Newspaper Clips
November 4-10, 2017

November 10

IIT Delhi to Organise Blockchain Summit & Hackathon from 10-13 November

http://businessworld.in/article/IIT-Delhi-To-Organise-Blockchain-Summit-Hackathon-From-10-13-November/09-11-2017-131110/

The objective of the event is to explore how blockchain architectures can enable a new digital infrastructure for India, improving efficiency, transparency, privacy, and cost across all sectors

Just before the Global Entrepreneurship Summit (GES) and as part of the series of Road to GES events, NITI Aayog along with Proffer, a blockchain startup founded by graduates of MIT and Harvard, are organising a Blockchain summit and hackathon at IIT Delhi from Nov 10-13, 2017.

The objective of the event is to explore how blockchain architectures can enable a new digital infrastructure for India, improving efficiency, transparency, privacy, and cost across all sectors.

More than 1,500 students from IITs, MIT, Harvard, Berkeley, and top engineering institutions around the world will be participating in the event, with 500 attending in-person on IIT Delhi's campus.

Microsoft, IBM, Accel, Coinbase, and Amazon AWS are sponsoring $17,000+ in prizes to reward the top 5 blockchain-based applications addressing problems in government/enterprise infrastructure, finance, energy markets, supply chain, decentralized Aadhar identities, information exchange, and more.

On the evening of Friday November 10 (6:20 – 6:30pm), NITI Aayog CEO Mr. Amitabh Kant will deliver a keynote, sharing his perspective on how blockchain technology can transform the Indian economy and presenting his vision for IndiaChain – a blockchain-enabled infrastructure for Indian

enterprise and government.

Aruna Sundararajan (Secretary, Telecom/IT), Dr. Sriram Raghavan (CTO and Director of Research, IBM India), and Dr. Ajay Bhushan Pandey (CEO, Aadhar/UIDAI) will also be addressing the crowd on Friday evening and Saturday morning.

Use-and-throw gadget is President's favourite air filter

https://timesofindia.indiatimes.com/city/delhi/use-and-throw-gadget-is-prezs-fav-air-filter/articleshow/61585208.cms

NEW DELHI: While the city is reeling from the pollution in the air, markets are seeing a surge in people buying anti-pollution masks. Amongst all this, former IIT-Delhi students, as part of the institute's incubation centre, have developed an easy to use air filtration system called Nasofilter, which unlike ordinary pollution mask does not hinder speaking and is easy to use.

Recently, at the IIT-Delhi convocation, President Kovind made a special mention of the product in his speech as an example of innovation by students. The NasoFilter —made of porous membrane — can be stuck to the nasal orifice and can clear PM 2.5 from the air being breathed.

The filter is made up of biodegradable polymer using nanotechnology and can be easily peeled off. It does not affect breathing or other activities.

"The filter can be used continuously for 10 hours more. It is based on a use-and-throw principle, and since it is biodegradable, it doesn't harm the environment," said Prateek Sharma, co-creator of the product.

Sharma explained that the product involves assembling millions of small pores to create a thin flexible membrane, which could capture very small particles with high efficiency. "This allows filters to be used for long hours while maintaining good breathability and comfort. The filters aim to provide relief to common users from air pollution and to protect people, who are prone to allergies, and safeguard those who are exposed to job related industrial particulate pollutants as well."

He also said that the filter does not hide the face, cause fogging of glasses or make it difficult to speak properly.

This product was awarded the Startups National Award 2017 by the Technology Development Board a few months ago to protect against air pollutants and minimise the risk of respiratory diseases.

Delhi air pollution: Government gasps; Odd-Even is back, next week

http://indianexpress.com/article/india/delhi-air-pollution-smog-toxic-odd-even-cars-aap-congress-bjp-arvind-kejriwal-stubble-burning-air-quality-index-4930571/

Delhi air pollution: CNG, electric and hybrid, women-only vehicles, those carrying kids exempt.

With air quality dipping further Thursday to its worst level this year, the Delhi government announced that the odd-even car rationing scheme will be rolled out in the city for five days from November 13 to November 17. Announcing this, Transport Minister Kailash Gahlot said that the scheme, a part of the emergency measure in the Graded Response Action Plan (GRAP), created and enforced by the Supreme Court-appointed EPCA, will be in place from 8 am to 8 pm like last year and will allow odd-numbered cars to run on odd dates while even-numbered cars will only run on even dates.

Earlier, the odd-even scheme had been implemented, initially for a fortnight beginning from January 1, 2016 and then four months later from April 15 to 30.

The move came after an “emergency” prevailed in the capital for the third day, with the Air Quality Index, worsening to 486, on a scale of 500 – and predicted to get worse over the next 48 hours. As per norms, a satisfactory AQI level is 100 and Delhi routinely is between 300 and 400.

IMA Declares ‘Public Health Emergency State’ In Delhi

After the Central Pollution Control Board task force told EPCA on Wednesday that prevailing conditions called for an “emergency” response, Delhi Lieutenant Governor Anil Baijal and Chief Minister Arvind Kejriwal met and announced that they were “preparing” for the implementation of the scheme.

Gahlot asked citizens and agencies to cooperate and promised that radio-cab services would not be allowed to use surge-pricing. He added that the DTC would hire 500 buses from private contractors to deal with the increased number of commuters. He said, “”Delhi Metro has also promised to provide 100 small buses during the period. Schools will be free to provide their buses voluntarily. However, there will be no compulsion.”

He also urged Prime Minister Narendra Modi to call a meeting of Chief Ministers of Delhi and its surrounding states to find a solution to the crisis.

Delhi air pollution: Bird Eye view of the Ram Leela Ground and old Delhi, from the Civic Center building. Smog in the Capital, as air pollution in the city has drastically increased, on Thursday, November 09, 2017.

The exemptions, Gahlot said, would include CNG vehicles, electric vehicles, hybrid vehicles, women-only vehicles and those carrying children up to 12 years of age, as well as children in school uniform.

He added, “IGL (Indraprastha Gas Limited) will issue stickers which will be available at 22 CNG stations in Delhi. Extra buses are also being arranged. But we will not requisition them for school buses.”

Different studies conducted on the efficacy of the scheme, in decreasing congestion and consequently reducing air pollution due to vehicular emissions, have come up with varying results.

In the first phase of Delhi odd-even rule, 10,058 vehicles were fined and in the second phase, 8,988 vehicles were fined.

A government survey after the first survey received 4.1 lakh responses, 81 percent of them positive while another 60 percent wanted the formula to be permanent — the government had claimed.

The second phase was followed by the Delhi government stating that compliance had been 99.6 percent and there had been increase in metro ridership from 2.5 percent to 3 percent. However “more congestion” had taken place, leading to the creation of a six-member committee, headed by Special Commissioner Transport K K Dahiya. The committee identified major construction activities, ongoing dismantling of the BRT corridor and negligible reduction of traffic entering from Noida and Gurgaon as key factors behind congestion.

Scientific studies though, on the efficacy of the odd-even scheme, are varied. Consider this:

* A study by the Energy Policy Institute at the University of Chicago (EPIC) and Harvard University had found reductions in pollutants in the afternoon hours in Delhi from January 1 to 15. According to the study, PM 2.5 declined by 13% on an average during the odd-even period.

* A study “ “Evaluation of the effects of the 15-day odd-even scheme in Delhi: A preliminary report”, by researchers at Transportation Research and Injury Prevention Programme (TRIPP), IIT Delhi found vehicle speeds increasing from 11 am during the first phase of the scheme, maximum increase

recorded was 9%. Although average speed dipped marginally in some locations between 6am and 11am, the study also found high compliance with the rule.

* A CPCB report told the NGT on April 21, while the second-phase of the scheme was ongoing, that "prime facie there is no data to suggest that odd-even scheme has any impact on decrease in vehicular pollution…the fluctuations in PM10 and PM2.5 is due to weather and change in wind patterns."

* A study by Poverty Action Lab South Asia and supported by the International Growth Centre (IGC) comparing the two versions of the scheme found consistent impacts over both rounds: high compliance, decrease in congestion.

Data protection paper in a week: Rai

http://www.thehindu.com/business/Economy/data-protection-paper-in-a-week-rai/article20046726.ece

'Need to define standards, protocols'

India will release a concept paper on its Data Protection Act within a week seeking stakeholders' comments as government experts grapple with issues concerning inter-operability, security and privacy of new emerging technologies such as artificial intelligence and cloud computing, said Gulshan Rai, chief of cybersecurity.

"We need to define security standards and protocols," Mr. Rai told delegates at a Internet of Things (IoT) conference here on Thursday. "Government is in the process of evolving a Data Protection Act. There is an expert committee under the chairmanship of Justice Srikrishna, of which I am also a member. The concept paper of the group will be out in a week's time."

To keep data of Indians "secure" and "protected" the Ministry of Electronics and Information Technology, on July 31, formed a committee of experts headed by B.N. Srikrishna, a former Supreme Court judge.

The experts, who include members from the government, academia and industry, will identify data protection issues and recommend methods for addressing them. It will also suggest a draft Data Protection Bill.

Technical issues

“There are technical issues such as interoperability, compatibility, privacy, security and adaptability and the cost of implementation. The other issues concern the diplomatic part of it. Also, do we have a international legal framework? How do we interpret the jurisdiction? That is another challenge,” Mr. Rai said.

There are nine billion IoT devices worldwide and by 2020 “we expect almost an increase by factor of three.” Today, the entire turnover of IoT devices is about $150 billion and “we expect it to go up by a factor of four in the next four years,” he said, quoting a report.

The committee’s view was that before the technology was implemented in the smart cities one needs to have a security architecture and framework in place, Mr. Rai said.

“Who will tellus, we did not have any experience. We had some expertise of what the security systems are in the conventional systems. We did not have the experience on smart cities and other technologies. There will be a different sort of technological implementation issues in smart cities and IoT technologies. Those can be in terms of protocols, application programme interface and upgradation software,” he said.

“A whole new world, not only for the development of technology, but for security will also emerge. The investment on device is much lesser as compared to the investment planned on security in both architecture or security application,” Mr. Rai said. A UN Group of Governmental Experts, tasked with examining cyberthreats and making recommendations, was unable to reach a consensus on its final report in June. While previous UN GGE reports remain valid and applicable, though not legally binding, the group’s future is uncertain, according to a statement on the UN website.

