rate of 12-15%. The sector has become a significant national contributor to generating wealth and employment in the country, as well as propelling innovation and technological development across key development sectors.

A detailed 'Startup India Action Plan' has been rolled out to support and empower startups in the country by introducing 19 action points focussing on (a) handholding support to entrepreneurs/startups; (b) creating funding support and incentivisation mechanisms for startups; and (c) supporting industry-academia partnerships and providing necessary incubation support for startups.

The Indian startup ecosystem has been going from strength to strength. Even the Covid pandemic, which had a substantial impact on FY-2022, could not dent the funding momentum for Indian startups.

Smells like a startup revolution

In fact, the country has seen 102 startups being elevated into the $1 billion-plus valuation club. Out of these 102 unicorns, 14 have been upscaled in January-March this year, which gives strength to the belief that 2022 could be another year of unicorns.

Covid-proof and reaching for new heights

The department of science and technology (DST) has played a critical role in shaping the startup culture in the country. Its flagship programme Technology Business Incubator (TBI) with its current network of more than 160 incubators has been successful in creating a strong societal impact by addressing challenges faced by the country. The network, during the Covid pandemic, played a critical role in identifying and supporting startups having products and services to address the problems brought on by the pandemic.

DST also set up the Seed Support System in the TBIs for providing much needed early-stage funding to startups. The number of supported programmes and the budget spending for the programme have quadrupled during the past five years.

Under the National Initiative for Developing and Harnessing Innovations (NIDHI) TBI programme, over the last five years 105 incubators have been set up across the country. The network of incubators has supported more than 12,000 startups (7,200 physical and 4,800 virtual). This startup network has 1,500-plus women-led startups, and more than 900 patents have been filed by them. Overall, the startups have produced more than 1,15,000 new jobs.

Giving full play to budding entrepreneurs

Some of the noteworthy milestones of DST's programme on innovation and entrepreneurship are:

- First government agency to establish institutional mechanisms such as TBI to support technology-based entrepreneurship.
- Enabling innovation ecosystem policy framework:
  - Service Tax exemption to both incubators and incubatee.
  - Permission to hold equity by DST-supported incubators (not for profit legal entities) ie, converting government grants to equity subscription.
  - CSR funding for incubators.
- First government agency to offer programmes in PPP mode for scouting and supporting innovation and startups:
  - First government agency to partner and create Sebi-registered PPP innovation fund.
  - First government agency to partner with international government (bilateral) and multilateral agencies for innovation and entrepreneurship development.
- DST-pioneered training and capacity building of incubation managers with exposure to global best practices.
- DST-backed TBIs were first to get support from multilateral international developmental agencies like UNDP, infoDev etc.

In conclusion, the Indian startup ecosystem is progressively evolving as evident from India's continuous rise in the global innovation index as well as ease of doing business ranking over the last five years. The whole ecosystem is providing a platform to aspiring youths to leverage their potential to reinvigorate, revitalise and further strengthen the indigenous ability of industries in the given geopolitical landscape.

An unlikely inventor and his success story

How a rural entrepreneur used solar power to green his innovation

PREETI MEHRA

When Haryana-based farmer Dharambir Kamboj returned to his village in Damla after an accident during his rickshaw pulling days in Delhi, little did he know that his penchant for inventions would lead him to a clean-technology innovation.

In 2017, the 59-year-old entrepreneur turned his invention into a company, Dharambir Food Processing Pvt Ltd., which he runs today along with his 31-year-old son and clocks over a crore of rupees in turnover. "Since childhood, I had an interest in inventing machines and when I visited some farmers in Ajmer who were using makeshift ways to process food, I saw the potential of an automatic food processor that would crush, pulp, deseed and extract juice."

And that is what he went on to design —a food processor that along with the usual functions also mixes, pulverises, steams and pressure cooks. The machine has the capability of processing fruit, vegetables, seeds, herbs and flowers, making it equally capable of oil, gel and essential oil extraction. The machine was then patented and validated by the National Innovation Foundation.

Though Kamboj was getting good orders for his machine, the story turned into one of clean technology, when the company was cherry picked along with five other ventures for grants by Villgro Innovations Foundation and Council on Energy, Environment and Water (CEEW) in 2020, under their Powering Livelihoods programme aimed at boosting "India's rural economy by scaling up the penetration of clean energy-powered appliances for livelihoods."

Dharambir Kamboj

"It was their idea (Villgro and CEEW) and adapting the machine to run on solar power was not so difficult. When I was working on making it a hybrid model that could work on solar, batteries, a generator or electricity, I kept wondering why I had not thought of it before," says Kamboj, thankful to the organisations for nudging him towards it. Today, it is bringing him accolades as well as export orders from Tanzania, Zimbabwe, Nigeria, Uganda, Kenya, Nairobi, and may even turn into a technology sale in Malaysia.

