Newspaper Clips
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March 20

IIT Kharagpur deisgns India's first superpower drone, names it after Mahabharata warrior

http://indiatoday.intoday.in/education/story/iit-kharagpur/1/908039.html

For the first time in the country, an indigenous superpower drone has been designed by a research group at IIT Kharagpur. Especially created for emergency situations, it is named after the epic warrior from Mahabharata, Bhim

For the first time in the country, an indigenous superpower drone has been designed by a research group at IIT Kharagpur. Especially created for emergency situations, it is named after the epic warrior from Mahabharata, Bhim. Less than a metre in length, its creators say that BHIM's uniqueness lies in the unmanned aerial device's state-of-the-art protection shield, superior imagery and hitherto unknown abilities.

As per a *TOI* report, BHIM can create a Wi-Fi zone within a nearly 1 km radius when it flies overhead.

"Such advanced built-in intelligence is not available in drones now. The design is completely in-house. The controlling and guiding algorithms of the drone have been developed in our lab," said Sudip Mishra, a faculty member of the computer science and engineering department.

Uses of BHIM

- Aimed for conflict zones, the drone, which has a battery backup of seven hours, can fly into a disaster (or war) zone and create a seamless communication network for security forces, rescue personnel and even the common man

- It can maintain long flight times and drop emergency supplies by accurately using parachutes

- It can also be used for rescue operations in remote and hard-to-access areas

- The drone can conduct integrity checks for boundary walls and find out breaches if any

The automated drone possesses an actual vision-based guidance with built-in intelligence which helps to detect if an area is crowded or not. It will then fly away and land in a safer place.

IIT-Guwahati, Tezpur University feature in Times Higher Education rankings

http://timesofindia.indiatimes.com/city/guwahati/iit-guwahati-tezpur-university-feature-in-times-higher-education-rankings/articleshow/57724789.cms

GUWAHATI: Two state institutes - IIT-Guwahati (IIT-G) and Tezpur University (TU) - have featured among Asia's top 150 higher educational institutes listed by the Times Higher Education (THE) Asia University Rankings 2017.

The IIT-G was placed in the 101-110 rank category this year. Last year, it had ranked 80. The TU, on the other hand, was placed in the 131-140 rank category.

The premier technology institute acknowledged the need for introspection. Director Gautam Biswas told TOI, "I am not really satisfied with the rankings. We should have been placed in a better position. I was expecting IIT-G to be placed in the 70-80 rank category this year."

The TU fraternity, on the other hand, was ecstatic. "For the first time, our university participated in THE Asia University Rankings 2017 and we are glad to fare so well," said registrar Biren Das.

Das said a good rank was necessary to attract the attention of students. "Nowadays, many students, especially meritorious ones, judge a university by its ranking," he added.

The THE Asia University Rankings 2017 assess universities on their core missions of teaching, research, knowledge transfer and international outlook and provide the most comprehensive and balanced comparisons available. Delhi University has been placed in the same rank group as TU, while IIT-G shares the honours with Jadavpur University.

March 19

IIT-Bombay will increase number of seats for UG and PG courses

http://www.hindustantimes.com/mumbai-news/iit-bombay-will-increase-number-of-seats-for-ug-and-pg-courses/story-rm681F7W5gDl9d2xKfr30H.html

Officials hope that there are no vacant seats this year.
Engineering students looking to bag seats in premier Indian Institutes of Technology (IITs) across the country have reason to cheer. With IITs planning to add 550-plus seats across courses and institutes, the total number of seats open for admissions stand at 11,000-plus for the next academic year.

While provisions for most new seats will be made in the newer institutes, IIT-Bombay will also increase its intake in undergraduate and postgraduate courses. "We are introducing a new program for undergraduate courses, which will add about 30 seats. Similarly, a few seats will be added to postgraduate courses for the upcoming academic year," said Devang Khakkar, director IIT-B. While the Joint Admission Board (JAB) approved the increase in seats in 2016, most of the older institutes were not open to the idea owing to infrastructural constraints.