Nations may move towards bilateral agreements, a trend which was prevalent in 2015 and 2016, according to the UN.

“When we went to the meeting there were lot of opposition on the attributions,” Mr. Rai said. Ultimately how do you attribute where the crime incident happened? Who is the actor? How do we define attribution? Do we have the inherent right to defend if attack happens? The talks failed.”

“Relationship with industry is important on realising what is the techno-cyber or techno-legal procedure is,” he said. “Today we need a collaboration with the industry because the entire cyber governance involves multiple stakeholders. We need help of stakeholders to build security architecture and cybergovernance architecture. We are looking at whether to be compatible to the European GDPR or the U.S. standard.”

Mr. Rai told the industry to build capacities for training graduates on new technologies by initiating short-term courses which needed to be upgraded from time to time.

“Discussions are on with IIT Delhi and Hyderabad. Practical part will have to come from the industry. We want to set up 10 centres in the next eight to nine months.”

IIT Roorkee develops new technique to reverse antibiotic resistance

https://telanganatoday.com/iit-roorkee-antibiotic-resistance

The team led by Dr Ranjana Pathania has discovered a novel molecule which inhibits the efflux of antibiotics

Roorkee: Researchers from the Department of Biotechnology at Indian Institute of Technology (IIT) Roorkee have developed a path-breaking technique, which will reverse drug resistance and enable the existing antibiotics to effectively kill bacteria, a press release from the institute said.

Drug Resistant Bacteria use a system called 'efflux pumps' that act as tiny motors to expel out the antibiotic from the cellular interior, thereby preventing the drug from reaching its target and helping the bacteria to survive even in the presence of antibiotic.

The team led by Dr Ranjana Pathania of the Department of Biotechnology at IIT Roorkee has discovered a novel molecule which inhibits the efflux of antibiotics leading to effective build-up of antibiotic inside the cell and subsequent cell death.

The molecule discovered by the team has been named 'IITR08027' and it disrupts the proton gradient that is responsible for energising the pumps.

The team has shown that the molecule when used in combination with fluoroquinolones allows the antibiotic to kill the bacterial cells, thereby effectively tackling the antibiotic resistance problem.

The study published in *International Journal of Antimicrobial Agents* found the molecule developed to be effective against multi-drug resistant clinical strains of Acinetobacter baumannii, one of the most prevalent pathogens, which have developed strategies to counter the existing antibiotics, especially fluoroquinolones.

Elaborating further, Dr Ranjana Pathania, Department of Biotechnology, Indian Institute of Technology Roorkee said, "Antibiotic resistance in bacterial pathogens has been one of the major issues that plagues the health care sector today. According to an estimate, about 1,900 people die every day due to antibiotic resistant infections, which amounts to about 70,000 deaths per year. Discovering a new antibiotic or drug, to counter the resistant bacteria will be a time-taking process, due to which the team wanted to come up with a technique, which could restore the efficacy and effectiveness of the existing antibiotics and medications like ciprofloxacin or norfloxacin."

"Since this molecule rejuvenates the activity of fluoroquinolones against resistant bacterial pathogens, its clinical use of could be a medically as well as an economically beneficial move. Moreover, this molecule has a very low cell toxicity, which makes it an ideal candidate to enter pre-clinical trial phase for toxicity and efficacy in animal models," added Dr Pathania.

According to the team, this general mode of action of IITR08027 and the inhibition technique of efflux can be used against other bacteria which express efflux pumps and adopt a similar mechanism of expelling antibiotics from the cell.

November 9

'20% of students have backlog in IITs'

http://www.thehindu.com/news/cities/Vijayawada/20-of-students-have-backlog-in-iits/article20006518.ece

V.Ramagopala Rao,Director,IIT, Delhi, diring an interaction with The Hindu on the side lines of three-day AP Science Congress at Andhra University in Visakhapatnam on Wednesday.

IIT Delhi Director says rote learning in corporate junior colleges is the reason

Every one out of five students in the IITs across the country have backlogs in one or two subjects at least in the first year. And in the IIT ecosystem, it is difficult to cover up the backlogs, if one does come prepared to face the IIT education system, said Director IIT-Delhi Prof. V. Ramgopal Rao.

He was here to deliver a lecture on Nano Science at the ongoing AP Science Congress in Andhra University and on the sidelights spoke to *The Hindu* on the backlog and faculty crunch issues in the IITs.

According to him, many of the students who have completed their plus two in corporate college environment lag behind in the first year. And that is because most of such colleges and coaching institutes follow the mugging-up and reproducing system of education rather than focussing on teaching the basics and principles.

"In IITs, the question papers are open-ended and the students are made to think and apply the principles in solving the problems. Because of their education background they fail. This apart, language is another issue that leads to failure. One should hone up their English skills," he said.

To counter this problem, the IITs have initiated online lecture series under the MHRD programme of Swayam Prabha. “We have recorded about 700 lectures in mathematics, physics, chemistry and biology and are telecast them free for four hours a day. The lectures are based on NCERT syllabus and focusses on basics. All students intend to join the IIT can go through this series to better their knowledge. This will help them when they join the IITs,” said Prof. Ramgopal.

Women percentage

The IITs intent to increase the number of girl students studying at the IITs from 10 % to 20 % by 2020. At present the number of girls is around 10 % and we intend to take to 13 % in 2018 and to 20 % by 2020, said Prof. V. Ramgopal Rao.

Faculty crunch

It is not only Andhra University or other State universities that face faculty crunch. There is a shortage of about 30 to 40 % in all IITs, especially in the pure science areas such as mathematics, physics and chemistry, he said.

According to him, earlier about 80% of the IITians would go abroad for higher studies and after completing Ph. D would return to the IITs in India. But now that percentage has dwindled to about 15 % and that is why the faculty pool is dwindling, he observed.

“We need to open up the faculty area to teachers from abroad. The government at present has opened it up, but foreign teachers can come only for a contract period of five years, which can be renewed. But there are two stumbling blocks in this issue: one the DST does not fund research projects for foreigners and the pay is comparatively very less. When Singapore pays about $70,000, why would they come for $25,000 in India? Research is a key area, and we need to revisit the funding rules,” he said.

I.I.T Delhi Honors Saurabh Mittal, Chairman of Incedo and Mission Holdings, With the 2017 Distinguished Alumnus Award

http://www.prnewswire.co.in/news-releases/iit-delhi-honors-saurabh-mittal-chairman-of-incedo-and-mission-holdings-with-the-2017-distinguished-alumnus-award-656031493.html

The Indian Institute of Technology, New Delhi, conferred the 2017 Distinguished Alumnus Award on Saurabh Mittal, Chairman of Incedo and Mission Holdings, for exceptional achievement and contribution in the area of Corporate Business Development and Entrepreneurship.

Distinguished Alumni Award is IIT Delhi's most prestigious award. The award recognizes alumni who have achieved greatness in their chosen field and reached the pinnacle of success. With only 72 awardees in over 50 years of IIT Delhi's history, prior awardees have included Vinod Khosla, billionaire venture capitalist; Raghuram Rajan, Former Governor of RBI, Jayant Sinha, Minister for Civil Aviation, among others. Other awardees, this year, were Dr. Kiran Bedi, Ramon Magasay award winner the current Lt. Governor of Puducherry, Prof. Soumita Dutta, Dean of Cornell Business School and Cornell Tech and Mr. Sunil Sood, MD & CEO of Vodafone India.

A self-made billionaire entrepreneur, Saurabh is the Founder, Chairman of Mission Holdings, his wholly owned Singapore-based global investment company. Mission Holdings invests in financial

services, media, real estate and technology firms, partnering with them to grow them into sector leaders and international powerhouses.

He is also the Chairman of Incedo, a Bay Area headquartered technology services firm, focused on Data & Analytics and Emerging Technologies. With strong expertise in financial services, life Science & communication engineering verticals, the firm helps client's transform businesses by bringing in strong technical capability, diverse skills and innovation ability.

For Saurabh, who is a dedicated philanthropist, another important goal has been to give children from humble beginnings, a chance to become leaders of tomorrow. While he's on the board of multiple non-profits, his greatest support has been for 'Parivaar' - an integrated school and home for thousands of children from destitute backgrounds in East India and for 'Avasara', an academy focused on developing young women leaders.

Saurabh completed his B.Tech in Electrical Engineering in 1995 from I.I.T Delhi and was the 'Best Graduating Student' of his batch. Later, he went on to pursue MBA from Harvard Business School where he got elected as a Baker Scholar (graduated with high distinction).

Speaking on this occasion Saurabh said, "It's a truly humbling moment to receive this honour from my Alma Mater. IIT Delhi works like an intense cauldron which produces true entrepreneurs and global leaders. The four years at IIT Delhi remain some of the most challenging and formative years for me."

About Incedo

Incedo is a technology solutions provider specializing in Data, Information Management, Business Intelligence, Analytics, and Emerging Technologies. Incedo has deep-rooted industry expertise in financial services, life sciences and communication engineering.

Headquartered in the Bay Area, Incedo has offices across North America and India. Its young, agile team consists of industry practitioners who understand the business needs of their clients.

Incedo works with four of the top ten life sciences and pharmaceutical companies, two of the top telecommunications companies in the world and some of the nation's largest financial services firms.

About Mission Holdings

Mission Holdings and its subsidiaries invest and operate primarily in financial services, media, real estate and technology. MH makes long-term investments in public and private markets around the globe. Guided by the entrepreneurial leadership of Mittal and by a team of seasoned investment executives, Mission Holdings seeks opportunities with strong management teams who aim to compound value over the long term. Mission Holdings cements its investment approach in research, discipline and a keen understanding of how to guide and grow companies into sector leaders and international powerhouses.

Mission Holdings is managed by its wholly owned Singapore regulated investment management company, Mission Holdings Management (MHM).

The company is headquartered in Singapore and has offices in New York and Bay Area, and an affiliate presence in Mumbai.

Focus on cyber security need of the hour: experts

http://www.thehindu.com/news/cities/Vijayawada/focus-on-cyber-security-need-of-the-hour-experts/article20006534.ece

Former cyber forensic scientist Krishna Sastry Pendyala addressing a session in Visakhapatnam.

