

Newspaper Clips
November 11-17, 2017

November 17

Mission Innovation Smart Grids Workshop

http://www.business-standard.com/article/government-press-release/mission-innovation-smart-grids-workshop-117111601308_1.html

In order to combat the growth of green house gas emission, the world is fast moving to the increased use of renewable energy sources. However, there is increased concern that high penetration of renewable energy can cause disruptions in the existing power network due to their intermittent nature. Technology solutions are, therefore, needed to address the challenges related to development design, integration, operation and management of grids which allows use of upto 100 percent renewable energy.

Mission Innovation challenge on Smart Grids is collectively working to enable future smart grids powered by renewables. 20 participating countries with India, Italy and China as Co-lead are working together to realise this aspiration. An international workshop is being organised during 16-19th November, 2017 at New Delhi to define research priorities and develop action plan for time bound action for realisation of these objectives.

The Technical meeting of the event was inaugurated by Secretary-DST on 16th November, 2017 in presence of several dignitaries including Directors of IIT-Delhi and IIT-Roorkee. The participating countries Australia, China, Denmark, European Commission, Finland, India, Italy, Saudi Arabia, Sweden, United States of America, United Kingdom will present the status on smart grids. With this background, the participants will deliberate on research needs and potential for collaboration in the domains of regional grids, distribution grids, micro-grids and cross innovations. The modalities for greater private sector participation and enabling mechanisms will also be discussed besides incentivising the performing research activities. The participating countries will resolve on future action plan and finalise technical contours of the Mission Innovation. A panel discussion with industrial experts is also planned.

The Public Workshop of the event will be held on 18th November, 2017 where the outcomes of brainstorming session would be disseminated to the larger stake holder forum. The Minister of State for Science, Technology and Earth Sciences, Shri Y.S.Chowdary, and Minister for Power, Shri R.K.Singh will inaugurate the exhibition showcasing achievements of industrial as well as R&D communities in the area. Both the Ministers will share their perspectives on the topic and will be supplemented by representatives from Co-lead countries as well as Directors of IITs (Delhi, Kanpur and Roorkee).

A Report on "Mission Innovation Smart Grids" activities, strategies and vision will also be released. India's collaborative programmes with United States and United Kingdom on the theme will also be formally launched. The Forum will adopt New Delhi Declaration and as an initial step in this direction, collaboration agreement between RSC Italy and IIT-Roorkee, India will be signed.

Neeri, IIT-M begin study of air in 10 cities of Maharashtra

<https://timesofindia.indiatimes.com/city/nagpur/neeri-iit-m-begin-study-of-air-in-10-cities-of-maharashtra/articleshow/61678976.cms>

Nagpur: A first-of-its kind extensive study on air pollution has kick-started in ten cities of the state. Unlike usual air quality monitoring, the study will focus on different sources and quantification of air pollution.

As reported by TOI earlier, the year-long study is jointly undertaken by the National Environmental Engineering Research Institute (Neeri) and Indian Institute of Technology (IIT) in Powai (Mumbai) with an aim of developing mitigation measures.

The Maharashtra Pollution Control Board (MPCB) is funding and facilitating the study for which Rs5.75 have been allocated. It is being conducted in Amravati, Aurangabad, Nashik, Nagpur, Chandrapur, Pune, Solapur, Kolhapur, Mumbai and Navi Mumbai.

Neeri director Rakesh Kumar said that monitoring has started in all the cities. "Though the board already has air quality monitoring stations, additional sampling is being done at multiple locations," he added.

Padma Rao, senior principal scientist and head of Air Pollution Control Division at Neeri, informed that preliminary findings of the study are under analysis. "While IIT-Powai is looking after ambient air quality monitoring, the filter papers are being brought to Nagpur for analysis," she said.

The first phase of the study is over and presently monitoring is being carried out for the winter season when air pollution is at its peak.

Apart from testing quality of air and "general compliance", the study focuses on sources of pollution in a particular air parcel. Samples are being collected from 10-15 locations in every city.

"This is a source proportionate study in which hundreds of samples will be analysed by fingerprinting all sources contributing to air pollution," said Rao.

In Nagpur, Neeri will also undertake "emission inventory" which is accounting the amount of pollutants discharged into the atmosphere. "We are collecting comprehensive data regarding number of industries, vehicles, biomass burning, thermal power plants, restaurants, crematoriums and other sources of pollution in every city. After analysing the collected samples, we will try to derive the quantity of air pollution occurring every year in a city," Rao added.

After analysing the data, the agencies will suggest solutions for curbing pollution at the source. "We will develop and implement short and long term action plan for improving air quality of the ten cities," said Kumar.

लखनऊ में जैसे ही आएंगे बादल, IIT कानपुर कराएगा कृत्रिम बारिश

<http://www.livehindustan.com/uttar-pradesh/story-iit-kanpur-will-make-artificial-rain-as-soon-as-clouds-come-in-lucknow-1648840.html>



लखनऊ की आबोहवा में बढ़ रहे प्रदूषण को कम करने के लिए आईआईटी-कानपुर कृत्रिम बारिश कराएगा। लखनऊ में बढ़े प्रदूषण स्तर से चिंतित मुख्यमंत्री योगी आदित्यनाथ का पत्र मिलते ही आईआईटी ने तैयारी शुरू कर दी है। आईआईटी कानपुर के कार्यवाहक निदेशक प्रो. मणींद्र अग्रवाल का कहना है कि आईआईटी कानपुर कृत्रिम बारिश कराने में सक्षम है। अगले दो से तीन दिन में बादल आते ही लखनऊ में कृत्रिम बारिश कराई जाएगी। इससे हवा में फैले जहरीले कण मिट्टी में आ जाएंगे।

आईआईटी कानपुर के एरोस्पेस इंजीनियरिंग विभाग ने करीब एक साल पहले फ्लाइट लैब में कृत्रिम बारिश कराने को लेकर एक रिसर्च शुरू की थी। रिसर्च में बायोसाइंस एंड बायोटेक्नोलॉजी इंजीनियरिंग और इंडस्ट्रियल मैनेजमेंट एंड इंजीनियरिंग विभाग का भी सहयोग लिया गया था। तीनों विभागों की मेहनत का परिणाम सकारात्मक रहा। आईआईटी ने कृत्रिम बारिश कराने में सफलता प्राप्त कर ली है। लखनऊ में बढ़े प्रदूषण को कम करने के लिए आईआईटी ने यूपी सरकार को कृत्रिम बारिश कराने के लिए पत्र भेजा था। मुख्यमंत्री योगी आदित्यनाथ ने आईआईटी के प्रस्ताव पर सहमति जताई थी। मुख्यमंत्री ने आईआईटी के निदेशक को पत्र लिख कर जल्द से जल्द कृत्रिम बारिश कराने का आग्रह किया है। अगले दो से तीन दिन में जैसे ही लखनऊ या इसके आसपास क्षेत्र में बादल दिखेंगे, आईआईटी-कानपुर कृत्रिम बारिश कराएगा।

आईआईटी ने सामान की सूची भेजी

कृत्रिम बारिश कराने के लिए कुछ विभागों की अनुमति लेनी होगी। आईआईटी ने यूपी सरकार को जरूरी व्यवस्थाएं करने के लिए एक सूची भेज दी है, ताकि बादल आए तो कृत्रिम बारिश कराई जा सके।

ऐसे होती है कृत्तम बारिश

बादलों में पानी होता है। कई बार बारिश होने की अनुकूल स्थिति नहीं होती है। इससे बादल बिना बारिश निकल जाते हैं। बादलों की भौतिक अवस्था में आर्टिफिशियल तरीके से बदलाव लाया जाता है। यह बारिश के अनुकूल बनाता है। इसमें कई तरह के रासायनिक पदार्थों का प्रयोग किया जाता है। कृत्रिम रूप से ऐसी स्थिति बनाई जाती है कि बादल से बारिश शुरू हो जाती है।

November 16

Employability: IIT-Delhi among top 150 varsities

http://www.business-standard.com/article/economy-policy/employability-iit-delhi-among-top-150-varsities-117111600116_1.html

IIT-Bombay also makes a comeback, IISc improves ranking

Times Higher Education ranked IIT-B 148th in its Global University Employability Ranking 2017

The premier Indian Institute of Technology-Delhi (IIT-D) has made a debut to the list of top 150 universities to the basis of recruitment by top companies.

Times Higher Education ranked IIT-D 145th, ahead of the Indian Institute of Technology-Bombay (IIT-B) at 148th position in its Global University Employability Ranking 2017. Though IIT-B has featured on the list of top 150 universities in the past, its ranking is on the decline.

Times hadn't ranked IIT-B last year. The same agency has ranked this premier institution at the 90th position in 2015.

The Times rankings, which were released on Thursday, caught attention as both IIT-D and IIT-B had recently slipped on the graduate employability rankings conducted by a similar agency the QS Quacquarelli Symonds. The QS list of the world's 500 leading universities, announced in September, had kept IIT-D and IIT-B in the category of 191-200 universities. Last year, IIT-D and IIT-B were in the category of top 101-150.

The contradiction in rankings by these two agencies was evident in the case of another premier institute, too — the Indian Institute of Science (IISc), Bangalore. The Times ranked IISc 29th this year, showing an improvement from the previous year's 38. IISc was ranked 20th by Times in 2015. QS had kept IISc in the category of 301-500 top universities this year.