"Engineering is not just about providing students with a classroom, but also making arrangements for extra laboratories and hostel rooms. Most older IITs are already struggling to make ends meet," said a senior faculty from IIT-Delhi, where the institute plans to introduce new seats via a new designing program, but not for engineering courses next year. There are currently 22 IITs in India, plus the Indian School of Mining in Dhanbad. Four of these — IIT-Goa, IIT-Dharwad, IIT-Jammu

and IIT-Bhilai — started admitting students only last year. Khakkar said neither IIT-Goa nor IIT-Dharwad would increase their seats.

"We are expanding our student intake capacity for different courses this year, including BTech, MTech and MSc. The net result is that our intake will be 1,250 in the next academic year. We hope to increase this to 1,450 by 2018," said Sudhir Jain, director, IIT-Gandhinagar. He added they aim to focus more on research from this year, especially in postgraduate courses.

However, institutes are unsure if adding seats to newer IITs serves the purpose.

In a first, the Joint Seat Allocation Authority (JoSAA) had decided to conduct six rounds of admissions last year, instead of the two rounds that was the norm till 2015. The move was aimed at ensuring that not a single IIT seat was left vacant. Despite this, 73 of 10,500 seats had gone vacant.

"We hope that no seats go vacant this year because students are only vying for seats at older IITs and do not opt for the new ones," said a senior faculty from IIT-B, who requested anonymity.

IITs do all but research in engineering

http://www.newindianexpress.com/thesundaystandard/2017/mar/19/iits-do-all-but-research-in-engineering-1582938.html

NEW DELHI: The great Indian IIT (Indian Institute of Technology) dream may be losing its charm. A study has found that these premier institutions lag way behind in producing quality research in engineering which is their core area.

The study, published in the country's prestigious scientific journal Current Science and conducted jointly by authors from the Banaras Hindu University and South Asian University, reveals that majority of the research output from IITs is in subjects such as physics, chemistry and material science. For IITs to be placed high among the global institutions, a lot of effort and support is required, it states.

The Indian Institutes of Technology (IITs) are laggards in producing quality research in engineering. Publishing research is important for any institution, for it helps in determining its international reputation and funding in case of private institutions. A joint study by authors from Banaras Hindu University and South Asian University analysed research performance of 16 IITs. At present, there are 23 IITs in India but data of rest seven was not available.

"The discipline-wise research performance analysis indicates that majority of the research output from IITs is in Physics, Chemistry and Material Science and research in engineering disciplines lags behind substantially," observes

the study.

It adds that IITs being primarily engineering and technology institutions should produce more research work in core engineering disciplines. The IITs lag behind as they are not focusing on publishing research in right kind of publications internationally.

The analysis also explains that there is a substantial difference in research performance levels of old IITs compared to the new IITs.

Among 16 IITs, seven are old—Kharagpur, Bombay, Madras, Kanpur, Delhi, Guwahati and Roorkee. While nine others—Bhubaneswar, Gandhinagar, Hyderabad, Jodhpur, Patna, Ropar, Indore, Mandi and Varanasi—have been established in the last 10 years.

"The new IITs are very young for a research performance in comparison with old IITs. Some new IITs, particularly the IITI, show promising research performance."

The research also stresses that one of the major outcomes of the analysis was that even the best-performing IITs of India are behind two top-ranking world universities—Massachusetts Institute of Technology, USA, and Nanyang Technological University, Singapore in research.

"Of these, NTU (established in 1991) is younger than the five older IITs, which shows that the age of an institution alone does not only call for higher performance. If a new institution like NTU can achieve higher research performance levels then why not some of the Indian IITs?" it questions.

IIT Indore comes up with short term course on spacecraft

http://www.freepressjournal.in/indore/iit-indore-comes-up-with-short-term-course-on-spacecraft/1037239

Indore : Space is a new buzzword in the country ever since ISRO successfully launched as many as 104 satellites in one go.

Driving motivation from ISRO, Indian Institute of Technology Indore has come up with a short-term course on "Spacecraft and Payload Pointing and Control".

Duration of the course will be 10 days and classes will be held from May 15-26.

"Bold successes of ISRO have stimulated private enterprises to escalate their stakes in the governmental aerospace endeavours. In the context of this invigorating panorama, the present course is developed to fulfil the need of practicing engineers to learn the subject of space vehicles and their payloads attitude dynamics and control quickly so that they

could contribute in their organizations without interrupting their job for years to earn an academic degree," a release issued by IIT Indore said.