'Threat of external intruders has gone up manifold'

Technology in the realm of computer science and internet is fast evolving, but at the same time the security aspect, especially the research and development in the sphere of cyber security, is at a much slower pace. And this imbalance could be the major threat in the coming days.

This was the opinion of experts at the session on cyber security at the ongoing AP Science Congress being held at Andhra University, on Wednesday.

According to Dr. Krishna Sastry Pendyala, former cyber security scientist of Government of India, from desktop we have moved into the Web, and the Web has transformed from 1.0 to 2.0 and 3.0. "We are now talking of 4.0 that include Internet of Things (IoT), and this enables access any time, at any place and anything. The scope is wider and so is the threat," he said.

Giving an example, the experts pointed out that refrigerators are being built that will be embedded with intelligence. Refrigerators will be connected to online sites and as and when vegetable or poultry stock depletes, it automatically sends a request to the online sites and the stock is replenished. And similarly, fans and lights will become intelligent and bills will be paid from ones e-wallet.

In such a scenario and with the society shifting to the cashless mode of transactions, the threat of external intruders has gone up many folds.

"Hackers can hack into your account from a remote device to your intelligent fan or refrigerator, leave alone cellphones and computers, which are more vulnerable, and connect to 100 other zombies (chain computers) and not only hack into your account but also into the main server through simple applications such as DDoS (denial of service attack). Through this application, one can bombard the

main server with requests over and above the capacity of the server, and get it gets hanged for hours. This was done to Amazon and Netflix site for nine hours last year and they lost billions of dollars," said a cyber-security scientist. According to the scientist, about 60 % of the requests were sent from cell phones, zombies and other others devices and about .001 were from intelligent pacemakers. The experts pointed out that the world is moving to an age where one living in the USA can administer the insulin dose to his ailing father or mother through a remote device and a hospital can remotely monitor a patient's heartbeat and if required send in an ambulance within minutes.

But at the same time a hacker can hack into the server and manipulate the health condition, which could be dangerous.

According to Prof. V. Ramgopal Rao, Director of IIT- Delhi, in future there will be no physical wars but they will fought on the cyber space. A country can cripple the financial status of another country and that is why we need more cyber security professionals and the government should think of starting more courses on cyber security at least at the PG level.

Dr. Krishna Sastry pointed out that IoT is like a tiger. "You either ride it or you are in it. IoT devices need regulations and they should not be used blindly," he said.

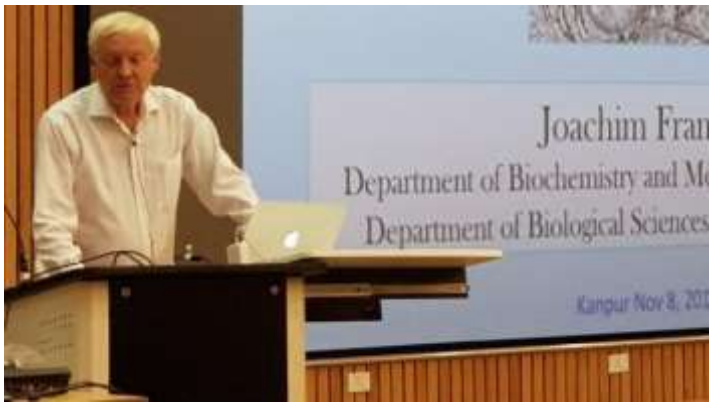
According to him, about 5 lakh new malwares are let out in the cyber space everyday and of them about 4 % are unknown. "In such a case, cyber security should be given top importance," he said.

Another scientist pointed out that what is needed is to see who are behind the hackers. In today's world the governments are also playing a key role.

The USA accuses Russia of sponsoring and breeding hackers and South Korea make similar allegations against North Korea. In the present situation, we need to first learnt to defend, then get into the offensive and at the same time increase and improve the surveillance, he said.

आईआईटी-कानपुर पहुंचे नोबेल विजेता फ्रैंक ने छात्राओं को दिए सफलता के मंत्र

http://www.livehindustan.com/uttar-pradesh/kanpur/story-chemistry-nobel-laureates-reaches-iit-kanpur-1634396.html



रसायन के नोबेल पुरस्कार विजेता जोकिम फ्रैंक बुधवार को आईआईटी, कानपुर में थे। यहां आयोजित एक विशेष व्याख्यान में उन्होंने छात्रों को सफलता के गुर बताए। फ्रैंक ने कहा कि हर तत्व में राज

छिपे हैं। उसे जितनी गहराई से देखोगे और जितना अकल्पनीय सोचोगे, उतनी ही कामयाबी मिलेगी। जिस तरह खून की एक बूंद से कई बीमारियों का पता चल जाता है, उसी तरह अभी भी कई राज छिपे हैं, जिसे आप तलाश सकते हो। बस एकाग्रता के साथ गहराई तक जाने की जरूरत है। 2017 में रसायन विज्ञान का नोबल पुरस्कार जीतने वाले कोलंबिया यूनिवर्सिटी, अमेरिका के जोकिम फ्रैंक ने आईआईटी में रसायन विज्ञान विभाग की ओर से आयोजित विशेष व्याख्यान में अपनी विभिन्न रिसर्च के बारे में भी जानकारी दी। बताया कि अभी भी कई रिसर्च कर रहे हैं। उन्होंने कहा कि छात्र सिर्फ एक चीज पर एकाग्र करें। अगर किसी एक पार्ट को पहले खुली आंख, फिर माइक्रोस्कोपी और फिर अन्य मशीनों से गंभीरता के साथ देखेंगे तो कई राज नए-नए पता चलेंगे। उन्होंने कहा कि जब क्रायो इलेक्ट्रॉन माइक्रो स्कोपी बनाई थी, तब वैज्ञानिक इसकी कल्पना भी नहीं करते थे। लगातार प्रयास के बाद इसमें सफलता मिली। इसी तरह ऐसी चीज सोचनी चाहिए, जो मुमकिन न हो। फिर उसे मुमकिन करने का प्रयास करें। तभी असली सफलता मिलेगी। विभाग के अध्यक्ष प्रो. संदीप वर्मा ने कहा कि नोबेल पुरस्कार विजेता जोकिम फ्रैंक के व्याख्यान से छात्रों ने काफी सीख ली है।

क्रायो इलेक्ट्रॉन माइक्रोस्कोपी पर मिला है नोबेल पुरस्कार

प्रो. संदीप वर्मा ने बताया कि जोकिम फ्रैंक को वर्ष 2017 में क्रायो इलेक्ट्रान माइक्रोस्कोपी के लिए नोबेल पुरस्कार मिला है। उन्होंने जब ये बनाया था, तब इसके बारे में किसी ने सोचा नहीं था। इसके बाद विश्व में बदलाव आया और इसका प्रयोग तेजी से बढ़ा। इन्होंने वातावरण में मौजूद रहने वाली नाइट्रोजन गैस को तरल पदार्थ में बदल दिया था। इसके बाद इसमें जो भी चीज जैसे प्रोटीन या अन्य तत्व डालते थे तो वह ठोस में परिवर्तित होकर एक सेप में बदल जाती है। फिर इस निश्चित सेप में इलेक्ट्रॉन बीम डालते हैं। इससे रिफलेक्शन कर जो लाइट आती है, उससे एक 3 डायमेंशनल सेप बनाते हैं।

Bureau of Police Research and Development plans national police think tank

http://indiatoday.intoday.in/story/bureau-of-police-research-and-development-plans-national-police-think-tank/1/1085320.html

Director General (DG) AP Maheshwari said the bureau "must aim to deliver value added responses right from the cognitive stage to delivery at cutting edge level."

The BPR&D wants to develop a national think-tank with a focus on getting the best police officers to be part of research and development.

Director General (DG) AP Maheshwari said the bureau "must aim to deliver value added responses right from the cognitive stage to delivery at cutting edge level."

While there are many think-tanks looking into policing solutions - such as the Police Foundation and Institute and the Vivekananda Foundation - the BPR&D (Bureau of PoliceResearch & Development) wants to develop its own.

The research force has a platform called NCIS, which actively collaborates with IIT-Mumbai. It is planning a national technology platform, with members of IIT-Delhi on board.

The force plans to come up with simple technological solutions for India's police.

In India, technology has mostly been applied for better communication and through the use of devices such as the GPS. The force will expand the use of tech, and look for automation solutions for hassle free policing. It will actively come up with plans and share them with ISRO and other organisations.

"Each force aims to better itself - like the NSG came up with (the) future soldier project or the ITBP with (a) new uniform for its women commandos on traffic duty," a senior officer said.

DG Maheswari acknowledges the challenges in the policing system, but remains optimistic.

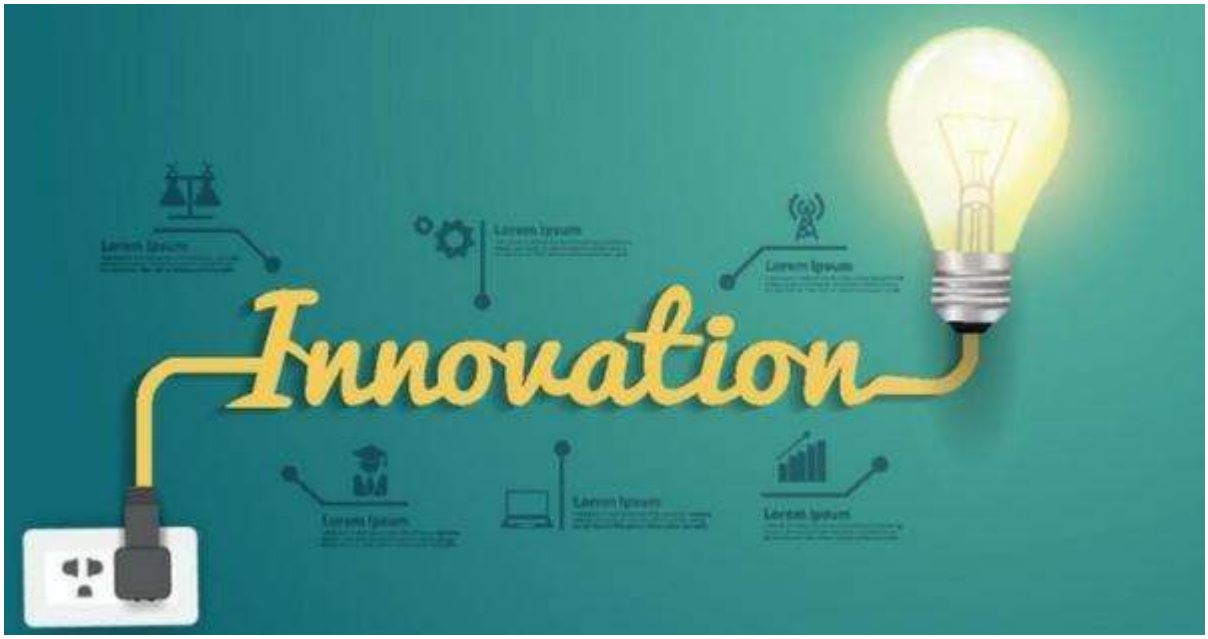
"The nature of internal security has changed dramatically and we now face proxy war situations, border transgression, demonstrative impacts of global occurrences, and these call for dynamic responses which could be activated instantly to counter any threat. Such is the vast and complex canvas of police R&D in our changing society. We believe will bring forth some of the solutions," he said.