Both Times and QS don't provide specific reasons behind changes in rankings of institutes.

Simon Baker, data editor, Times Higher Education, said in a statement that Asian universities, mainly those in China, Taiwan and South Korea, have made good progress this year. "This extends a trend that has been building for several years, with more universities from the region becoming household names in the minds of global graduate recruiters," Baker added.

Why hiring and retaining foreign faculty is the biggest hurdle ahead of Institutions of Eminence

<https://www.dailyo.in/variety/institutions-of-eminence-foreign-faculty-iit-delhi-ugc-higher-education/story/1/20587.html>

The deeply-entrenched culture of obstructionism directed at research-oriented faculty may prove difficult to deal with.

Many of India's leading universities have since September been preparing their applications in a bid to get tagged as Institutions of Eminence (IoE). Some enthusiastic university leaders have already announced to the press that they will be seeking the IoE status.

It is expected that by March-April 2018, 10 public and 10 private higher education institutions will get the IoE tag.

The IoE group of institutions will be completely free from UGC regulations. They will enjoy unprecedented administrative and financial autonomy in a wide range of matters, including faculty and staff salaries, student fees, courses on offer and content. For instance, the institutions in the IoE group will be free to seek foreign faculty with higher salaries if they so wish. The government is committed to provide up to Rs 1,000 crore to each public institution while private institutions will have access to public funds for research.

The foreign faculty issue

The issue of hiring foreign faculty has cropped up at different times over the last few years but has failed to reach any conclusion. There are two main advantages of the IoE group of institutions hiring foreign faculty.

First, there is some evidence that foreign-trained faculty, especially those with PhDs from some of the best universities in the world, are more research-oriented and research-productive than those trained at even the best Indian universities. This is a broad generalisation, of course, but holds true mostly. Therefore, in order to compete effectively in the world university rankings, the IoE group is well-advised to hire PhDs from the best universities in the world or those most likely to be productive in terms of research output and quality of research.



Second, hiring foreign faculty will earn points in world university rankings for internationalisation of education. Therefore, just hiring X number of foreign professors – not those with foreign PhDs alone but those with foreign passports, including Overseas Citizenship of India (OCI) – will benefit the university in terms of rankings.

The UGC's recommendation is that the IoE group hire foreign professors to a maximum of 25 per cent of faculty strength. However, the definition of foreign faculty is broad and includes even those with Indian passports if they have earned their PhDs at any institution which ranks among the top 500 in the world. While hiring Indian passport holders with PhDs from abroad will bring research benefits, their presence will not be beneficial in terms of internationalisation for which foreign passports (and not foreign PhDs) will count.

Will they come and stay?

A recent survey on select Indian Institutes of Technology (IITs), though hardly comprehensive or conclusive, found that some IITs – notably IIT-Bombay and IIT-Delhi - have done much better than others in adding foreign-trained PhDs to their faculty roster.

Some other institutions such as Indraprastha Institute of Information Technology, Delhi and Ashoka University are also success stories in terms of recruiting foreign PhD holders as well as foreign passport holders. So, for a variety of reasons, some institutions have done better than others in hiring foreign PhDs.

But there is another aspect about foreign faculty that merits attention – retaining the hired faculty. Many universities have not been doing well on that front. Recently, there was a case at Nalanda University where an American faculty member's contract was not renewed because she was deemed unsuitable to teach a course on an Indian theme. But there are other cases too, where foreign faculties have left due to the extremely difficult conditions created by their colleagues and the university administration.

Those who come must be prepared for the worst

Hiring foreign-trained faculty will benefit the institutions which hire them. The IoE group must especially seek foreign faculty in some combination of foreign-trained Indians and those with foreign passports, including OCIs. However, those with foreign PhDs often find it difficult to work at Indian universities and these difficulties will exist even at the IoE group. Higher salaries may help but location often matters for foreigners and those returning from abroad. City-based institutions have an advantage in this regard but imagine the plight of a foreigner landing in Delhi for a job interview under current conditions. At the same time, of course, there are advantages of working in India that do not exist in Western universities.

But the biggest obstacle to hiring and retaining faculty will be the work culture at India's universities and professional relationships with colleagues and administrators. It is difficult to imagine, for example, how the deeply-entrenched culture of obstructionism directed at research-oriented faculty, especially those with a PhD from abroad, will go away with the IoE tag. Or imagine the difficulties that an OCI will face if she is hired at a higher salary than her colleagues because of her research record. Some foreign faculty members may adapt to working under "Indian conditions" but most will not.

If the current record of India's universities is any indication, hiring and retaining foreign faculty will be among the biggest challenges for the IoE group of institutions.

IIT Roorkee Researchers Make Breakthrough in Memory Device Technology

<https://www.ndtv.com/india-news/iit-roorkee-researchers-make-breakthrough-in-memory-device-technology-1775555>

A team of researchers from the Department of Physics and Centre for Nanotechnology has developed a high-density, energy-efficient and four-logic state memory device named Magnetoelectric Random Access Memory (MeRAM).

DEHRADUN: Researchers at IIT Roorkee today claimed to have made a breakthrough in memory device technology which, they said, usher in a new technological revolution.

A team of researchers from the Department of Physics and Centre for Nanotechnology has developed a high-density, energy-efficient and four-logic state memory device named Magnetoelectric Random Access Memory (MeRAM).

The device could provide a massive boost to overall computing processes and memory-intensive tasks like video and multimedia signal processing, pattern recognition, virtual reality, artificial intelligence and machine learning.

"MeRAM has immense potential to be used in future memory chips for almost all electronic applications, including smart phones, tablets, computers, microprocessors, and for large data storage," Davinder Kaur Walia, a professor at the Department of Physics and Centre for Nanotechnology, said.

The device was constructed in the Functional Nanomaterials Research Laboratory using magnetron sputtering technique, she said.

MeRAM's key advantage over existing technologies is that it combines extraordinary low energy with very high density, high-speed reading and writing times, and non-volatility--the ability to retain data when no power is applied, Ms Walia said.

"The world is rapidly moving towards faster, smaller and quantum technologies which has created an ever-increasing demand for small and more efficient devices and technology. Our focus was to achieve a four-logic state as we knew that then we will be able to create a device which could probably usher in a new technological revolution," she said.

"To achieve this, we used a new material called Ferromagnetic Shape Memory Alloys (FSMA) and the concept of composite barrier were chosen which helps us in achieving the goal of distinguishable memory logic states. The current ultimate memory cell has shown a tremendous improvement of nearly 140 per cent in the memory functions," she added.

IIT मद्रास ने EMBA 2018 के लिए शुरू किया रजिस्ट्रेशन , ऐसे करें आवेदन

<http://www.amarujala.com/education/career-plus/iit-madras-invites-for-executive-mba-programme-apply-before-november-30>

IIT मद्रास ने EMBA 2018 के अकादमिक सेशन के लिए आवेदन आमंत्रित किए हैं। एडमिशन के लिए जो भी उम्मीदवार आवेदन करना चाहते हैं, वे आधिकारिक वेबसाइट iitm.ac.in पर जाकर आवेदन कर सकते हैं।

EMBA दो साल का डिग्री प्रोग्राम है जिसका लक्ष्य एक कार्यात्मक और एकीकृत परिप्रेक्ष्य में एक आधुनिक व्यापार संगठन का नेतृत्व करने के लिए समकालीन प्रबंधन का ज्ञान विकसित करना है। इस कोर्स को 8 भागों में विभाजित किया जाएगा जिसमें कुल 30 पाठ्यक्रम शामिल होंगे। एक सेमेस्टर की फीस 3 लाख होगी वहीं पूरे कोर्स की फीस 12 लाख रखी गई है। आवेदन के इच्छुक उम्मीदवार को 30 नवंबर 2017 से पहले आवेदन करना होगा। आवेदन फीस 1000 रुपये रखी गई है।

IIT मद्रास ईएमबीए प्रोग्राम 2018 के लिए ऐसे करें आवेदन

- IIT मद्रास की आधिकारिक वेबसाइट पर जाएं।
- "Admission Open for Executive MBA (EMBA) Program" लिंक पर क्लिक करें।
- एडमिशन पोर्टल लिंक पर क्लिक करें।
- दिए गए निर्देशों को पढ़ें और "जारी रखें" पर क्लिक करें।
- लॉगिन कर रजिस्ट्रेशन करें।
- अपना विवरण भरें और आवेदन जमा करें।
- आवेदन का प्रिंट निकाल लें।

November 15

Centre takes lead in ensuring crackdown against cyber crooks

<https://timesofindia.indiatimes.com/india/centre-takes-lead-in-ensuring-crackdown-against-cyber-crooks/articleshow/61643405.cms>

NEW DELHI: As Jamtara in Jharkhand and Rohtak in Haryana emerge as hubs of cyber and phone frauds, with the countrywide case averaging at 10,000-12,000 a month, the Union home ministry has

taken the lead in ensuring crackdown by state police against cyber crooks. If latest reports are to be believed, the frequent raids by state police over the past few months have seen many phone scammers land in their net, even as others were forced to shift to neighbouring districts.