The institute said that professionals dealing with satellite and payload motion control in aerospace organisations and companies and teachers who plan to teach this subject in their colleges would be benefited from the course.

For CEP participants from ISRO, DRDO, CSIR or any Central government departments, and any academic institute, the registration fee is Rs 40000, and for participants from industries, the fee is Rs 50000. The last date for registration is May 1

e-fest to begin on March 27

In order to encourage students to take entrepreneurial roles, IIT Indore would be organising entrepreneurship fest from March 27 to April 2.

"Designed to build public awareness and support for entrepreneurship, the fest would focuses public attention on biggest opportunities and encourages participants to reflect on their role as leaders and innovators," a release issued by IIT Indore said.

During the week long fest, different events would be organised. While events like Crazy Ideas and Biz Quiz would be organised March 27 and 28 respectively, Business Case Study and a Session with radio storyteller Nilesh Mishra would be held on March 29 and 30 respectively.

Besides, different workshops will be held on March 31 whereas April 1 would witness event Startup Pavilion. The last day of the fest would see event Engendea.

Institute's first TEDx event on Mar 26

IIT Indore would be organising its first ever TEDx event on March 26. The theme of the event is IMPACT which would see speakers from different background of life who made a mark in their respective fields. Main speakers are Govardhan Eco Village director Guaranga Das, Tinkle magazine editor Rajani Thindiath, documentary and corporate photographer Mahesh Bhat, graphic designer Shiva Nallaperumal, stand-up comedian Manan Desai, entrepreneur Mathew Jose, Agniveer founder Sanjeev Newar and ThinkPhi co-founder Samit Choksi.

March 18

IIT-B designs keyboard to make chatting in Indian languages easier

http://www.thehindu.com/news/cities/mumbai/iit-b-designs-keyboard-to-make-chatting-in-indian-languages-easier/article17525615.ece

Local flavour

- India has about 340 million smartphone users
- The number of users typing in Indian languages on smartphones is more than those doing so on personal computers. Typing in Indian languages on personal computers is mostly done by professionals
- Abugida script is mainly used in India and countries to its east, such as Bangladesh, Myanmar and Thailand

So far, there have been 18 lakh downloads of the new keyboard. We're seeing about one lakh downloads a month

Prof. ANIRUDHA JOSHI, IDC School of Design

The Swarachakra is available in 12 languages; platform connects multiple smartphones at the same time

The Industrial Design Centre (IDC) in IIT Bombay has designed Swarachakra, a free Indian language keyboard for Android phones. Swarachakra is available in 12 Indian languages, and is integrated with the Better Together framework, which allows users to run an application on multiple phones at the same time. Users can type on one phone using the Swarachakra keyboard and see the conversation on the second phone.

The Better Together toolkit and Swarachakra keyboard will be unveiled on Monday at the Microsoft Research in Bangalore. The 'Better Together' framework was developed as part of a project titled, 'Re-shaping the Expected Future' initiated by Future Interaction Technology Lab in Swansea University, U.K., and funded by European organisation Engineering and Physical Sciences Research Council.

The Swarachakra is available in Hindi, Marathi, Konkani, Kannada, Malayalam, Tamil, Telugu, Oriya, Bengali, Assamese, Punjabi and Gujarati.

A big part of this story, said Prof Anirudha Joshi of the IDC School of Design who led the six-member IIT-B team, was that text inputs in Indian languages were fairly weak. On Wikipedia, for instance, there is very little material in Indian languages. "It's a symptom of the larger problem. It's not true of East Asia or even Africa, though. The reason is not politics or social phenomena. It's to do with the structure of scripts we use."

Indian languages, he explained, fall into the Abugida category — a family of script mainly in use in the Indian sub-continent, and some parts of Africa and Canada. The other categories are the alphabet — Greek, Latin and so on; the Abjad — Persian or Urdu, in use in West Asia and North Africa; and the infographic script in Japan, China and Korea. "The Abugida has a unique script structure, and text input mechanisms need to take that into account," he said.