November 8

IIT Kharagpur to Host Young Innovators' Program

http://monotonecritic.com/2017/11/07/iit-kharagpur-to-host-young-innovators-program/

IIT Kharagpur might this week host the last stage of the Young Innovators' Program, in which students from high school from all over the country might show their projects on how to crack the problems of the world. Rolled out in April, the YIP is a platform to promote teen minds, students from class 8 to 10, with a credo along with scientific enthusiasm to crack the issues faced by the world. All in all, 24 teams from schools have cleared 2 rounds of elimination and reached the 2-day final stage to be conducted in the campus of IIT Kharagpur from this week onwards.



The candidates might come with a technical innovation in the form of diagrams, working models, or animations that can possibly solve an issue faced by the globe. “The YIP might assist students recognize how a thought can be converted to a product for utilization in the real world and assist cover the gap between actual feasibility and brilliant ideas,” claimed General Secretary of IIT-KGP for the Branding and Relations Cell, Simran Garg, to the media in an interview here. There are 6 main domains that have been recognized for the program, namely, agriculture and food sciences, energy, hardware modeling, environment, biotech, and product designing.

The teams will make poster presentation and model of their thoughts along with a demonstration open to visitors and 7 faculty members of IIT-KGP will moderator the projects. “Via this event we have made an attempt to give the participants a thought of pioneering research and motivate them to chase a career in technical research in opposition to the popular career drifts,” Garg claimed.

The candidates might also get an opportunity to discover the scientific atmosphere inside the IIT campus and be present at a seminar on robotics. “The creativity and enthusiasm of the students that are taking part is a sign of their potential. It is important to recognize their talent at a promising age and look after them as the future of scientific community of the country,” claimed Head of International Relations & Alumni Affairs, Associate Dean, and faculty lead for the event, Prof Baidurya Bhattacharya, to the media in an interview.

IIT-Kharagpur plans joint research projects with University of Manchester

http://indianexpress.com/article/education/iit-kharagpur-plans-joint-research-projects-with-university-of-manchester-4927342/

A statement issued by IIT-Kharagpur on Tuesday said that both institutes held a series of discussions in scientific, technical, and other areas to undertake joint research or technology projects and international academic programmes.

IIT-Kharagpur and University of Manchester (UoM) are planning to initiate joint research project and academic programmes. A statement issued by IIT-Kharagpur on Tuesday said that both institutes held a series of discussions in scientific, technical, and other areas to undertake joint research or technology projects and international academic programmes.

A team of eight professors and administrators of UoM, led by their Associate Vice President Prof. Stephen Flint, visited IIT-Kharagpur over the weekend during their maiden trip to India this year. The two educational institutions, which signed an MoU last summer, would work towards developing a course for working professionals in the domain of Health Informatics. Opportunities for international Masters and PhD programs have also been discussed.

Professor Siddhartha Mukhopadhyay, Dean of Alumni Affairs and International Relations at IIT-Kharagpur, said, “Enhanced exchanges between IIT-Kharagpur and UoM would not only help develop research programmes with global impact but would also lead to world-class training programmes for students in and out of universities.”

Joint research projects are being considered in Biomedical Informatics, Advanced Materials, Smart Textiles and Earth-Environment-Water Sciences, which will be one of its kinds in India.

Such research can be supported through various research funding such as Newton Bhabha Fund, Global Challenges Research Fund etc.

Professor Abhijit Mukherjee, the faculty coordinator of this MoU at IIT-Kharagpur who have a decade long research collaboration with scientists of MoU, said, “These institutional bonding can really develop a milestone between UK-India academic collaborations.”

Professor Flint said that he was really impressed by the goodwill and positive feel on both sides to build a strong, productive relationship.

IIT BHU and IRMA sign MoU to promote innovation

http://indiatoday.intoday.in/education/story/iit-bhu-varanasi-irma/1/1083412.html

With the objective of setting up a Centre of Excellence in Refractories at the Ceramics Department, an agreement has been signed between Indian Refractory Makers Association (IRMA) and IIT-BHU, Varanasi.

With the objective of setting up a Centre of Excellence in Refractories at the Ceramics Department, an agreement has been signed between Indian Refractory Makers Association (IRMA) and IIT-BHU, Varanasi. A release issued stated, "This is an initiative that will bring in technological advancement to the refractory industry in the country for making it globally competitive, a release issued here said.

"This Centre of Excellence will fulfill the need of the industry as we did not have an independent third party laboratory for material testing. I am confident that it will establish a distinct reputation for itself with cutting-edge infrastructure facilities at IIT-BHU and technical prowess of Indian Refractory Makers Association," Indian Refractory Makers Association Chairman Hakimuddin Ali said.

Third party testing

The Centre of Excellence will provide third party testing of refractory products and raw materials to all the refractory makers, user industries and suppliers of a variety of raw materials. It will also characterise indigenous raw materials, which will help the refractory makers identify the best suited raw materials for various applications.

"I am sure that this initiative will prove to be a milestone in the development of the refractory industry. It will be a place, where all the players in the refractory industry can take the advantage of our expertise and improve the quality of their products.

"Our aim is to make Indian refractory products globally competitive by creating a synergy between industry and academia," IIT (BHU), Varanasi Department of Ceramic Engineering Professor Devendra Kumar said.

Outreach programme for youth organised

http://e-pao.net/GP.asp?src=19..081117.nov17

Imphal, November 07 2017: With an aim to promote the knowledge of science and technology among the youth, especially the youths residing in far flung areas of the State, Institute of Nano Science and Technology (INST), Mohali in collaboration with Trinity High School, Meipou Pallel organised an outreach programme at Meiphou community hall today .

The programme was organised under the aegis of Department of Science and Technology .

Chemistry Professor, IIT Delhi as well as INST Director Professor Ashok Kumar Ganguli delivered a special lecture on ‘Science in daily life’ and ‘Nano Science and Nano Technology’ .

Students from Trinity High School, Meiphou Pallel, Sinasu Institute of Science, Maringphai, Pallel High School, Corner Stone Academy, Pallel, Union Model High School, Komlathabi, St Joseph Higher Secondary School, Kuraopokpi, Langol Public School, Langol took part in the programme .

The programme was also attended by Associate Professor Kirorimal College, DU, Dr Ramananda Singh, Institute of Nano Science and Technology Scientists namely Dr Bhanu Prakash, Dr Manolata Devi, Trinity High School headmaster M Brojen among others.

IIT graduates snap up markedly higher pre-placement offers

https://timesofindia.indiatimes.com/city/mumbai/iit-grads-snap-up-markedly-higher-pre-placement-offers/articleshow/61551718.cms

MUMBAI: Pre-placement offers or PPOs are on the rise at the Indian Institutes of Technology and acceptance rates on students' part have peaked too. Companies such as Qualcomm, Samsung, Microsoft, Goldman Sachs and Amazonare avoiding the early placement rush and instead offering jobs to the graduating class of 2018 via the PPO route.

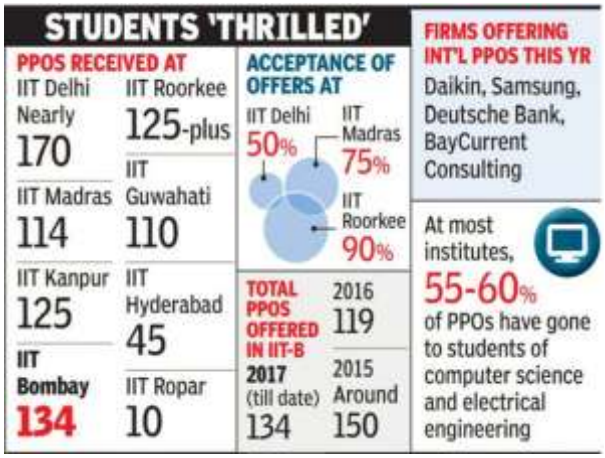
PPOs at IIT Delhi have touched almost 170 and the count at IIT-Madras is 114—a 56% rise in pre-

placement offers from the previous year. IIT Kanpur has got around 125 and the number is 134 at IIT Bombay, 125-plus at IIT Roorkee and 110 at IIT Guwahati. Acceptance at Delhi is a little over 50% and it's 75% at Madras. Among the younger institutes, students of IIT Hyderabad have already got 45 PPOs and IIT-Ropar 10 (15 in 2016).

Professor Manu Santhanam, advisor, training and placement, IIT Madras, said: "One of the principal reasons is an increase in the number of internships in companies that are large recruiters. The PPOs are a reward for the excellent performance of students in internships." The placement officer at IIT Delhi said, "Not only is the number of PPOs higher this year, even the acceptance rate has gone up. It is normally not so high."

"More than 90% students have accepted the PPOs. This year has seen an exceptionally high number because they have received very good PPOs of quality jobs,' said N P Padhy, placement head, IIT Roorkee.

At most institutes, nearly 55-60% of the PPOs have gone to students of computer science and electrical engineering. Qualcomm, Microsoft and Wipro are the largest recruiters on most campuses. Last year, Samsung, which picked a host of IITians last year through the PPO route, was among the top payers.