"The Jharkhand police, on being advised by the home ministry to rein in cyber criminals operating out of Jamtara, have not only identified them but also made a good number of arrests over the past couple of months. Many criminals are now operating out of neighbouring districts. A dedicated team of Jharkhand police is keeping an eye on phone fraudsters and taking action where needed. Similarly, with pockets of Bihar and Rohtak range also identified as phone fraud hubs, the concerned state police have been alerted and a crackdown initiated," an officer told TOI hours after Union home minister Rajnath Singh chaired a high-level meeting on phone and e-wallet frauds here on Monday. The meeting was attended by senior officials of the home ministry, ministry of electronics and information technology (MEITY), telecom ministry, banking sector, Intelligence Bureau, Delhi police and Jharkhand police.

The need to have a strategy to tackle phone frauds stems from home ministry's concern over the exponential increase in such crimes. Even though the individual amounts lost or swindled are small and many cases go unreported, the fact that these affect the common man including the poor, has made the ministry look for ways to track such fraud, fix accountability and devise a system that offers a secure payment gateway. This was the second meeting on phone and e-wallet frauds, the last one being in September that led RBI to issue a circular dated October 11 that, among other things, put a Rs 10,000 cap on a single e-wallet transaction.

Some security solutions discussed at Monday's meeting included making e-wallet companies maintain metadata comprising archival information on transactions, ensuring that they share data with a designated central agency, making SMS alerts mandatory for all transactions and ensuring that the e-wallet company maintains consumer data along with aadhaar seeding.

An important suggestion that came up was building an element of insurance into e-wallet, digital and phone banking transactions to cover e-payment frauds. The need to have a Banking Payments Settlement law to fix responsibility and a possible time-lag between payment and realisation was also discussed. An internet protocol upgrade to IP6 was suggested to ensure more secure e-payments. An inherent problem in RuPay cards was brought up, which was attributed to weak adherence to know-your-customer norms.

According to a home ministry source, IIT-Delhi has been roped in to prepare an algorithm to enable data analytics such as which kind of accounts are more vulnerable to phone and e-wallet frauds. "They have been asked to develop filters to identify and segregate account numbers and holders of accounts who have been victims of e-payments fraud," said the officer.

Expect light rain on Wednesday but pollution may shoot up again, say experts

<http://www.hindustantimes.com/delhi-news/expect-light-rain-on-wednesday-but-pollution-may-shoot-up-again-say-experts/story-tYmLaDlf7Tn8kAjL6vcVKN.html>

The high moisture content would trap the local pollutants hindering their dispersal process. This could help the pollution level to shoot up again from Thursday.



CPCB data states that pollution levels in Delhi had shot up after heavy rains during the monsoon months. But even then the air quality was never 'good' in June and fluctuated between moderate and poor categories.

Delhi is likely to receive a drizzle on Wednesday, which might help in bringing down the pollution level of the city by some extent temporarily.

Experts, however, fear that the air quality is likely to become fouler once the rain is over. But they were sure that the pollution was unlikely to hit the 'severe' zone again.

The rain will also ensure that moisture level in the city's air builds up again. The high moisture content would trap the local pollutants hindering their dispersal process. This could help the pollution level to shoot up again from Thursday.

The Indian Meteorological Department has forecasted that Delhi could once again witness some shallow fog and mist in the morning till Saturday. SAFAR, which is under the ministry of earth sciences, has also forecasted that levels of particulate matter could shoot up once the rain end.

"There can be a rise in pollution levels after the rain. This is because the moisture level will increase which will help trap pollutants. But this time we don't expect the pollution to touch severe levels," said D Saha head of the air quality laboratory of Central Pollution Control Board (CPCB).

Scientists said that fog and aerosol hazes likely amplify each other and form a vicious cycle.

"On one hand aerosol – a kind of pollutant – serves as 'seeds' that make it easier for fog to form, on the other hand the moisture droplets in the fog acts like small 'chemical factories' that help gaseous

pollutants to graduate into haze causing aerosols," said SN Tripathi, coordinator of the Centre for Environmental Science & Engineering at IIT Kanpur.

CPCB data states that pollution levels in Delhi had shot up after heavy rains during the monsoon months. But even then the air quality was never 'good' in June and fluctuated between moderate and poor categories.

Experts said that the rate of dispersal of pollutants depends much on the type of rain.

"Heavy rain with large and high velocity rain drops is able to clear pollutants more effectively than a drizzle with smaller water particles falling at a lower speed," said Dilip Ganguly, assistant professor at Centre for Atmospheric Sciences in IIT-Delhi.

Usually rains wash away the particulate matter. But there are some particulate matters, whose size varies between 0.1 micron and 1 micron. They are not cleaned and linger even after heavy rains. They are hydrophobic and tend to bounce away whenever a rain drop hits them.

This phenomenon, experts say, is known as Green Field Gap.

"Not all types of rain is equally effective. Longer durations of drizzle are more effective than short lived heavy showers," said Abhijit Chatterjee, assistant professor of environmental sciences section at Bose Institute in Kolkata.

Pollution a health issue, not just an environment problem

<http://indiatoday.intoday.in/story/pollution-a-health-issue-not-just-an-environment-problem/1/1089354.html>

New Delhi, Nov 14 (PTI) Pollution should be seen as a serious health issue, rather than just as an environmental problem, according to experts who today called for immediate action to reduce the impact of pollution on peoples well being.

In a briefing on the findings of the Lancet Commission on Pollution and Health held here today, researchers highlighted the huge economic burden and health costs that pollution poses for India as well as countries around the world.

"We tend to look at pollution as an environmental problem, rather than a health problem," said Karti Sandilya, one of the authors of the Lancet study.

The Commission had last month published a report which found that pollution caused over nine million deaths worldwide in 2015 - accounting for 16 per cent of the deaths worldwide.

The report found that India had the worlds highest number of deaths due to air, water and other forms of pollution in 2015.

Pollution killed as many as 2.5 million people in India, highlighting that pollution disproportionately affects the poor.

Jairam Ramesh, Member of Parliament and former Minister of Environment, Forests and Climate Change, noted that the series of international studies published in the last few years, only serves to reinforce the high impact of environmental pollution on mortality and morbidity in India.

"The country wakes up only if something happens in Delhi," said Ramesh, who was also one of the authors of the Lancet study.

He emphasised on the need to look beyond New Delhi and recognise that air pollution and particulate matter is only one aspect of the issue.

The report found that 1.8 million deaths were due to water pollution, 1.1 million deaths were attributed to soil pollution. As many as 2.9 million deaths occurred due to indoor air pollution.

The study aims to dispel the myth that pollution is an inevitable consequence of development, said Mukesh Khare, from Indian Institutes of Technology (IIT) Delhi.

"I dont think India needs to pollute its way to development," added Ramesh.

The researchers lauded the governments effort to boost the use of solar energy and curb the growth of coal-based power plants.

Khare noted that pollution-linked diseases caused global welfare losses of USD 4.6 trillion or 6 per cent of global GDP.

The study also noted that pollution causes productivity losses, and can reduce the GDP by upto 2 per cent.

"It may not sound like a lot, but for lower income countries like India, this represents a huge loss," said William Suk, from the US National Institute of Environmental Health Sciences.

While welcoming more such research on health impact of pollution, Ramesh said that there is an urgent need to spend equal amount of time on finding and implementing remediation techniques to tackle all forms of pollution.

"Unfortunately, not just the government but even the common people are living in denial," said Arvind Kumar, a doctor at the Ganga Ram Hospital in New Delhi.

"I have seen a change in the colour of lungs over the last 30 years - turning from pink to black," said Kumar.

Kumar said that lungs of non-smokers in New Delhi have begun to resemble the lungs of regular smokers, and it is high time that appropriate policy changes are implemented.

Samsung Innovation Awards 2017 Held at IIT-Kanpur to Recognize Young Innovators With Path-breaking Ideas

<http://indiaeducationdiary.in/samsung-innovation-awards-2017-held-iit-kanpur-recognize-young-innovators-path-breaking-ideas/>



Kanpur : Samsung India conducted the 7th edition of the annual Samsung Innovation Awards at the Indian Institute of Technology (IIT), Kanpur in association with Entrepreneurship Cell. Samsung Innovation Awards aim to recognize and reward innovations that have the potential to revolutionize everyday living and enable students to take their ideas to the next level.

The first prize went to the team that included Kshitij Jaggi, Kumar Shivang and Rishabh Sahu who worked on a peer to peer financial transaction app using Blockchain technology in a distributed environment. The vision of the team is to enable financial inclusion of chit fund subscribers with Circle, a mobile first solution for organisers to easily manage the members, bringing in transparency in the whole process and creating credit history for all Indians.

Insomniatec, comprising students Kaustubh Mundra and Sankalp Rastogi, won the second prize for proposing a project that uses an infra-red camera coupled with computer vision technology to detect drowsiness in a vehicle driver while in motion and provides in-time alerts.

One of the projects, Muskan Solid Waste, consisting Hari Shankar and co-founder Mewa Lal found a special mention at the awards. This is a start-up that converts organic waste into high yielding compost. The technique used reduces time for composting and produces more efficient manure compared to artificial fertilizers.

The awards were presented by Dr Aloknath De, Chief Technology Officer, Samsung R&D Institute, India – Bangalore (SRI-B). The winners were given cash prizes worth INR 2.5 lakh while the five finalists received merit recognition from Samsung.