Local manufacturing

Meanwhile, Kamboj says that the big fish always try to eat the small fish, and he has had several large companies offering to buying him out. However, he and his son wish to grow the business independently and by manufacturing the machine in the village vicinity they are providing jobs and livelihood to many.

Kamboj makes machines in several sizes for different pockets. The smallest processes around 40 kg in an hour and costs ₹60,000, while the big machines can process 200 kg per hour and costs ₹2 lakh. His son Prince, who virtually runs the company, explains that shifting to solar has brought with it huge savings in electricity and more interest from different parts of the world.

Publication	Hindustan Times	Language	English
Edition	New Delhi	Journalist	Bureau
Date	27/07/2022	Page no	16

TDB-DST supports 'Giga Mesh'– an innovative wireless product for rural India

Keeping the principle of 'Antyodaya' and the vision of the Prime Minister as its core guiding force, the government aims to provide internet connectivity to the last person in society. The major focus is on rural sectors for ensuring an end to end digital connectivity. To achieve this, government is leaving no stone unturned! The Department of Telecommunication through 'USOF' is already implementing the world's largest rural connecting program 'Bharat-Net' to connect 2.5 lakh gram panchayats with optical fibre, through its SPV 'BBNL'. To further enable this, the Technology Development Board supports Astrome Technologies Private Limited, Bengaluru for the productisation and commercialisation of 'GigaMesh solution for delivery of 5G

telecom and internet services for defence and rural sectors'. Also, to solve Internet Woes of Rural India, TDB has agreed to provide financial assistance of Rs 2.97 crores, out of the total project cost of Rs 19.79 crores to M/s Astrome Technologies.

The idea behind development of GigaMesh is that, fibre-like capacity is needed at every telecom site but deploying the same at each site is not feasible, due to several constraints.

Publication Millennium Post | Language English
Edition New Delhi | Journalist Bureau
Date 14/07/2022 | Page no 5

COVID-19: Scientists develop new means to inactivate virus

OUR CORRESPONDENT

NEW DELHI: In a breakthrough development, scientists of the Indian Institute of Science (IISc) in collaboration with researchers from the CSIR-Institute of Microbial Technology developed a novel mechanism to inactivate COVID (SARS-CoV-2) virus by blocking their entry to cells and reducing infection ability.

According to a senior official in Ministry of Science and Technology, researchers reported the design of a new class of synthetic peptides that cannot only block the entry of the COVID (SARS-CoV-2) virus entry into cells but also clump the virions together, reducing their ability to infect.

This novel approach provides an alternative mechanism to render viruses like SARS-CoV-2 inactive, promising a new class of peptides as antivirals, the official said, adding that the rapid emergence of new strains of the SARS-CoV-2 virus has diminished the protection offered by Covid-19 vaccines calling for new approaches to prevent infection by the virus.

According to the ministry, IISc scientists have exploited this approach to design peptides that can bind to and block the spike protein on the surface of SARS-CoV-2 virus. This binding was further characterised extensively by cryo-electron microscopy (cryo-EM) and other biophysical methods, it added.

The research was supported under the COVID-19 IRPHA call of SERB Science and Engineering Research Board, a statutory body of the Department of Science and Technology.

The designed peptides are helical, hairpin-shaped, each capable of pairing up with another of its kind, forming what is known as a dimer.

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Publication	Mint	Language	English
Edition	New Delhi	Journalist	Bureau
Date	25/07/2022	Page no	3

IIT Kanpur launches NIRMAN Accelerator Program with govt

ISTOCK

New Delhi: Indian Institute of Technology (IIT) Kanpur's Startup Incubation and Innovation Centre (SIIC) has launched the NIRMAN Accelerator Program that will help various startups and innovators overcome business challenges from their prototype to market journey. Under the programme, applications will be invited from manufacturing startups and innovators engaged in healthcare and agriculture domains. The programme is supported by the Union government's Department of Science and Technology.

TECHCIRCLE

Cancer-causing virus can infect neuronal cells, says IIT study

PIONEER NEWS SERVICE
NEW DELHI

Researchers from IIT Indore have found that cancer-causing virus Epstein Barr Virus (EBV) can infect the neuronal cells and drive various changes in biomolecules such as fatty acids, carbohydrates, and protein components, leading to diseases of the central nervous system as well as brain cancer. The study is published in the journal ACS Chemical Neuroscience.

The EBV virus has been found to be widely present in the human population. It usually does not cause any harm, but the virus gets reactivated inside the body in some unusual conditions like immunological stress or immunocompetence. This may further lead to various complications like a type of blood cancer called Burkitt's lymphoma, stomach cancer, multiple sclerosis, and so on. Earlier studies provided links of EBV involvement in various neurodegenerative diseases. However, how this virus can affect the cells of the brain and manipulate them is still unexplored.