Each IIT has a different policy for students who accept PPOs. Some IITs such as Madras don't allow such candidates to participate in the placement season. Some other institutes such as IIT Bombay ask the companies if the candidates can continue to sit for interviews and keep their choices open.

Students are thrilled that the PPOs are pouring in. "It looks like a good placement season," said one who added that hiring was picking up and that internship was a great way for candidates to test the waters before signing up for a job.

"Our departments' emphasis on criticality of summer internships and the popular trend among recruiters is to hire tried-and-tested talent and make a informed decision," said an IIT Kanpur faculty.

The placement season kickstarts on December 1 and PPOs come in till the end of October. "The vagaries of the economy due to demonetization had hit placements last year. A lot of start-ups were blacklisted too. That had an impact on last year's placement. But this season looks good already," said a placement team member from IIT Roorkee.

'IISER and IIT will focus on collaboration in many areas'

http://www.thehindu.com/news/national/andhra-pradesh/iiser-and-iit-will-focus-on-collaboration-in-many-areas/article19994544.ece

IISER Director Prof. Krishna N Ganesh interacts with the media in Tirupati on Monday

Tirupai set to become a premier educational centre, says IISER Director

The presence of two premier educational institutions in Tirupati, the Indian Institute of Science Education and Research (IISER) and the Indian Institute of Technology (IIT), would enable collaborations on various fronts such as research, talent and resources, IISER Tirupati Director Prof. Krishna N Ganesh said.

Addressing the media, after taking charge as the Director of IISER Tirupati from November 1, here on Monday, Prof. Ganesh hailed the efforts of the State and the Central governments for establishing both the institutions at a single location. "It is quite rare that two educational institutions of national importance spend time as neighbours. The vision of Chief Minister N. Chandrababu Naidu (and other government officials) for establishing both IIT and IISER would augur well for the temple city and transform it into a premier educational centre," he said. Elucidating on advantages of sharing resources between the institutions, Prof. Ganesh said that they would not only be looking forward to associations in teaching and research but also on outreach activities, a combination of sciences and engineering.

Campus building

Prof. Ganesh said that they would be selecting an architect for building their main campus and possibly accommodate the students by 2019. The eco-friendly campus with the inclusion of modern concepts, would showcase the vision of the institution by imaginative environs. "We are planning to build infrastructure like lecture halls, UG labs, hostels, foodcourt etc., by 2019, so that students can directly move to the new campus with no hindrance. The district officials have extended their support to our action plans with proactive interactions," he maintained.

Highlighting the challenges, Prof. Ganesh said that they would work towards attracting some of the best faculty from across the country, focussing on developing research laboratories-ecosystem, and build a great campus. He also said that they would strive to establish a connect with students and teachers (of various educational institutions in Tirupati) to inspire and spark interest in sciences, alongside their outreach programme – 'Unnati.'

Prof. Ganesh, who earlier worked as the founding Director of IISER Pune, mentored IISER, Tirupati, and now has been appointed as its Director. Functioning at a transit campus near Karakambadi Road, IISER Tirupati hosts 250 BS-MS students, 25 Ph.D. students, post doctoral researchers, project fellows/assistants and 30 regular faculty (covering areas such as physics, chemistry, mathematics, biology, earth/climate sciences) and 28 non-teaching staff. IISER Tirupati was included with other IISERs as an Institute of National Importance under NITSER Act 2012.

November 7

IIT village internship

https://www.telegraphindia.com/india/iit-village-internship-183583

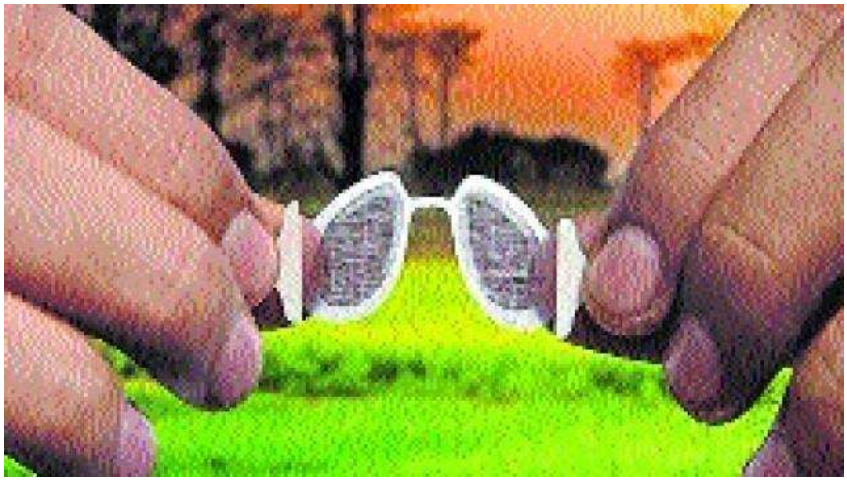
New Delhi: IIT Delhi is set to start a village internship programme for its students this summer to help them understand the problems in rural areas better.

The programme will be voluntary. Under it, the students will visit a rural area and spend one or two months with the people to understand their problems and think of technological solutions.

"The students will talk to farmers and the village panchayats," said IIT Delhi director Ramgopal Rao. The IITs have started the Unnat Bharat Abhiyan under which each institute is adopting five villages. The students will work under the scheme.

प्रदूषण की मार से बचाएगा दस रुपए का 'नैसो'

http://www.livehindustan.com/ncr/story-naso-of-ten-rupees-will-save-you-from-pollution-1631573.html



दिल्ली-एनसीआर में प्रदूषण का स्तर लगातार बढ़ रहा है। इससे बचने के लिए आईआईटी दिल्ली के पूर्व छात्रों ने नैसो फिल्टर नाम का श्वसन फिल्टर बाजार में उतारा है। यह सांस लेते समय 95 प्रतिशत धूलकण और प्रदूषकों के प्रवेश को रोकने में सक्षम है। इसका मूल्य 10 रुपये है। आईआईटी दिल्ली के पूर्व छात्र प्रतीक शर्मा ने इसे कारगर बताया है। प्रतीक ने बताया कि नैसो फिल्टर में बेहद पतली झिल्ली लगी है। इसे लाखों रोम छिद्रों को एकत्र कर तैयार किया गया है। पतली झिल्ली प्रदूषण कणों को बेहतर क्षमता से फिल्टर करने में सक्षम है।

सोशल मीडिया पर साझा करने पर मुफ्त में 10 फिल्टर मिलेंगे

आईआईटी, दिल्ली के पूर्व छात्रों ने इस फिल्टर को तैयार करने के लिए नैनोक्लीन ग्लोबल प्राइवेट लिमिटेड नाम की कंपनी बनाई है। फिलहाल वे आईआईटी परिसर से ही इस कंपनी को चला रहे हैं। प्रतीक ने बताया कि इसे साझा करने वाले लोगों को मुफ्त में 10 नैसो फिल्टर दिए जा रहे हैं।

टैक्सी-अॉटो के बाद अब साइकिल भी लें 5 रुपये घंटे पर

http://www.livehindustan.com/uttar-pradesh/kanpur/story-after-taxis-auto-now-bicycle-rentals-1631698.html

आईआईटी में अब पांच रुपये में एक घंटा साइकिल की सवारी कर सकते हैं। हर हॉस्टल, लाइब्रेरी व एकेडमिक भवन के सामने ये साइकिलें उपलब्ध हैं। इसका संस्थान के छात्र खूब लुत्फ उठा रहे हैं। टैक्सी, ऑटो के बाद अब ओला देश में पैडल सवारी शुरू करने जा रहा है। इसकी शुरुआत कम्पनी ने आईआईटी में प्रोमो के साथ की है। फिलहाल इसके लिए एक माह तक कोई शुल्क नहीं देना होगा। आईआईटी में साइकिल की सवारी खूब प्रचलित है। साइकिल से शरीर स्वस्थ रहता है तो प्रदूषण भी नहीं फैलता है। इसलिए ओला टैक्सी, ऑटो के बाद साइकिल टैक्सी की शुरुआत करने जा रही है। इसकी शुरुआत से पहले कम्पनी ने आईआईटी-कानपुर में प्रोमो शुरू किया है। इसके तहत करीब 300

से अधिक साइकिलें संस्थान में उपलब्ध कराई गई हैं। इसकी सवारी ओला के एप पर बुकिंग के जरिए की जा सकती है। इसमें पहले 30 मिनट की सवारी निशुल्क है। इसके बाद हर 30 मिनट के लिए पांच रुपये चुकाने पड़ेंगे। संस्थान में अधिकतर छात्र साइकिल से ही चलते हैं। इस बीच जब से ये सुविधा हुई है, छात्र मनोरंजन के लिए अपनी साइकिल छोड़ बुकिंग कर साइकिल की सवारी कर रहे हैं।

IIT कानपुर के कार्यवाहक निदेशक बने प्रो. मणींद्र अग्रवाल, प्रो. मन्ना गए आईआईटी-खड़गपुर

http://www.livehindustan.com/uttar-pradesh/kanpur/story-iit-kanpur-became-acting-director-manindra-agrawal-1631704.html

आईआईटी कानपुर के कार्यवाहक निदेशक प्रो. मणींद्र अग्रवाल होंगे। वह संस्थान में डिप्टी डायरेक्टर पद पर थे। कार्यकाल पूरा होने के बाद निवर्तमान निदेशक प्रो. इंद्रनील मन्ना ने प्रो. मणींद्र अग्रवाल को कार्यभार सौंप दिया। इससे पहले संस्थान के सभी शिक्षक व छात्र-छात्राओं के साथ स्टाफ ने प्रो. मन्ना को विदाई दी। प्रो. मन्ना अब अपने मूल संस्थान आईआईटी-खड़गपुर में सेवाएं देंगे।