Samsung Innovation Awards 2017 saw an overwhelming response, with eight teams getting an opportunity to present their ideas to the jury comprising Dr. Aloknath De from SRI-B and professors from IIT-Kanpur—Dr. Amitabha Bandyopadhyay from the Department of Biological Sciences & Bioengineering (BSBE), Prof. Sandeep Shukla from the Department of Computer Science and Engineering from IIT Kanpur.

Samsung R&D Institute – Bangalore will engage with the award winners to further develop their innovations.

“Through the platform of Samsung Innovation Awards, we want to encourage students to work on innovative ideas in evolving areas of artificial intelligence, computer vision and IOT. When we see diverse and quality projects in these emerging technology areas, we can sense the pulse of our youth. Novelty of ideas, comprehensiveness in execution and impact of solution are yardsticks in selecting the winners. Samsung has been supporting deep-tech innovation at large and this year’s event in IIT-Kanpur is one such initiative,” said Dr. Aloknath De, Chief Technology Officer, Samsung R&D Institute, India – Bangalore.

Cutting-edge innovations were showcased at the competition. The innovative product ideas and solutions presented this year ranged from a cloud-based healthcare data management system to an intelligence platform for law enforcement and defence agencies.

“Innovation and entrepreneurship ought to become an integral part of institutions of academic and higher technical learnings. We must quickly transform into an innovation driven society where young minds understand societal needs, carve out opportunities and take calculated risks to become job creators and leaders. We are happy that corporates such as Samsung are coming forward to help us create the desired ecosystem at IIT Kanpur,” said Mr. Sameer Khandekar, Associate Dean, Innovation and Incubation, IIT Kanpur.

The 2017 edition of the Samsung Innovation Awards was initiated at IIT-Kanpur campus six months ago through an open entry process, where students submitted their innovative ideas. The shortlisting process was led by professors from IIT-Kanpur and researchers from SRI-B, who also selected the eight finalists.

The final teams presented their ideas to the jury at the IIT-Kanpur campus. The winning project was selected based on the degree of innovation, feasibility, usability, relevance and overall impact on masses.

Conceptualised in 2011, the Samsung Innovation Awards seek to support and encourage young talent who have an innovative approach and look to improvise different systems and processes. Further, it aims to develop indigenous products and services for fulfilling mass needs thereby transforming lives and creating sustainable solutions for the benefit of the society at large.

Over the years, Samsung Innovation Awards have become one of the most eagerly awaited ideation contests at IIT’s due to enthusiastic participation from the student community. The first edition was conducted at IIT Delhi and since then Samsung Innovation Awards have been held at other major IITs. The last edition in 2016 was held at IIT Bombay and had witnessed great interest and enthusiasm from students. Samsung continues to provide the next generation of Indian innovators and entrepreneurs an avenue to showcase and advance their engineering skill sets.

IIT Roorkee Researchers Make Breakthrough in Memory Device Technology

<https://www.ndtv.com/india-news/iit-roorkee-researchers-make-breakthrough-in-memory-device-technology-1775555>

A team of researchers from the Department of Physics and Centre for Nanotechnology has developed a high-density, energy-efficient and four-logic state memory device named Magnetoelectric Random Access Memory (MeRAM).

DEHRADUN: Researchers at IIT Roorkee today claimed to have made a breakthrough in memory device technology which, they said, usher in a new technological revolution.

A team of researchers from the Department of Physics and Centre for Nanotechnology has developed a high-density, energy-efficient and four-logic state memory device named Magnetoelectric Random Access Memory (MeRAM).

The device could provide a massive boost to overall computing processes and memory-intensive tasks like video and multimedia signal processing, pattern recognition, virtual reality, artificial intelligence and machine learning.

"MeRAM has immense potential to be used in future memory chips for almost all electronic applications, including smart phones, tablets, computers, microprocessors, and for large data storage," Davinder Kaur Walia, a professor at the Department of Physics and Centre for Nanotechnology, said.

The device was constructed in the Functional Nanomaterials Research Laboratory using magnetron sputtering technique, she said.

MeRAM's key advantage over existing technologies is that it combines extraordinary low energy with very high density, high-speed reading and writing times, and non-volatility--the ability to retain data when no power is applied, Ms Walia said.

"The world is rapidly moving towards faster, smaller and quantum technologies which has created an ever-increasing demand for small and more efficient devices and technology. Our focus was to achieve a four-logic state as we knew that then we will be able to create a device which could probably usher in a new technological revolution," she said.

"To achieve this, we used a new material called Ferromagnetic Shape Memory Alloys (FSMA) and the concept of composite barrier were chosen which helps us in achieving the goal of distinguishable memory logic states. The current ultimate memory cell has shown a tremendous improvement of nearly 140 per cent in the memory functions," she added.

November 14

IIT Delhi signs MoU with Indian Oil Corporation Ltd

<https://www.biospectrumindia.com/news/68/9801/iit-delhi-signs-mou-with-indian-oil-corporation-ltd.html>

MoU aims to develop a long-term framework for research collaboration and advancement of technology



IIT Delhi has signed a memorandum of understanding (MoU) with the Indian Oil Corporation Ltd (R&D Centre).

MoU aims to develop a long-term framework for research collaboration and advancement of technology.

The main objective of the MoU will be for the two organizations to collaborate for promotion of education, research and innovation in the areas of mutual interest.

A highlight of this MoU is that IOCL will offer additional 25% higher fellowship amounts to the IOCL-IITD research scholars having CSIR-NET JRF or any other equivalent fellowships and full fellowships to exceptional GATE qualified students.

Big data analysis by IIT-Delhi to help identify frauds

<http://www.deccanherald.com/content/642643/big-data-analysis-iit-delhi.html>

In its fight against financial cyber-crimes, the government has now roped in IIT-Delhi to help authorities identify criminals using phone and other technology for fraud through big data analysis.

Other initiatives planned by the government also include providing additional information through text messages or email alerts to customers from banks or e-wallet companies. This customer alert mechanism would include names of beneficiaries of any financial transaction wherever necessary for better traceability and crosschecking on the part of the victim.

Union Home Minister Rajnath Singh on Monday reviewed the measures taken by the authorities to

tackle the financial sector frauds emanating from the usage of cards and e-wallets in particular.

Officials said IIT-Delhi would use big data analysis for identification of perpetrators of phone frauds in order to prevent duplication across e-wallets.

Another plan is to publish online statistics depicting specific incidents, frauds against e-wallet companies and banks along with details including investigation to enable customers to make an informed choice before subscribing to e-wallet services.

Legal aspects involved in making metadata archival possible by way of sharing of data among different government and private agencies, reduction of insurance cost and mandatory KYC for all the entities issuing Prepaid Payment Instruments (PPIs) are also contemplated. Disabling of default international transactions facility for credit and debit cards are also being discussed.

At the inter-ministerial review meeting, Singh took stock of the steps being taken to check financial cybercrime emanating from the usage of cards and e-wallets in particular and how to protect interests of the citizens. Singh had on September 28 constituted an Inter Ministerial Committee on Phone Frauds (IMCPF), which held its first meeting on October 24 when it discussed various nature of phone frauds and steps to be taken by the various stakeholders.

Stubble burning down by almost 45% in Punjab from last year

<http://www.moneycontrol.com/news/india/stubble-burning-down-by-almost-45-in-punjab-from-last-year-2436673.html>

Only 42,025 stubble burning cases were recorded till November 11 this year, compared to 76,045 cases in the same period last year.



Stubble burning in Punjab — considered to be the main culprit behind Delhi's worsening air quality — has fallen 44.73 percent from last year, the *Indian*

Only 42,025 stubble burning cases were recorded till November 11 this year, compared to 76,045 cases in the same period last year, the data collected by NASA's NPP_VIIRS satellite and available with the Punjab Pollution Control Board (PPCB) shows.

PPCB officials told *Express* that their target was to achieve a 50 percent decline in cases of burning stubble which remains on the field after the harvest of paddy crop in October. However, they fell short of meeting their target because Punjab chief minister Amrinder Singh had announced relaxation of penalties for offenders, giving them leeway.

Earlier this year, the National Green Tribunal (NGT) and the Punjab government had banned stubble burning. While many did not take heed of it, some sections of farmers also protested and challenged the ban by burning crop residue.

Meanwhile, air pollution in Delhi continued to worsen. On Monday, thick smog reduced visibility and the air quality remained at “hazardous” levels. Delhi’s average air quality index (AQI) was 460 on Sunday, which was close to this season’s high of 486 as recorded on November 9.

Sunday’s condition was due to a fall in temperature, increased cloud cover, less wind speed in lower altitudes, and winds at higher altitudes carrying pollutants from Punjab and Haryana, as per the Central Pollution Control Board (CPCB), the *Hindustan Times* reported.

What are the various causes behind Delhi smog?

The CPCB on Saturday informed the National Green Tribunal (NGT) that vehicular emissions contributes 20 percent to Delhi’s pollution. Two-wheelers are responsible for a third of the total vehicular emission.

In November, the Supreme Court had banned the sale of fireworks during Diwali in Delhi to stop repetition of last year’s situation where AQI stayed hazardous for days, affecting public life and health.

Nonetheless, the air quality during Diwali turned ‘severe’. SAFAR project director Gufran Beig told *PTI* that reduction in emissions from one particular source and reduction in levels of pollution are not linearly related or directly proportional. However, external contributions, such as stubble burning, did not exceed 10 percent of the total pollution load during Diwali period as wind speed was lower and did not carry in the pollutants, the SAFAR report said.