The idea took shape during the desktop computer era, when the team had to discard the standard Qwerty keyboard and develop a physical keyboard suited for Indian scripts. The team made about a 100 keyboards, but used them for internal research projects.

"The main story was when Android phones became available. We did a few experiments, and came up with Swarachakra."

The 'chakra' appears with consonant options next to a word.

The 'dynamic' keyboard, which shows how different letters look post-typing, is designed keeping the structure of Indian scripts in mind, explained Prof. Joshi. The word 'car', when typed in Hindi, for instance, has a vowel modifier after the first letter – the keyboard takes that into account, besides offering the possibility of combining two characters into one, such as when the word 'act' is written in Hindi. "A typical keyboard is designed for the alphabet, and doesn't support these complexities."

Nearly six years ago, a research paper referred to "the puzzle of text input in Indian languages." Today, it's no longer a puzzle, at least not on the smartphone. "What we were left to work on was speed and accuracy."

The idea of typing words on one smartphone and seeing words appear on another was that most users who use Whatsapp, Facebook messenger, Hike or Viber, see the chat on only half of the screen, while the other half is covered by the keyboard, especially in case of use of Indian languages.

"Many homes in India have more than one smartphone. Also, messages are getting longer. This allows you to read the whole message you are composing."

The 'splitting' project was born out of a collaboration with Swansea University, on technology for emergent users — those new to the internet or even to smartphones. "Currently, smartphones are for those already familiar with the desktop. But for a lot of people, it is the only connection with technology."

So far, there have been 18 lakh downloads of the new keyboard, says Prof. Joshi. "We're seeing about one lakh downloads a month."

Prof. B K Mishra takes charge of IIT - Goa as its Founding Director
http://www.orissadiary.com/CurrentNews.asp?id=72787

Bhubaneswar: Former Director of CSIR – Institute of Minerals & Materials Technology (IMMT), Bhubaneswar Prof. Barada Kanta Mishra has taken charge as the Founding Director of newly established IIT-Goa. Earlier, Prof. Mishra was teaching in Indian Institute of Technology (IIT), Kanpur before joining CSIR – IMMT, Bhubaneswar.

"As founder Director, I have the modest goal to use my experience of IIT Kanpur and CSIR – IMMT to establish an institute of international repute where students and faculty will work in tandem to solve problems at the forefront of research"

Prof. Mishra mentioned.

"We must aim at influencing policy decisions with S&T backup that address national as well as global challenges. I intend to tap the immense potential and the enthusiasm of young minds to contribute in the best possible way" he added.

Advocating for the need of a better Student Care System for research scholars in IITs he stated that there should be good coordination between the industries and the academy so that the innovations in the laboratories can be applied for the welfare of the people in real life.

About CSIR – IMMT Bhubaneswar he said, "World class research cannot be carried out with outdated equipment and laboratory. A rapid modernization program was taken up. Within few years the laboratory enjoyed state-of-the-art facilities and became quite ambitious in taking up grand challenges."

Well known for his deep involvement in mineral processing and extractive metallurgy, Mishra has graduated in Metallurgical Engineering from NIT Rourkela. He obtained his PhD and post-doctoral degree from University of Utah, USA as a Fulbright Fellow. He also has taught in Aston University, UK. In 1993, he joined IIT Kanpur.

Prof. Mishra's research group has links with all major mineral processing and metal industries of India. He has published over 200 SCI journal papers and has 5 nos. of US patents to his credit.

He is a recipient of the National Mineral Award and is a Fellow of the Indian National Academy of Engineering. For his industry linkage in terms of R&D he has received the prestigious VASVIK Award. He served as a member of the Supreme Court appointed Expert Committee for Macro EIA Study relating to mining in Goa. At present he is the President of Indian Institute of Mineral Engineers.

United Spirits collaborating with IITians, research scholars to improve quality of products

http://economictimes.indiatimes.com/industry/cons-products/liquor/united-spirits-collaborating-with-iitians-research-scholars-to-improve-quality-of-products/articleshow/57697137.cms

Students at some of the country's top engineering and research institutes are helping spirits maker United Spirits — no, not by consuming its products — but by looking to improve whisky ageing and packaging processes besides launching new flavours.