आईआईटी में मंगलवार को निदेशक प्रो. इंद्रनील मन्ना का अंतिम दिन रहा। वह रोज की तरह ही कक्षाओं में पहुंचे तो शाम को विभिन्न कार्यक्रमों में हिस्सा लिया। शाम छह बजे प्रो. मन्ना ने निदेशक पद का कार्यभार डिप्टी डायरेक्टर प्रो. मणींद्र अग्रवाल को सौंपा। प्रो. मन्ना ने बताया कि पांच साल के कार्यकाल में कई ऐसी चीजें रह गईं, जिन्हें वे पूरा नहीं कर सके। उनकी लगातार प्राथमिकता रही कि संस्थान को देश व विश्व स्तर पर कामयाबी दिलाई जा सके। प्रो. मन्ना के कार्यकाल में ही संस्थान में तीन नए डिपार्टमेंट अर्थ साइंस, कॉग्नेटिव साइंस व इकोनॉमिकल साइंस शुरू हुए। साथ ही प्रो. मन्ना ने ही ज्वाइंट पीएचडी प्रोग्राम शुरू कराया।

प्रो. मन्ना ने बताया कि अब उनकी पूरी प्राथमिकता रिसर्च होगी। वर्तमान में आईआईटी-कानपुर व आईआईटी-खड़गपुर में ज्वाइंट रूप से लेजर में रिसर्च हो रहा है। इसमें आईआईटी कानपुर के दस वैज्ञानिक व आईआईटी खड़गपुर के सात वैज्ञानिक कार्य कर रहे हैं।

कार्यों को गति देना रहेगा प्राथमिकता

आईआईटी के कार्यवाहक निदेशक का कार्यभार संभालने के बाद प्रो. मणींद्र अग्रवाल ने कहा कि उनकी प्राथमिकता वर्तमान में चल रहे कार्यों को गति प्रदान करना है। छात्रों की हर समस्या का प्राथमिकता के आधार पर निस्तारण किया जाएगा। जब तक स्थाई निदेशक नहीं आते हैं, तब तक संस्थान को ऊंचाई तक ले जाने का प्रयास रहेगा।

रैगिंग मामले की फिर होगी जांच : प्रो. मन्ना अपना कार्यकाल पूरा करने से पहले एक जांच समिति का गठन कर गए हैं, जो रैंगिंग मामले की फिर जांच करेगी। इस मामले में आईआईटी प्रशासन 22 छात्रों को दोषी मानते हुए निलंबन की कार्रवाई कर चुका है। इसमें 16 छात्रों को तीन साल व छह छात्रों को एक साल के लिए निलंबित किया गया है। इस कार्रवाई को लेकर छात्र व कुछ शिक्षक लगातार आपत्ति जता रहे थे।

IIT Goa students may soon intern with CSIR, DRDO

https://timesofindia.indiatimes.com/city/goa/iit-goa-students-may-soon-intern-with-csir-drdo/articleshow/61537703.cms

PANAJI: The Indian Institute of Technology (IIT), Goa, has started the process of initiating interactions of its students with national establishments like the Council of Scientific & Industrial Research (CSIR) and Defense Research and Development Organisation (DRDO).

The institute is also readying itself to host interns from other institutes under IIT Goa faculty members.

"It is a step towards addressing the often heard criticism that, over the years, students going through the IIT system have not played a significant role in advancing the country's science and technology sector. The idea behind this initiative is to make students aware of the developments in science and technology going on in the country early on in their student days and connect them with the different establishments such as BARC, ISRO, IGCAR, DRDO, CSIR Labs, etc," IIT Goa director Barada Kant Mishra told TOI.

IIT Goa's internship cell has been recently activated with this objective in mind.

A portal is also being readied for external students to seek internship with IIT Goa faculty members. "Interested students will have to upload their CV and statement of purpose and indicate their area of interest and who they would like to intern with. These applications will be organized systematically and given to the faculty members concerned who can select the interns," said Mishra.

IIT Madras' Bluetooth-controlled robots sweep area clean, enter record books

https://www.techgig.com/tech-news/IIT-Madras-Bluetooth-controlled-robots-sweep-area-clean-enter-record-books-140046

Two hundred and seventy students of IIT Madras came together under the institute's Centre for Innovation (CFI), formed teams, and created 45 robots that cleaned a 750-sqft area with the help of rotating scrubbing pads. Monitored by representatives from *Asia Book of Records* and *India Book of Records,* this feat has set an Asian record for deploying the largest number of robots to clean a space.

These robots, with high revolutions per minute (RPM) motors at their core, consisted of a couple of scrubbing pads directing the dust towards the central suction mechanism. A filter then collected the dust in a vacuum tunnel. The robots were controlled by Bluetooth through a mobile-based application the students had developed. A proximity ultrasound fixed to the robots ensured there were no collisions, and the robots simultaneously went about their task for five minutes.

Gaurav Lodha, Executive Student Head, CFI, told *NDTV*,

"This will also impart technical training to students by teaching them the basics of electronics, robotics, automation, wireless communication, 3D printing, rapid prototyping, and software modelling along with soft skills like teamwork, time management, problem-solving, communication, and leadership."

With an objective to contribute to the Swachh Bharat Abhiyan, this innovation is further fuelling hopes that automated robots could take over manual scavenging and cleaning of sewer waste, eliminating human effort and burden.

Asian Book of Records presented a provisional certificate after the event. The final approval and certification will come in after due assessment of the evidence.

Professor B Ravindran, faculty-in-charge at CFI, told *Deccan Herald*,

Another major aim of this attempt is to sustain, spread, and strengthen the concept of Swachh Bharat Abhiyan by some of the most skilled students in the country's premier engineering institute.

Education must build character, says Venkaiah Naidu

http://www.newindianexpress.com/states/andhra-pradesh/2017/nov/07/education-must-build-character-says-venkaiah-naidu-1694043.html

RAJAMAHENDRAVARAM: Education is not merely to get employment and the purpose of education is to enlighten and empower an individual, Vice President M Venkaiah Naidu has said.

He inaugurated the Amenities Centre & NTR Convention Centre on Adikavi Nannaya University (AKNU) campus here on Monday. He also laid the foundation stone for Botanical Garden in the campus.

Chief Minister N Chandrababu Naidu also laid the foundation stone for the Arts College building. Governor ESL Narasimhan was also present at the inauguration ceremony.

Welcoming the distinguished guests, AKNU vice-chancellor professor M Mutyala Naidu briefed them about the progress achieved by the university in the last few years. He requested the distinguished guests to convince the University Grants Commission (UGC) to accord 12 B status for AKNU so that the university can get funds from the former.

Addressing the gathering, the Chief Minister recalled his college days and said that they were unforgettable. “Over one lakh students from twin Godavari districts are studying in the colleges affiliated to AKNU. I hope the university progresses on all fronts in future,” he said. “The TDP government is giving priority to education and through Gyanabhoomi, students from SC, ST, BC and Minority communities are getting scholarships. We are extending a loan of `10 lakh for students who want to study abroad,” he said.

Speaking on the occasion, Venkaiah Naidu said, “Teachers must transfer the world of learning.” He further said that they should be friendly mentors and act as role models to students. He exhorted the students not to neglect their mother tongue. He further said that education must build character, caliber and capacity besides promoting good conduct. While we are enhancing access to higher education, there is a general feeling that quality of courses and the teaching processes needs to be considerably improved, he added.

Vice President’s advice

Education must build character and promote good conduct. There is a need for raising the standards of education and increasing the professional competence of teachers

India was once known as ‘Vishwaguru’ and Indians, irrespective of caste and creed, were blessed with lot of talent and intelligence and those qualities have to be fully tapped to make students acquire knowledge and face contemporary challenges.

November 6

'Come back and teach at IIT', President Ram Nath Kovind tells IITians

http://indiatoday.intoday.in/education/story/president-ram-nath-kovind-to-iitians/1/1083209.html

"The obligation is on IIT-Delhi authorities to involve and invite alumni, many of whom are well placed in other universities or in the industry, to come back and teach here - even if for short periods or for specific courses," said President Ram Nath Kovind.

At the 48th convocation of Indian Institute of Technology (IIT) - Delhi, President Ram Nath Kovind who was the chief guest for the event said it was the "moral obligation" of the IIT - Delhi alumni to give back to the institute and "come back and teach" at IIT - either for a short or long duration.

Furthermore, Ram Nath Kovind also advised IITians to "adopt" a school for underprivileged children in order to aid its development.

As per reports, in the IIT Delhi convocation ceremony, in total 1,941 students received their degrees, of which 306 were PhD students.

Here's what IIT-Delhi Director V Ramgopal Rao said:
"This is the first time IIT-Delhi has crossed the 300 mark in terms of the number of PhD students graduating during the convocation," IIT-Delhi Director V Ramgopal Rao told PTI.

Experts from President's speech:
"Many of those who studied here in the past were fortunate to have their world-class education heavily subsidised by the tax payer. There is a moral obligation to pay back, and to help those less privileged - in whichever manner the individual prefers. It would be best if this process of paying back enriches education and scholarship at the grassroots of our society."

"The obligation is on IIT-Delhi authorities to involve and invite alumni, many of whom are well placed in other universities or in the industry, to come back and teach here -- even if for short periods or for specific courses. If procedures need to be simplified to achieve this, then efforts must be made in that direction," President Kovind added.

Distinguished Alumni Award:
Furthermore, this year, the below mentioned four alumni were given the Distinguished Alumni Award.

- Lieutenant Governor of Puducherry Kiran Bedi

- Managing Director and CEO of Vodafone India Sunil Sood
- Professor Soumitra Dutta from Cornell University
- Founder of Mission Holdings Saurabh Mittal

Kovind on adoption of underprivileged children:
"I would urge the IIT-Delhi authorities and community to adopt and partner a school for underprivileged children and see how they can contribute to its development and the capacity building of its pupils," Kovind said.

The IIT system in general - and IIT-Delhi specifically - was the "gold standard of technical education in our country" and the "brand ambassadors of India's intellectual and technological strength across the globe, from Singapore to Silicon Valley," Kovind added.

Give back to society, help needy students: Prez to IIT Delhi

http://www.ptinews.com/news/9208047_Give-back-to-society--help-needy-students--Prez-to-IIT-Delhi

New Delhi, Nov 4 (PTI) President Ram Nath Kovind today urged IIT Delhi alumni to give back to the society by helping the less privileged students of the premier institute by undertaking short teaching stints and sponsoring scholarships.

The President, while speaking at the Indian Institute of Technology (IIT) Delhi campus here during its 48th convocation, said all great universities of the world have a deep and thriving engagement between old students and the institution.

"They invite alumni to contribute, not merely in terms of financial assistance but more in terms of

knowledge sharing and time," Kovind said.