Over time, various studies by IIT Delhi, IIT Kanpur, and SAFAR have cited road dusts, not stubble burning, as the constant source of air pollution. A study conducted by IIT-Kanpur found that 56 percent of PM10 (fine particle pollutant) was caused by road dust, 10 percent by industries, 10 percent by concrete batching and only 9 percent by motor vehicles. In the case of PM2.5 (finer than PM10), the share was — 38 percent by road dust, 20 percent by vehicles, 12 percent by domestic fuel and 11 percent by industry.

Other than road dusts, domestic and industrial sources contribute largely to pollution. If crop residue can be linked to biomass burning, as suggested by *Urban Emissions*, the IIT-Kanpur study (2015) would peg the contribution of the source in the total pollution at around 19 percent. It would also include biomass used for cooking and heating as large part of Indian households are yet to start using LPG.

Options on the card

To fight air pollution, the AAP government is trying to implement the odd-even scheme, which allows odd-and even-license-numbered private vehicles on the roads on alternate days.

It hasn't been able to implement the scheme as NGT did not give a nod to the current scheme where female-driven cars and two-wheelers are excluded from it.

Following the developments, Transport minister Nitin Gadkari has sought a thorough research to identify major reasons contributing to the pollution. He said his ministry will extend all possible help in this regard.

In the meantime, the Supreme Court has agreed to hear fresh plea seeking immediate measures to reduce pollution in Delhi. The plea involves the Centre directing states on stubble burning, road dust and odd-even scheme implementation.

Study indicates high level of mercury in fish at Kodai lake

<http://www.thehindu.com/news/national/tamil-nadu/study-indicates-high-level-of-mercury-in-fish-at-kodai-lake/article20406597.ece>



Relying on findings from an expert team from IIT-Hyderabad, environmental activists and CPI (ML) functionaries have alleged that Hindustan Unilever's (HUL) presence from the mid-80s to the beginning of the millennium had polluted the Kodaikanal lake and the surrounding Periyakulam pond.

Claiming that the mercury levels in fish in the region were high, activists under the banner 'Campaign to Cleanup Kodaikanal Mercury Pollution,' including members of the People's Union for Civil Liberties (PUCL) and CPI (ML), urged the government on Monday to share vital information with the people and prevent spread of diseases. The fish were tested in December 2016.

The activists displayed a few photographs to show how people in the hilly region had been at the receiving end due to pollution and contamination of the environment beyond permissible levels.

Accusing the government and the Tamil Nadu Pollution Control Board (TNPCB) of being dormant in the past, activist Nityanand Jayaraman said that the study had found high levels of mercury in fish from Kodai lake and ponds fed by the Pambar stream in Periyakulam plains.

He said that, in a letter written to Theni and Dindigul District Collectors and Kodaikanal Municipal Commissioner on August 2, 2017, IIT-Hyderabad scientist Asif Qureshihe had urged the administration to advise people, particularly, pregnant women, to limit their consumption of fish from these water bodies.

Potency of mercury

Mercury is a potent neurotoxin. It can damage the brain and also lead to kidney failure. Methyl mercury, the form that is found in fish, is even more poisonous.

The U.S. environmental Protection Agency has prescribed a safe level of 30 microgram/kg of mercury in fish. However, four out of eight fish caught from Kodai lake contained between 31.1 and 41.9 microgram/kg. Fish caught from a pond fed by the Pambar stream, less than 5 km from Kumbakarai falls, contained far higher levels – between 94 and 165 micrograms/kg.

Unilver's proposed clean-up standard for soil in Kodaikanal was 20 times weaker than the soil guideline value for mercury in the UK, Unilever's headquarters, Mr. Nityanand said. He urged the State government and the TNPCB to tighten the clean-up standards for Unilever's contaminated site remediation.

Meanwhile, responding to the allegations, a spokesperson for HUL said that over the last 15 years, independent studies carried out by IIT-Delhi, the National Botanical Research Institute, Lucknow, and the Indian Institute of Soil and Water Conservation Research Centre, Ooty, have confirmed that there has been no adverse impact on the environment outside the factory premises.

The only exception is a small area on the perimeter of the factory, which HUL has already committed to remediate through soil remediation trials which commenced in August 2017 as per approval given by the TNPCB.

With regard to the proposed clean-up standard for soil in Kodaikanal, he said that the TNPCB, in consultation with the Scientific Experts Committee (constituted by the Supreme Court Monitoring Committee), set the remediation standard of 20 mg/kg based on a site-specific risk assessment study in line with international best practices.

The standard has been confirmed by the Central Pollution Control Board (CPCB), to which the TNPCB had referred the matter. The Ministry of Environment, Forest & Climate Change has also endorsed the 20 mg/kg soil remediation standard.

Bikes, autos have to be included in odd-even for impact

http://www.ptinews.com/news/9230805_Bikes--autos-have-to-be-included-in-odd-even-for-impact-.html

New Delhi, Nov 13 (PTI) Odd-even restrictions have to apply to two-wheelers and three-wheelers for the scheme to succeed, says a researcher at the New York-based Columbia University, doubting its efficacy in the long run.

According to V Faye McNeill, associate professor of Chemical Engineering in the institute, the impact of the odd- even scheme fizzles out eventually as drivers find ways around the restrictions.

This has been seen in megacities like Mexico City and Manila where the scheme was enforced in the past.

"Controlling emissions from transportation is very important, but in the long term I don't think that the odd- even scheme is going to be the answer," she told PTI in an email interview.

She said she had seen data indicating that the odd-even traffic rationing scheme reduced PM2.5 "somewhat" (around 20 per cent) at peak traffic times during the January trials.

"However, as experiences in other megacities such as Manila and Mexico City have shown, traffic rationing is not a viable long-term pollution or traffic reduction measure, because drivers find ways around the restrictions," she said.

McNeill, an expert on atmospheric aerosols, said air doesn't obey city, state, or even national boundaries, so emissions need to be curbed at a regional level as well as locally, citing the examples of Los Angeles and Mexico City with similar tendencies towards stagnant air like Delhi.

Assessing the previous two rounds of the car rationing scheme in Delhi, the researcher observed that the pilot phase in January 2016 was more successful compared to the second round in April. The air is colder and more stagnant in winters, and the baseline pollution level is higher, which make any drop in pollution levels visible.

"Two-and-three wheelers, especially those with two-stroke engines that run on mixed fuel, are important sources of pollution and they shouldn't be missed in air quality policy.

They should be included in the restrictions if there is any hope for the odd-even scheme to have an impact," McNeill said.

It's logical for people to use these forms of transportation if cars are restricted, she said, adding that they can be worse emitters than cars.

According to a landmark IIT-Kanpur study on Delhi's pollution, the share of trucks and two-wheelers in terms of total vehicular pollution in the city is around 46 per cent and 33 per cent respectively. The share of four-wheelers is 10 per cent, it estimates.

McNeill said air pollution is "taking a toll on the health" of the citizens of Delhi and the rest of India, referring to spikes in hospital admissions and deaths from cardio-respiratory disorders during air pollution episodes in the national capital and other Indian cities.

The Centre-notified Graded Response Action Plan (GRAP) is a "good start" in cleaning up the city's toxic air, she said, adding that without enforcement it will not be successful and more manpower is needed so that it is implemented successfully.

"The next level is to address the roots of the air quality problem and address them proactively and

preventatively. This may require long-term investments in changing energy and transportation infrastructure," she said.

More investment in air pollution science, and partnership between policymakers and scientists, will be needed for this next step, the researcher added.

Industry, academia join hands to boost innovation, entrepreneurship

<https://telanganatoday.com/industry-academia-join-hands-to-boost-innovation-entrepreneurship>

The MoUs are aimed at capacity building, fostering research, intellectual property management, mentoring and commercialisation.



Hyderabad: CL Educate, Research and Innovation Circle of Hyderabad, TIE Hyderabad and T-Hub are signing memorandum of understandings (MoUs) with premier institutions such as IIT-BHU, IIT-ISM Dhanbad, IIIT Bangalore, IIT Kalyani, Weizmann Institute of Science of Israel, corporates, startups and early investment funds.

The MoUs are aimed at capacity building, fostering research, intellectual property management, mentoring and commercialisation.

In addition to this, CL Educate and T-Hub have also signed a MoU with a public enterprise as part of its CSR to work with 30 science and engineering colleges in Hyderabad and across the State to enable research and innovation in their campuses.

The MoUs are going to be signed at a two-day meet MeltingPot, an innovation platform connecting academia and industry collaborating in the fields of research and innovation. The event is being held in Hyderabad on November 14 and 15.

Featuring eminent speakers from industry and academia, one of the highlights of the event is the spotlight session on Israel featuring Prof Gadi Ariav, professor, Tel Aviv/IIMB; Aaron Jaffe, general counsel, Yeda-Technology transfer at Weizmann Institute of Science; Jay Krishnan, CEO, T-Hub and Dr G Raghuram, director, IIM Bangalore. Satya Narayanan R, Chairman, CL Educate said.