The researchers utilized the Raman microspectroscopy technique, supported by the Department of Science and Technology (DST) under FIST scheme to explore the possible impacts of a cancer-causing virus on brain cells. The technique based on Raman Effect is a simple, cost-effective tool to find sensitive chemical changes in biological samples.

They showed that there could be timely and gradual changes in various biomolecules in the neuronal cells under viral influence. Additionally, these changes were distinct when compared to the changes observed in other supportive brain cells (that is, astrocyte and microglia).The team consists of a group leader from Infection Bioengineering group at IIT Indore, Dr. Hem Chandra Jha, along with his students Omkar Indari, Shweta Jakhmola, and Meenakshi Kandpal in collaboration with the group leader of Material and Device Laboratory (Department of Physics), Professor Rajesh Kumar and team including Dr. Devesh K. Pathak and Ms. Manushree Tanwar found that some common biomolecular changes were observed at times in these cells.

They observed that the lipid, cholesterol, proline, and glucose molecules increased in the cells under viral influence.

Covaxin induces robust immune memory to SARS-Cov-2: Report

PIONEER NEWS SERVICE
NEW DELHI

Scientists have found that Covaxin, which is an inactivated whole-virion vaccine manufactured by Bharat Biotech, an Indian pharma, induces robust immune memory to SARS-CoV-2 (the virus that causes COVID-19) and variants of concern that persist for at least six months after vaccination and induces memory T cells that can respond robustly against the variants.

This may help in controlling the virus load and thus, reduce the disease severity, according to a study.

The study was published in the Nature Microbiology journal.

Although the clinical trial data were available for the vaccine efficacy, important questions remained unanswered for evidence-based policy-making particularly. These included whether the vaccine induces immune memory, how long the vaccine-induced memory persists, and whether these memory responses are able to sustain against the SARS-CoV-2 variants.

In a multi-institutional collaboration with the Translational Health Science and Technology Institute (THSTI), Faridabad, All India Institute of Medical Sciences (AIIMS), New Delhi, ESIC Medical College, Faridabad, Lok Nayak Jai Prakash Narayan Hospital (LNJP) Hospital, New Delhi, LJI, LA Jolla, Dr. Nimesh Gupta and group at the National Institute of Immunology (NII), New Delhi, investigated 97 SARS-CoV-2 unexposed individuals who had received vaccine, up to six months after 2-dose vaccination. The vaccine-induced responses were compared with the immune memory in 99 individuals who recovered from mild COVID-19, the Union Ministry of Science & Technology said in a statement.

The study supported under IRHPA-COVID-19 special call by the Science and Engineering Research Board, a statutory body of the Department of Science and Technology, found that the vaccine produces antibodies against Spike, RBD, and Nucleoprotein of the virus, just like in virus infection. However, analyses of both the binding and neutralising antibodies revealed a reduced recognition of variants of concern like Delta (India), Beta (S. Africa), and Alpha (UK).

"This study showed that the vaccine is capable of inducing memory B cells. The researchers found this satisfying because antibodies may decline with time, but these memory B cells can replenish antibodies against the virus, whenever required. Their study provided the first-ever evidence of the detailed traits of immune memory generated in humans in response to an inactivated virus vaccine," the Ministry said.

Publication	The Times of India	Language	English
Edition	Hyderabad	Journalist	TNN
Date	05/07/2022	Page no	3

Navigation testbed launched at IIT-H

TIMES NEWS NETWORK

Hyderabad: Minister of state (Independent Charge) Science and Technology and Earth Science Jitendra Singh on Monday inaugurated the first Testbed for Autonomous Navigation at IIT Hyderabad.

He said that TiHAN Autonomous Navigation Testbed (Aerial & Terrestrial) will be the destination for next-generation safe, sustainable, and smart mobility solutions. "This will be the source of futuristic technology generation for autonomous vehicles. The testbed will allow us to test the next generation autonomous navigation technologies accurately and allow faster technology development and global market penetration," said Singh.

He said that India's first test-bed for autonomous navigation would provide a platform for industries, R&D labs, and academia to drive collaborative research in autonomous navigation, thus making India a global leader in these technologies.

Singh said setting up of 25 technology innovation hubs across the country is one of the programmes launched under the PM to make India a destination for futuristic tech

Singh said, "TiHAN is developing and deploying areal-time Cyber-Physical System utilizing unmanned aerial vehicles and unmanned ground/surface vehicles for many application sectors of national importance. Among the most essential factors for making autonomous and connected vehicles more acceptable to consumers is their effectiveness in realistic conditions. It is crucial to evaluate these technologies in a safe, controlled environment."