In the case of the IIT Delhi alumni group, he said, this can be done in several ways.

"Many of those who studied here in the past were fortunate to have their world class education heavily subsidised by the tax payer. There is a moral obligation to pay back, and to help those less privileged -- in whichever manner the individual prefers," the President said.

He suggested that it would be best if this process of giving back "enriches education and scholarship at the grassroots of our society."

"The obligation is on the IIT Delhi authorities to involve and invite alumni, many of whom are well placed in other universities or in industry, to come back and teach here, even if for short periods or for specific courses.

"If procedures need to be simplified to achieve this, then efforts must be made in that direction," he said.

Kovind stressed that "all of us must strive to give back to society in our own little way" as he also asked the premier institute to partner with a needy school and help its children and faculty.

The President, who is a Visitor to the institute, said he was happy to know that the IIT Delhi "now has more post graduate students than at the undergraduate level."

"This is a healthy sign. We are moving towards research- based learning and churning out products and technologies for nation building. I am happy to note that researchers at IIT Delhi have invented and developed products that have contributed to the well being of fellow citizens," Kovind said.

The President also lauded the faculty of the institute and said the success of the graduating students was "also a tribute to the faculty of IIT Delhi, which is among the best our country has to offer."

"They (faculty) have nurtured raw youngsters into mature professionals. My good wishes to all of them," he said.

Path Breaking New PhD Research at IITD on Social Media

https://www.outlookindia.com/newsscroll/path-breaking-new-phd-research-at-iitd-on-social-media/1182560

New Delhi, Delhi, India (NewsVoir) November04, 2017--- "First of its kind study in India using primary research to look into use of social media in targeted communications for political parties, elections, e-governance, brand building

Dr. Subi Chaturvedi received her PhD. From IIT-D today at the convocation presided by the Hon. President of India Shri Ram Nath Kovind and Kumar Mangalam Birla, Chairman of the IIT Delhi Board and the Aditya Birla Group. Ms. Chaturvedi's work at IIT is considered path breaking and seen as a significant step forward towards examining New Media technology, Social Media, Political

Communication, E-Governance, News Gathering, Deepening Democracy and their impact of both inclusive democracy, enhancing citizen participation, and the discipline and practice of both management & communication as well. This is the first primary study in India with senior editors and journalists, and their use of social media in the field of political communication and technology. It has staggering findings and detailed case studies on key ministries of the government including MEA and Railways. It proposes a unique model for the media and the government for technology adoption and enables the creation of a 24X7 responsive government for truly actualising the power of over a billion mobile connections and 350 million internet users.

The study is particularly significant for developing countries and emerging economies where access, connectivity, digital literacy and capacity building remain critical issues. The first of its kind study done by Dr. Subi Chaturvedi during her PhD. At IITD is significant for political parties and the government as they go into election mode.

The technology model proposed examining the motivation of influencers online will enable better mapping and structured channels of engagement for focused and precise delivery of key messages. Lead to better Campaign management as well. Where over 180 constituencies are expected to be impacted directly with social media, this can be a game changer for general elections 2019. Twitter and social media have emerged as essential tools of the cyber arsenal for most parties and give an instant connect and real-time feedback.

There are lessons in the study for the discipline of management, as well as information and communication flows, as traditional institutions of socialisation get subverted and the top down model gets increasing replaced with many to many forms of communication, which are loosely structured, decentralising power and democratising the public sphere.

For brands and the corporate world these insights mapping the online time spent, the social media preference, the detailed analysis of Twitter adoption in India for breaking news will be invaluable for brand building, management and recall. Complex issues of internet Governance and facilitative policies for citizen empowerment are also explored.

What ultimately makes or breaks news, how agendas are set, framing, priming and agenda setting takes place and ultimately how social media, in particular Twitter is being used for breaking and making news.

These mediums also allow new heroes to be discovered and amplifies multiplicity of views and opinions, plurality of voices and can help create the next generation of political whiz kids breaking barriers and effectively challenging dynastic legacies. The art and craft of political communication due to rock bottom data prices and new and emerging tools of communication can now be honed to a science with the intersection of liberal arts, interdisciplinary research such as this, and big data analytics, classifying both consumer and citizen preferences and causes to their last mile. Multiplying tremendously the chances of conversion of both consumers and citizens into products and votes.

The study is a reservoir for further research and holds tremendous scope for scalability and further exploration by technology researchers as well as Humanities and political science scholars. Mr. Birla Birla also alluded to both technology and disruption as the key for the new revolution. Key Findings

A positive correlation is found between perceived usefulness/ease of use of social networking sites and journalists' attitude to following political news, between attitude to follow political news and journalists' behavioural intention towards accepting political news online, between the attitude to follow social networking websites and journalists' actual use of the site towards accepting political news online; and between intention to follow social networking websites and journalists' actual use of political news. The correlation between consonance of external factors of social networking websites with the adopter's values and journalists' attitude to follow political news was not found. The dependency and usefulness of Twitter highlights the importance and potential of social networking sites in agenda setting and news gathering. This research paves the way for, and warrants further research into the importance of other social networking sites in accessing and distributing news. About the Technology Social Scientist: Dr. Subi Chaturvedi (Phd. IIT-D)

Dr. Subi Chaturvedi is a former member of the United Nations Internet Governance Forum MAG in which capacity she advised the UN Secretary General on global Internet Governance policy matters. She is currently the Head and Sr. Director of Public Affairs, COAI. A widely published, public policy professional and noted columnist, activist academician and scholar, she writes regularly on Cybersecurity & emerging issues, Digital Diplomacy, Internet, Governance, Youth, Media, Technology, Policy, Political Communication, and Digital Economy and holds a PhD from IIT- Delhi.

Unnat Bharat Abhiyan can help transform rural India

http://www.dnaindia.com/analysis/column-unnat-bharat-abhiyan-can-help-transform-rural-india-2557899

On August 22, 2014, Prime Minister Modi urged the directors and chairpersons of IITs to develop appropriate technologies to fast-track their progress. On November 11, 2014, the Ministry of Human Resource Development (MHRD) launched Unnat Bharat Abhiyan (UBA) with a noble aim of connecting institutions of higher education including Indian Institutes of Technology (IITs), National Institutes of Technology (NITs) and Indian Institutes of Science Education & Research (IISERs) to support local communities to address their challenges through customised technology development, diffusion, and social interventions.

UBA is not just a government scheme, it’s a revolutionary mechanism to transform rural India through capability and capacity enhancement. Some of the above-mentioned institutions pioneered advancement of technology and product developments for the corporate world, which immensely benefited society at large. However, the local communities surrounding these institutions had limited access to such technology, innovations, and knowledge transfer. Most of such institutions have produced world-class technocrats, doctors, engineers, and scientists — serving many multinational companies in their respective domain. Unfortunately, villages/communities hardly a touching-distance from such institutions still struggle to find viable solutions to a host of issues including healthcare, sanitation, drinking water, energy, education, irrigation, agriculture, housing, and waste management.

One may argue that such deficiencies need to be addressed by the elected bodies or government. Generally a massive plan outlay to the tune of Rs 9,000 crore per annum by the Department of Rural Development (DoRD), ground-level situations demand improved performance delivery; therefore a holistic involvement of all stakeholders is inevitable. Conventionally, the orientation of people is to leave all developmental activities to the government; thereby scope for safe escape is high. Time has come to challenge the existing notion of "leave to the government or let the government do". A fundamental change in mindset from 'allegation' to "accountability" leading to collaboration and co-creation of value must be built into the system. Perhaps, 'New India' — where prosperity, equity, sense of ownership and belongingness must be central to the development story. New India needs 'out-of-box thinking' collectively executed through shared responsibility.

MHRD's initiative for an inclusive growth of local community through participation of national level institutions is a path-breaking step to make such institutions an architect of rural transformation. I believe all institutions under UBA have necessary wherewithal to help local communities convert challenges into opportunities.

UBA has been launched with manifold objectives which include: "(i) building institutional capacity in Institutes of higher education in research & training relevant to the needs of rural India, and (ii) provide rural India with professional resource support from institutes of higher education, especially those which have acquired academic excellence in Science, Engineering & Technology and Management."

Technical institutions are invited to work in partnership with the DoRD to enhance efficacy of government investments in various sectors, especially in: "water conservation through watershed approaches, use of new technology and local materials and designs in rural housing programmes, the Pradhan Mantri Awas Yojana — gramin, solid and liquid waste management, and Sansad Adarsh Gram Yojana".

Under UBA, leading institutions like IITs and IIMs have taken up the responsibility of developing villages to achieve a 'developed India'. In the first round of UBA, coordinating institutions would adopt villages from 92 districts for developmental activities. These institutions have varied expertise, which could be utilised for holistic development of villages with emphasis on: (i) augmenting basic infrastructure, (ii) skill development, enhancing marketability of agro-products, (iii) strengthening primary healthcare through telemedicine, (iv) invigorating primary education, (v) improving energy accessibility, and (vi) improving rural income & livelihood generation.

During our UBA team's recent visit to a couple of villages in Amethi district, it was observed that despite high-level of government support to attract children to school; primary education remains a big concern. I was surprised to find an upper primary school in a village operating without electricity, while the lower primary school in the same premises has electricity connection. There is a wider gap between student enrolment and actual attendance.

Changing market dynamics demand primary schools must provide exposure to students in science, arts, sports, culture, and history. In this connection, the higher education institutions are willing to act as catalysts in the transformation process.

Under UBA, the emerging symbiotic relationship between academic institutions and government will weed out several challenges of the local community.

IIT-Kharagpur, NDLI to collaborate with international libraries

http://indianexpress.com/article/education/iit-kharagpur-ndli-to-collaborate-with-international-libraries-4924556/

UNESCO has also promised to promote the digital libraries and resource-sharing activities of SAARC countries, an IIT-KGP release said

In association with IIT-Kharagpur, the National Digital Library of India (NDLI) is planning to go global through collaborations with top digital libraries of the world. NDLI made this announcement last week at an international workshop, hosted by the UNESCO and the engineering institute in Delhi.

UNESCO has also promised to promote the digital libraries and resource-sharing activities of SAARC countries,
an IIT-Kharagpur release said. “While procuring international content is one aspect, being inclusive and open is also important. The information should be made available in all forms, be it data, technology or content,” said P P Das, in-charge of NDLI, in a press statement.