“For India to reach the top among global economies; collaborative Research and IP creation is a critical milestone to cross. The need of the hour is to create a collaborative ecosystem that can instill and nurture innovation and entrepreneurship amongst the youth and help them leapfrog to commercialization. By enabling these MoUs WAINConnect is delivering on its promise to create linkages between academia and industry – the two largest contributors to the innovativeness of an economy,” Srinivas Kollipara, COO, T-Hub said.

“Hyderabad today has become the preferred destination for entrepreneurs, corporates and major events in the country. We are happy to have the MeltingPot2020 Innovation Summit 2017 happening here in our city. The event provides a good platform for all the stakeholders involved to network, collaborate and innovate together to further the ecosystem. The Hyderabad startup ecosystem has grown multifold over the past few years and T-Hub aims to make Hyderabad among the top 10 startup ecosystems in the world.”

Pradeep Mittal, president, TiE Hyderabad said, “As an organisation committed to promoting innovation and entrepreneurship in Hyderabad/Telangana. TiE Hyderabad is happy to collaborate with WAIN Connect platform and MeltingPot2020 to deepen and enrich the potential connect with innovators and entrepreneurs. In collaboration with WAIN Connect and CL Educate we also wish to introduce and enlarge the TYE and TiE Grad programme in schools in Telangana/Hyderabad over the next three years.”

Varsity teachers bodies demands change in 7th pay revision

<http://www.deccanherald.com/content/642647/varsity-teachers-bodies-demands-change.html>

Two prominent university teachers' associations have decided to launch a movement against the Central government this month, expressing dissatisfaction with the latest revision in the salary of faculties under the seventh pay commission.

The All India Federation of University and College Teachers' Organisations (AIFUCTO) has given a call for holding a sit-in protest across the country on November 30, demanding for changes in the seventh pay revision scheme, notified recently.

The Delhi University Teachers Association (DUTA) will observe November 15 as "black day" at all the colleges here and later take out a protest rally on November 21 to press for their demands.

The Human Resource Development (HRD) Ministry notified the seventh pay revision scheme on November 2 following Union Cabinet's approval to the pay hike recommendations of an expert committee set up by the University Grants Commission (UGC).

"We note with utmost shock and dismay that this (pay revision scheme) has belied the hopes and aspirations of the lakhs of University and College teachers of the country, putting the sincerity and commitment of the central government to higher education into dock," the AIFUCTO said.

Citing various anomalies in the seventh pay revision scheme for university teachers, the AIFUCTO said it seeks to deny incentives for the MPhil and PhD both at the entry point and during service years.

"We strongly criticise it. This reflects the extreme insensitivity of the central government towards the hard work and challenges faced by researchers in the country in getting these degrees, thereby reducing the dignity and devaluing the significance of these prestigious degrees," the University teachers body added.

The DUTA termed the pay revision scheme as negative and retrograde, claiming that the stipulations made in it will have an adverse impact on the career advancement of every section of the teaching community in the universities.

"The most horrific recommendation on the pay revision of the teachers is the withdrawal of the PhD/Mphil increments. This is a retrogressive step as it amounts to discouraging research and taking away incentives for the same," DUTA president Rajib Ray told reporters at a press conference here on Monday.

He also claimed that the pay revision matrix, notified for Associate professors and above levels, would lead to stagnation in the career advancement of the teachers after a certain period of time.

Both the AIFUCTO and the DUTA also rejected the Government's decision to bear only 50% of the total expenditure to be incurred by the State Governments in implementation of the seventh pay scheme at State Universities and colleges.

"We demand allocation of 100% central assistance to the States," DUTA president said.

'Not even 1% of Indian educational institutions disabled-friendly'

<http://www.timesnownews.com/mirrornow/news/in-focus/not-even-1-of-indian-educational-institutions-disabled-friendly/56229>

New Delhi: Not even one percent of Indian educational institutions is user-friendly for disabled persons, participants at the National Convention of Youth with Disabilities have said here.

According to statistics from the University Grants Commission (UGC) of India website, as of February, there are 789 universities, 37,204 colleges, and 11,443 stand-alone institutions in India.

"Yet, not more than one percent of our educational institutions are disabled-friendly," said participants at the just concluded national event for the brightest disabled students of the country.

"Fifty percent of persons with disabilities are under 25 years of age, in keeping with India's demographic dividend, yet none of the universities are truly accessible.

"A ramp here or a disabled-friendly toilet there doesn't qualify the college or university as accessible," Javed Abidi, Director at the National Centre for Promotion of Employment for Disabled People (NCPEDP), said in a statement on Monday.

Moreover, "not even one percent of the seats in higher educational institutions are currently occupied by disabled people," the participants said, at the event jointly organised by NCPEDP and global software major Accenture.

Few students who make it to the higher education institutions face problems like accommodation, travelling which become too expensive for them, they said.

"We still have a very, very long road ahead of us in order for our educational institutions to become genuinely accessible and disabled friendly," Abidi added.

Since 1995, the government has made it mandatory for all government educational institutions and other educational institutions receiving aid from the government to reserve three per cent seats for persons with disability.

This reservation was increased to four percent in the Rights of Persons with Disabilities (RPWD) Act 2016.

However, the quota on paper is of no use if the entire educational system remains hostile to students with disabilities, the participants said.

The convention witnessed the presence of a total of 100 persons with disabilities, including 65 students from top-notch institutes of the country.

New education policy draft by year end: Prakash Javadekar

<http://digitallearning.eletsonline.com/2017/11/new-education-policy-draft-by-year-end-prakash-javadekar/>



Union Human Resources Development (HRD) minister Prakash Javadekar said that the first draft of the new National Education Policy will come out by this year end.

The Ministry of Human Resource Development (MHRD) has appointed a nine-member panel to work on a New Education Policy (NEP) in June this year. Renowned space scientist Krishnaswamy Kasturirangan is the head of the panel.

Besides Kasturirangan, who was the head of Indian Space Research Organisation (ISRO), the panel also includes former IAS officer and union tourism minister K J Alphonse Kanamthanam and Fields Medal winning mathematician Manjul Bhargava.

Alphonse played a key role to achieve 100 percent literacy in Kerala's Kottayam and Ernakulam districts.

According to reports, vice chancellor of the Baba Saheb Ambedkar University of Social Sciences Ram Shanker Kureel is also part of the panel. Kureel has wide experience in the field of agriculture sciences and management.

Dr M K Shridhar, former member secretary of the Karnataka State Innovation Council, Dr T V Kattimani, an expert on language communication, Dr Mazhar Asif, professor of Persian at Guwahati University, and former director of education, Uttar Pradesh, Krishan Mohan Tripathi are also in the panel. Besides, the committee also comprises Vasudha Kamat, former vice chancellor of Mumbai's SNDT University.

"They have said that we can have the first draft of the policy by December end.... It will be implemented as soon as possible after it has been debated (in Parliament)," Javadekar said.

Javadekar stated that the new education policy will serve the country for the next 20 years and will be more modern, research-oriented and will produce better citizens.

Before the panel was formed, suggestions were solicited from legislators, students, parents and other stakeholders for almost two and a half years, the minister said.

November 13

Modi will be in Philippines to attend the India-Asean and East Asia summit today

http://www.business-standard.com/article/politics/modi-in-manila-for-asean-summit-bilateral-trade-investment-top-agenda-117111200651_1.html



Modi's trade talks: Prime Minister Narendra Modi will be in Philippines to attend the India-Asean and East Asia summits on Monday and Tuesday. Bilateral trade and investments, among others, will be key discussion topics. Bilateral meetings between the prime minister and other leaders on the sidelines of these summits are being finalised.

Event management

Monday is the last day of the Blockchain summit and hackathon at IIT Delhi. The event started on Saturday and continued over the weekend. It was planned as a chain of events in the run-up to the Global Entrepreneurship Summit in Hyderabad at the end of the month. Sponsored by NITI Aayog, along with Proffer, a blockchain start-up founded by graduates of MIT and Harvard, the objective was to explore how blockchain architectures can enable a new digital infrastructure for India, improve efficiency, transparency, privacy, and cost across all sectors. About 1,500 students from the IITs, MIT, Harvard, Berkeley, and the top engineering institutions from across the world are participating, with 500 attending in person at the IIT Delhi campus. Microsoft, IBM, Accel, Coinbase, and Amazon AWS have sponsored \$17,000 in prizes to reward the top five blockchain-based applications addressing problems in government/enterprise infrastructure, finance, energy markets, supply chain, decentralised Aadhaar identities, information exchange, etc.

Delhi's disaster management

The odd-even car rationing scheme will be enforced in the national capital for five days from Monday, Delhi Transport Minister Kailash Gahlot said. The decision comes on the backdrop of a spike in air pollution level. Under the policy, private vehicles are allowed to ply based on the last number on their licence plates. Odd-numbered cars would run on odd dates, while the even-numbered ones on even dates. In 2016, the scheme was enforced twice — January 1-15 and April 15-30. While traffic is expected to be smoother, public transportation and app cabs will see a surge.

National Testing Agency (NTA) To Conduct JEE Main, NEET; 10 Points to Know

<https://www.ndtv.com/education/national-testing-agency-nta-to-conduct-jee-main-neet-10-points-to-know-1774095>

Union Cabinet approved the setting up of National Testing Agency (NTA). The agency would be responsible for conducting entrance examinations in the country thus relieving educational bodies like CBSE, AICTE etc.