Indian Institute of Technology (IIT), Kharagpur, IIT-Madras, Indian Forest Research Institute (IFRI) and Central Food Technological Research Institute (CFTRI) are among the institutes that the country's largest spirits company has approached to help drive innovation, following in the footsteps of parent Diageo.

A team of engineers at IFRI is helping USL replace American oak wood and instead use Indian wood for cask maturation to add new flavours. Some IIT Madras engineering students are modelling the maturation process to suit the Indian environment and CFTRI is helping the firm brainstorm ideas to launch traditional Indian fermented drinks.

"We collaborate with various institutes for long-term projects to get different perspectives and try out new innovations for our market," said Shovan Ganguli, senior vice-president for research and development (R&D), at USL.

"For instance, it started with us asking IIT-Kharagpur to help stop deterioration of liquid in glass bottles. Then they introduced us to nanotechnology, which is being used in other food industries."

When exposed to sunlight, the dissolved oxygen in the bottle reacts with liquid and changes the original flavour.

"The engineering students helped us build nanoparticles embedded (in) glass bottles which block the sunlight and eat up the oxygen inside the bottles," Ganguli said. The concept is now in the lab experiment stage.

A pilot will be conducted in a year to test the application of the research being conducted by Master's and PhD students at IIT-Kharagpur at its plasma and nanotechnology laboratories. IIT-Kharagpur professor Sudarsan Neogi said USL is funding the research in nanotechnology applications to increase the shelf life of beverages.

"This is the first-of-itskind research being done at any of the IITs.

This research will help the company to retain the taste, flavour and keep the beverage undisturbed for a very long time," he said.

The maturation project with IIT Madras is to start next month. The institute had done a similar project with Tata Tea some time back, where the maturation process was accelerated.

"This project with USL is also about accelerating the maturation process by bringing down the time taken which is currently 24 hours to as low as six hours without compromising the quality of the product," said S Pushpavanam, professor of chemical engineering at the institute. "We are trying to find the operating conditions for this, like optimal temperature and pH level, to suit the Indian environment. This will take a couple of years."

These innovations are part of a long list that the maker of Johnnie Walker whisky and Smirnoff vodka has prepared to drive its Indian business. Diageo's global sales of its innovation portfolio more than doubled to £1.5 billion, or about .`12,150 crore, in 2015 from £700 million in 2010.

The British liquor giant has more than 180 people dedicated to innovation roles with 15 executives stationed in India.

USL aims to get about 20% of its sales from new product launches and another 30% by renovating existing brands by 2020. Six months ago, it launched McDowell's Silk, a honey-flavoured whiskey, at a premium, and Captain Morgan original, a chocolate and vanilla flavoured rum.

IIMs to gain autonomy, education policy to be redrafted in 2-3 months: HRD Minister

http://indianexpress.com/article/education/iims-to-gain-autonomy-iit-research-education-policy-to-be-redrafted-in-2-3-months-prakash-javadekar-hrd-minister-4574878/

The government is also looking to give scholarships to students for research and check brain drain.

There are 270 million students in India with higher education being pursued by over 14 million students.

Prakash Javadekar, the Union Minister for Human Resource Development, said on Friday that the government is set to complete its redraft of the education policy soon. He added that the government is focusing its attention on granting autonomy to IIMs and to improve research and innovation in higher education.

Speaking at the 2017 Conclave by India Today, the Union Minister said the redraft will take two to three months. There are 270 million students in India with higher education being pursued by over 14 million students.

"We have completed our exercise and hope to release the redraft policy in two to three months. To improve the quality of education, certain earlier decisions also need a relook," Javadekar said. He added that 130 million of 230 million students go to the government schools. The remainder 100 million study in private schools.

"We want to improve the quality of the government and municipal schools to such an extent that people will withdraw their children from the private schools and enroll them with the government schools," Javdekar said. He also claimed that the government will focus supporting incubation centres and start ups at Indian Institutes of Technology (IITs).

"There are incubation centres at IITs and 200 research proposals have been shortlisted from 1500 applications," Javadekar said.

The government is also looking to give scholarships to students for research and check brain drain. In addition to all this, the government is inviting research proposals.