For the past few months, NDLI has been collaborating with Europeana Foundation which looks for developing a digital cultural heritage platform for Europe. Tainacan Project (Brazil), National Library of The Netherlands, National Library of South Africa and National Library of Nepal are some of the digital libraries that show interest to tie-up with NDI.

About 200 domain experts from India and abroad, including representatives from Microsoft Research, Google and Taylor & Francis, participated in the international workshop. The workshop deliberated on the state-of-the-art technology, practices and policies accepted internationally for digital library design.

The NDLI project, funded by the Ministry of Human Resources Development, was kick-started by IIT-KGP with the aim to create a national online educational asset for students interested in research and innovation. The national library has become a leading digital repository of the country with approximately 1.26 crore content resources – thus bringing a significant change in the domain of online content search for both academics and general readership.

The portal *(http://ndl.iitkgp.ac.in/)* went live about a year back and currently hosts more than 12 million contents in over 100 languages, sourced from about 150 institutes or publishers.

IIT-K researchers design a phone app for studying cancer

https://www.biospectrumindia.com/news/58/9770/iit-k-researchers-design-a-phone-app-for-studying-cancer.html

The new App takes pictures and counts the differently stained cells and gives the proliferation index in less than a minute.

A team of researchers at the Indian Institute of Technology (IIT) Kharagpur have developed a new smartphone App, SmartIHC-Analyser for helping in faster and more accurate evaluation of cancer after treatment.

The App analyses the expression of a protein marker called Ki-67 for determining an increase in the number of cancer cells. The App, now available for Android phones, analyses microscopic images of stained cancer tissue and in less than a minute tells if there is progression or regression of cancer cells post treatment.

The smart phone is fitted to the eye-piece of the microscope using a specially designed 3D-printed holder to take microscopic images of the cancer cells. To analyse proliferation, the colour variations in the stained cancer cells are studied. Cells positive for the protein marker will appear brown whereas the negative ones will appear blue. The new App takes pictures and counts the differently stained cells and gives the proliferation index in less than a minute.

The researchers analysed 30 cases of Ki-67-stained breast cancer tissues collected from Tata Medical Center, Kolkata and compared the results from the App with manual counting. Based on this comparison with the manual method, the App had nearly 97 per cent accuracy. Tata Medical Center has been collaborating on this study with IIT-K.

The researchers believe that health workers at public health centres can be trained to use the App thus enabling faster results.

November 5

India is moving towards research-based learning, says President Kovind at IIT Delhi

http://www.hindustantimes.com/delhi-news/india-is-moving-towards-research-based-learning-says-president-kovind-at-iit-delhi/story-UHICYwSVhmWAyklwjzVqKI.html

Ram Nath Kovind, the chief guest at IIT Delhi's 48th convocation, asked IIT to adopt and partner with a school for underprivileged children to help build their capacity

President Ram Nath Kovind address the 48th Convocation of Indian Institute of Technology in New Delhi on Saturday.

The Indian Institute of Technology Delhi held its 48th annual convocation on Saturday where a total of 1,941 students were awarded degrees, including 632 B.Tech degrees.

V Ramgopal Rao, director of IIT Delhi, said that 306 students were also awarded their Ph.D degrees — the highest number of doctoral degrees awarded at the institute so far. He cited the addition of new departments, increase in research and development funding and improved infrastructure as reasons for the increase.

In his convocation address, President Ram Nath Kovind, who was also the chief guest, asked the IIT Delhi community to adopt and partner with a school for underprivileged children to help build their capacity.

“I would urge the IIT Delhi authorities and community to adopt and partner a school for underprivileged children and see how they can contribute to its development and to the capacity building of its pupils,” the President said.

He also remarked on how there were now more postgraduate students than undergraduates at IIT Delhi, which means that the country is moving “towards research-based learning and churning out products and technologies for nation-building.”

The event was divided into three phases. Each phase spanned approximately 7.5 hours as per the schedule and began and ended with either the national anthem or the national song.

The registrar of the institution, Sandeep Chatterjee, said that the singing of the national anthem and national song, or the playing of sanskrit shlokas as guests, office bearers and faculty entered the grounds was an IIT tradition.

November 4

President Ram Nath Kovind addresses 48th convocation of IIT Delhi

http://www.ddinews.gov.in/national/president-ram-nath-kovind-addresses-48th-convocation-iit-delhi

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President Ram Nath Kovind today said that institutions like IIT Delhi are not just centres of education but are also the hub of communities.

Addressing the 48th Convocation of IIT Delhi, President Kovind urged IIT Delhi authorities to adopt and partner schools for underprivileged children and see how they can contribute to its development and to the capacity building of people.

Department of Design to be established at IIT Delhi

http://indiatoday.intoday.in/education/story/iit-delhi-department-of-design/1/1081470.html

On Tuesday, IIT Delhi announced the decision to set up a Department of Design to churn out designers who would be able to fuse new technologies.

On Tuesday, the Indian Institute of Technology-Delhi (IIT-D) announced the decision to set up a Department of Design to churn out designers who would be able to fuse new technologies with aesthetics for useful maneuvering in the final product. The approval for the same was given by Board of Governors of IIT on August 4.

Importance of design

The institute's Director V Ramgopal Rao told reporters, "Design is very important in using the final product. If I am making a tool, let's say a bomb detection device, I must keep in mind where the mechanism will be hidden, where the buttons would be, how would one hold it."

School of Interdisciplinary Research

Consent was also given by the board for a School of Interdisciplinary Research (SIRe) in the same meeting. Under this, students will be enrolled in PhD programmes to work on research ideas proposed by faculty members from different streams. The announcements were made two days ahead of the institute's convocation which will be held on Saturday and will be addressed by President Ram Nath Kovind.

Ramgopal Rao emphasised that the designs would not be an abstract exercise but be instrumental in making the end product un-clumsy.

The Department of Design, which will offer Bachelors, Masters and PhDs, is scheduled to start its operation in 2018-2019, along with the SIRe.

Professor-Assisted Learning (PAL) programme

Rao said the institute was also helping Joint Entrance Exam (JEE) aspirants through tutorial videos uploaded on the Swayam Prabha channels of the central government, under the newly-launched Professor-Assisted Learning (PAL) programme.

"Many aspirants, especially girls, are not allowed to go to Kota (Rajasthan) or such places for coaching by their parents. So, we have initiated this programme so that aspirants do not have to go to expensive classes at remote places," he said. The response to the tutorial videos had been very good, Rao said, adding that they would soon be roping in IIT students as well to include a question-answer element in the videos, as desired by many beneficiaries.

IIT Roorkee creates ‘low-cost’ fuel from algae

https://timesofindia.indiatimes.com/city/bareilly/iit-roorkee-creates-low-cost-fuel-from-algae/articleshow/61497635.cms

Roorkee: Researchers at the Indian Institute of Technology (IIT) Roorkee have come up with a new method for production of biodiesel from microalgae (‘kai’ in Hindi), which they claim is low-cost and more effective.

Elaborating on the research, professor BR Gurjar, head of centre for transportation systems of the institute said, “Microalgae are considered to be one of the superior resources for production of biodiesel due to the species’ ability to produce higher biomass and accumulate more lipids, which are the target material for biodiesel production. To increase the rate of production and to make it cost-

effective, we used heterotrophic cultivation of microalgae using low-cost organic carbon-based feedstock such as agro waste, molasses, municipal and industrial wastes. This resulted in an automotive quality in biodiesel production."

The cost of feedstock and expense of operation are two crucial cost components in biodiesel production. The cost of feedstock alone accounts for about 60–70% of the total cost while the cost of the substrate is also a huge factor. The method employed by IIT Roorkee considerably reduces the cost of the substrate.

IIT Roorkee researchers used the algal-based crude glycerol in the production, which is a low-cost organic carbon source and the main byproduct of the biodiesel production process. Crude glycerol works as a media feedstock for cultivation of microalgae, thereby reducing the cost of the substrate to a negligible point.

Research showed that the use of crude glycerol enhanced the accumulation of the total lipid in the algal cells. Various analyses after the production of the fuel proved it was better in terms of quality and quantity. The fuel was also comparable to the existing vehicular fuel standards.

"The method used by the team is beneficial to the environment as there is no biodiversity loss attached to it. Moreover, it minimizes waste production by using materials like agro-waste and is able to produce an enhanced quantity and quality of biodiesel," said Richa Katiyar, an associate in the research project.

Medical informatics still at a nascent stage in India: Expert

http://www.tribuneindia.com/news/ludhiana/medical-informatics-still-at-a-nascent-stage-in-india-expert/492161.html

Says amalgamation of engineering, medical faculty must to check spread of diseases

Director, NIT Jalandhar, Dr Lalit Awasthi, speaks during the programme organised at Guru Nanak Dev Engineering College.

Around 60 participants from Punjab and Haryana participated in the 15-day faculty development programme on bio-medical instrumentation, bio-medical informatics and health informatics drew to

a close at the Guru Nanak Dev Engineering College today. The programme was sponsored by the All-India Council of Technical Education (AICTE).

Expert sessions were held to discuss the coming together of engineering and medical field to create new avenues for advancements of imaging, analysis and thus expedite and improve prognosis and treatment.

Several experts including Dr Amit Mehandiratta from IIT Delhi, Dr Sukhwinder Singh from University Institute of Engineering and Technology, Chandigarh, and Dr Vipul Sharma from PTU Bathinda shared their views in the fields of bio-medical instrumentation, bio-medical informatics and health informatics.

Lalit Awasthi, Director NIT Jalandhar, was the chief guest.

Experts said it was extremely important to amalgamate engineering faculty with medical for the advancement in finding solutions and treatment for complex medical problems.

As part of the ongoing projects, engineers trained in the faculty development programme would collect data and analyse CT Scan, MRI and medical imaging among other things. The experts said with advanced data imaging, it would be possible to create biomedical implant, deformity, construct a limb, that can be created according to specific sizes.

Prof Arvind Dhingra from the college said advanced medical imaging would help analyse images so that medical experts can take pre-emptive steps to prevent the spread of diseases. He said medical informatics was being done in developed countries, but was at a nascent stage in India.