National Testing Agency (NTA) To Conduct JEE Main, NEET; 10 Points

NEW DELHI: Union Cabinet approved the setting up of National Testing Agency (NTA). The agency would be responsible for conducting entrance examinations in the country thus relieving educational bodies like CBSE, AICTE etc. of their exam conducting duties. The agency would begin its operation with taking over examinations which are currently being conducted by CBSE and eventually cover other entrance examinations. The setting up of NTA would allow students to have access to one standardized test and will also curb allegation of uneven difficulty level in various sittings in an exam.

Here are **10 things to know about National Testing Agency.**

1. The Finance Minister in the budget speech of 2017-18 had announced that a national body will be set up which will be responsible for conducting entrance examinations for higher education.
2. Government has allocated a fund of Rs. 25 crore for NTA to begin operation in the first year. From its second year, the agency will become self-sustainable.
3. Some of the exams which would be conducted by NTA will be JEE Main, NEET UG, UGC NET, CTET, etc.
4. The exams will be conducted online and will likely be conducted twice a year. So far entrance exams like JEE Main or NEET UG are conducted only once a year. UGC NET used to be conducted twice a year but from this year, CBSE announced that NET will also be conducted once a year. The prospect of the entrance exams twice a year will bring relief to students who often have to face undue pressure specially for exams like JEE and NEET which are conducted immediately after the board exams are over.
5. The agency would function as an autonomous body and will be chaired by an educationist who will be appointed by the MHRD.
6. The agency will have a board of governors who will represent the member institutions.
7. NTA will be created as a society registered under the Indian Societies Registration Act, 1860.
8. The agency would cater to about 40 lakh students who appear in various entrance exams. 11,86,454 students had registered for JEE Main exam this year. 11,38,890 had appeared for the NEET UG exam this year. Approximately 9.30 lakh candidates had registered for UGC NET which was concluded recently.
9. NTA will ensure that exams have a standardized difficulty level.

10. It is also expected that setting up NTA will help avoid conflicts about varying levels of difficulty in different sets of question paper.

GATE 2018: Change your examination center option from today on GOAPS, check how

<http://www.timesnownews.com/education/article/gate-2018-change-your-examination-center-option-from-today-on-goaps-check-how/124215>



Guwahati: Candidates who have applied for the Graduate Aptitude Test in Engineering, GATE 2018 would be able to apply for changes in the examination center. The option to make the changes would start from today. Interested applicants are required to login to the GATE Application Processing System or GOAPS to do the change. Please note, the option is available for a fee of Rs. 400. Steps to make the changes are provided below.

Candidates are also advised to note that the facility to make the changes would be available only for this week – which is from today, November 13 till Friday, which is November 17. The facility is only online and any offline requests or applications would not be accepted. Candidates would be required to make an online fee payment of Rs. 400.

In order to make changes, candidates are required to login to GOAPS. After logging in, candidates would be prompted to check and change (if required) the examination center. Candidates are required to submit their new preferences from the list of drop down menu. After selecting the new option, the system would prompt you to make the fee payment. Please note, candidates would be required to make an online fee payment of Rs. 400, irrespective of the category they belong to.

GATE 2018 is scheduled to be conducted in February 2018 by IIT Guwahati. Candidates who are desirous to apply for PSU recruitment based on GATE 2018 scores are advised to keep a check on the notifications. Almost all the applications for PSUs would start from January 5, 2018 when the GATE 2018 Admit Card is released. Applicants would have to share their GATE 2018 registration numbers

(as shared on the GATE 2018 admit card) to apply for the vacancies. Updates on the same would be provided here, when available.

IIT-Bombay boost to startups: Degree in entrepreneurship

<http://indianexpress.com/article/cities/mumbai/iit-bombay-boost-to-startups-degree-in-entrepreneurship-4934789/>

While IIT-B has been offering a host of courses to aid budding entrepreneurs, a BTech (Minor) in Entrepreneurship was formally launched this year.

WHEN Shubham Chouhan, then a second year engineering student at the Indian Institute of Technology, Bombay, (IIT-B), pitched his startup idea in a class in 2015, little did he know he would be registering his own venture two years later.

Chouhan, now an aerospace engineering with a minor degree in entrepreneurship, is in the process of registering his startup — an artificial intelligence based product in the field of media. He is one of the five students who form the first batch of students to get a formal degree in entrepreneurship from the IIT-B.

While IIT-B has been offering a host of courses to aid budding entrepreneurs, a BTech (Minor) in Entrepreneurship was formally launched this year. Over the past three years, the institute's Desai Sethi Centre for Entrepreneurship (DSCE) has designed eight inter-disciplinary elective courses in entrepreneurship. These include Introduction to Entrepreneurship, Business for Fundamentals for Technopreneurs, Managing Tech Innovation, Developing a Proof of Concept Basic and Advanced, Tech venture creation, Marketing for Entrepreneurs and Intellectual Property Management. Each course carries six credits.

This year, the institute decided that students who complete 30 credits — either five courses of six credits each or two courses and six half courses — would be awarded a formal B Tech (Minor) degree. "Over the past decade, we have seen a lot of students are going into the entrepreneurship space, by joining startups or by starting own venture. Keeping this in mind, we started designing courses for interested students. Eventually, we have decided to grant degrees in entrepreneurship," said Anand Kusre, professor in-charge of DSCE. He said the basic and advanced courses on Proof of Concept were the most sought-after ones and students agreed.

"Sometimes, even if we have an idea, we don't know how to go about it or how to develop the idea into a startup. Through the courses, particularly the Proof of Concept courses, we were able to develop our ideas into a viable business model," said Deepak Meghlani, a mechanical engineer from IIT-B who took six courses and was awarded the degree. His classroom project — a mobile application for travellers — generated interest from market players and he was in talks to sell the algorithm of the app.

"Currently, I am working as a business analyst to gain some corporate experience and polish my skills. But my aim is clear. In a couple of years, I will start my own venture," said Meghlani. The degree programme is the latest addition to IIT-B's thriving startup ecosystem. The DSCE was set up in 2014 to

work in tandem with the student support group E-Cell and the institute's incubator Society for Innovation and Entrepreneurship.

IISc, BIT-Mersa among 123 deemed varsities asked to drop 'university' from their names

<https://scroll.in/latest/857640/iisc-bit-mersa-among-123-deemed-varsities-asked-to-drop-university-from-their-names>

Institutes that do not comply with the directive will face action under the UGC (Institutions Deemed to be Universities) Regulations, 2016.

The University Grants Commission has ordered 123 deemed-to-be-universities to drop the word "university" from their names. Instead, the institutes may mention the word "Deemed to be University" within parenthesis.

Among the institutes that received the UGC letter are Birla Institute of Technology-Mesra, Christ University, Indian Institute of Science-Bangalore, Indian Agricultural Research Institute and Indian Law Institute.

Citing the Supreme Court order dated November 3, the education body said the use of the word violates Section 23 of the UGC Act of 1956, which stipulates cases where the use of the word "university" is prohibited. Institutes that do not comply with the order will face action under the UGC (Institutions Deemed to be Universities) Regulations, 2016.

Greenhouse gas emissions in Chandigarh to rise by 200% in 2020: Study

<https://timesofindia.indiatimes.com/city/chandigarh/greenhouse-gas-emissions-in-city-to-rise-by-200-in-2020-study/articleshow/61620555.cms>



CHANDIGARH: Chandigarh, which has the highest vehicle density in the county, is projected to increase climate-damaging greenhouse gas (GHG) emissions by almost 200% from 2,486 Gg (Giga grams, the unit of emission) to 4,014 Gg by 2020, according to a recent study.

The study published last month in a reputed international journal — Environmental Science and Pollution Research — was conducted by investigators from PGI, IIT, Roorkee, and Panjab University (PU). It implies that the released gases (carbon monoxide, carbon dioxide and nitrous oxide) from the vehicles would raise the temperature of the city in another three years.

Dr Suman Mor from the department of environment studies, PU, had supervised the study that comes at a time when the Delhi government has already declared a public health emergency due to the smog by a student from IIT Roorkee. She said, "We wanted to have a baseline data of greenhouse gases as there is a high vehicle-density in Chandigarh. These gases contribute to global warming and affect climate in the long-term."

The study found that four-wheelers were the main culprit. Also, an additional 173 Gg load of greenhouse gases has been projected if all diesel buses would be transformed to CNG by 2020. "CNG is a clean alternate fuel. It was also found that fuel transition from diesel to CNG cannot be considered as a clean technology, as there has been a huge increase in the GHG load, 173 Gg. However, there is a need to study the load of other air pollutants with GHGs to study their overall effect on climate change for better policy making," said Dr Ravindra Khaiwal, School of Public Health, PGI.

This is the first such research to evaluate vehicular pollution in the city in the context of greenhouse gases. The study concluded that increasing private vehicle population because of rising per capita income might be one of the reasons for the rise in GHGs.

ALARMING NUMBERS

Estimated greenhouse gases (GHGs) — CO, N₂O, and CO₂ — emission from motor vehicles in Chandigarh has increased more than two times from 1,065 Gg (unit of emission) in 2005 to 2,486 Gg by 2011. It is expected to increase to 4,014 Gg in 2020

An increase of 173 Gg in GHG load is projected if all diesel buses are transformed to CNG by 2020 in Chandigarh

GHG load from transport sector has increased from 366 Gg in 2000 to 2,486 Gg in 2011, more than fivefold in a decade. It also reveals that CO₂ consists of 85% of total GHG load in 2000 and increased up to 90% in 2011.

The study has estimated that GHG emissions from transport sector in Chandigarh are expected to rise by 4,015 Gg by 2020 from almost 61% of 2011 emissions

Four-wheelers and buses are major contributors of greenhouse gases, though the number of buses is less but the GHG load from them is quite high

In 2001, 88% of GHG load was from two-wheelers (2-stroke engine-based), which reduced to 83% in 2011 due to their number being reduced from 76% in 2001 to 60% due to introduction of efficient 2-

wheelers.

Higher GHG emissions from four-wheeler diesel vehicles were observed than gasoline-powered vehicles as emission factor for diesel vehicles is 1.5 times than gasoline-powered vehicles in case of CO₂

As Chandigarh has mainly diesel vehicles, hence, the GHG load from 3-wheelers is mainly due to diesel-powered 3-wheelers. But, from 2009 onward, the share of the GHG load from LPG-driven 3-wheelers showed a significant rise from 3% in 2009 to 20% in 2011, which is due to increase in number of 3-wheelers

Two wheelers | 2,76,179

Four-wheelers | 2,33,871

(Number of vehicles registered till date in Chandigarh, according to the Registering and Licensing Authority)

KEY Recommendations

Government should promote public transport through awareness programmes

Alternate transportation modes like Metro trains, fuel transition, and other cleaner fuel technologies must be introduced.

While implementing a change in vehicle technology, CO₂ emissions must be considered. Replacing diesel with CNG alone is not a good option for reducing greenhouse gases.

Competitive air choking students: Study

<http://www.thehindu.com/todays-paper/tp-national/tp-kerala/competitive-air-choking-students-study/article20376714.ece>

‘39,775 students in the country committed suicide from 2011 to 2015’

Tremendous pressure of competitive examinations is pushing students to anxiety disorders and depression.

Recent findings of the UNESCO reveal that in addition to increase in stress-related disorders, there is an alarming rate of suicides in students who are preparing for competitive examinations.

“There is extensive evidence showing that high-stakes tests based on narrow performance measures could encourage efforts to ‘game the system’ negatively impacting on learning and disproportionately punishing the marginalised,” the UNESCO said in its annual Global Education Monitoring Report released recently.

Private tuitions

The report also criticised private tuitions saying it could increase students' academic burden and stress. It blamed tuitions for worsening inequality in education, saying 'Better-educated households in urban areas with children attending private schools were more likely to pay for private tutoring.'

Statistics from the National Crime Records Bureau reveal that 39,775 students in the country committed suicide from 2011 to 2015. Of them, 8,934 cases were reported in 2015 alone.

"According to statistics provided by MHRD (Ministry of Human Resources Development), 5,762 students, preparing for entrance examinations for professional courses after Plus 2, committed suicide in 2015 in the country. They find it very difficult to adjust with school and coaching timings," says Dr T.P. Sethumadhavan, Educational and Career Consultant.

Kota in Rajasthan, the pioneering place for entrance coaching in the country, reported highest incidences of suicides among students preparing for Joint Engineering Entrance (JEE) examinations. According to statistics, 20 students committed suicide in Kota in last year alone, he said. Incidentally two students committed suicide in the last three months in NIIT, Calicut, in the State. Road accidents among students were also increasing.

During 2016-17, 150 engineering college students lost lives in Kerala due to road accidents. Reports show anti-depressants and narcotic drugs were rampant among students.

"Students entering into higher education sector must select courses based on their own interest, aptitude and attitude. In many of the cases, students are forced to choose courses due to parent's and peer pressure. This results in poor performance or withdrawal of courses during their study period," Mr. Sethumadhavan said.

Parents as well as students should have an alternative plan. They should understand it was not end of life if they cannot achieve their pre-conceived goal, he said.

Students required emotional support from parents and counselling support from teachers.

Environment, effort and direction were important for their curricular and co-curricular activities. But not many campuses gave attention to student counselling, experts said.

Shortage of employment opportunities was another cause of worry for qualified youth. According to NASSCOM and ASSOCHAM findings, employability among graduates in the country was less than 20 %.

Only 17 % of the students worked in the discipline in which they graduated.

The state of affairs indicated the need for parents, teachers, educational authorities and government to organise structured regular counselling sessions for the students so as to help them develop a positive mindset.

New App promises to reform e-learning

<http://gulftoday.ae/portal/d6df5bed-73d1-48f0-8760-b6f2ab8f0ddc.aspx>



DUBAI: Byju's, India's largest Edu-tech company and the creator of India's largest K-12 learning app, launched its services in Dubai on Sunday to cater to the need of a vast number of students living in the region.

Launched in India in 2015, Byju's – the learning app offers highly adaptive, engaging and effective learning programmes for students in Grades 4-12 and competitive exams like JEE, NEET, CAT, IAS, GRE and GMAT. The app has crossed more than 12 million downloads and 700,000 annual subscribers worldwide.

Byju Raveendran, founder and CEO of Byju's, said: "About 300,000 students have downloaded the app in the GCC with 40 per cent of them from the UAE alone. To ensure a better and deeper connect with the students of this region, we are setting up dedicated teams here who will be available to help students understand and experience personalised learning."

Delivering world class learning experience, the app is making learning contextual and visual, and not just theoretical. The learning app is paving the way for new-age, geography-agnostic learning tools that sit at the cross section of mobile, interactive content and adaptive learning methodologies.

Offering an engaging and effective learning experience, Byju's app creates personalised learning journey for individual students based on their proficiency levels and capabilities which helps them learn at their own pace and style.

He said that this app has been launched to help students fall in love with learning, and change the way they learn.

"Since children love using smartphones and iPads, we wish to help them learn through a medium they love. Technology, content and design have been brought together powerfully to captivate, motivate and guide students to learn better. Using the app for 51 minutes daily, students have shown remarkable progress, as 93 per cent parents have reported significant improvement in their children's grades after using the learning app," he said.

Raveendran added: “We have worked together to create superior learning experience. The lessons on the application are recommended based on a student’s learning style and academic requirements. Across subjects, grades and chapters, we have created a powerful knowledge graph with over 50,000 concepts and relationships. Assessments are integrated with the videos to support knowledge acquisition.”

He said that when a student struggles on an assessment, each wrong answer is mapped to a specific learning gap and targeted remedial videos and activities are recommended as review. This way, it encourages students to learn at their own pace and style.

“In case of any difficulty, 90 per cent questions are answered immediately after posting it online. The remaining 10 per cent questions are answered within 24 hours,” he added.

Capturing the journey of the brand and the way Byju’s is revolutionising learning, Harvard Business Review has also done a case study.

November 12

Important information you need to know about JEE Mains 2018

<https://www.brainbuxa.com/education-news/important-information-you-need-to-know-about-jee-mains-2018-7478>

The JEE exam are conducted annually by one of the IITs to determine the eligibility of the candidates for various courses offered by institutions of national importance.

The exam is conducted in two categories namely- JEE Mains and Advanced. Mains is conducted by the Central Board of Secondary Education (CBSE) and advanced is conducted by one of the IITs every year and this year IIT Kanpur is in charge of conducting the JEE Advanced 2018 exam.

The official notification will be out somewhere in third week of November but before that below are some things you need to know about the exam:

Eligibility

Candidates who wish to appear in the exam must have at-least 75 percent in their class 12 exams or be in top 20 percentile of the board. For the candidates of reserved categories, the minimum percentage is 65 percent. Further to be eligible for the JEE Advanced, candidate's rank need to be among first 2,24,000 candidates.

Exam dates

CBSE has announced that JEE main exam will be held on April 8, 2018 and it is expected that the advanced exam will be conducted on May 20. However, these dates are tentative and subject to change.

Application process

For the JEE 2017, the application forms were released in the month of December (2016) and the same can be expected for the JEE 2018. The application process will be online and candidates will be required to visit the portal jeemain.nic.in to apply for the exam. Another portal for the JEE exam is jeeadv.ac.in and candidates can visit it to get the latest information about the JEE Advanced exam.

Online test

This year JEE Advanced exam will be in online mode. It consists of two papers-- paper 1 and paper 2 and both exams are of three hour duration each.

ANALYSIS | Why Delhi Turns into a Gas Chamber and How it Affects Much More Than Our Health

<http://www.news18.com/news/india/analysis-why-delhi-turns-into-a-gas-chamber-and-how-it-affects-much-more-than-our-health-1574357.html>

Delhiites are cursed by geography to be prone to a meteorological phenomenon called inversion where warm air rests above the colder air closer to the ground, preventing it from mixing upwards thereby trapping all that we put into it – almost like a lid

Delhi's pollution episodes at this time of the year have become an annual affair - the latest one has the Chief Minister comparing Delhi to a gas chamber.

Like Los Angeles and Mexico City, Delhiites are cursed by geography to be prone to a meteorological phenomenon called inversion where warm air rests above the colder air closer to the ground, preventing it from mixing upwards thereby trapping all that we put into it – almost like a lid. This lid extends across the Indo-Gangetic plain through much of the winter months, leaving it covered in a haze and exposing millions to bad air quality.

During the months leading up to the monsoon, much of this semi-arid region is dry and dusty winds from as far away as the Sahara and Arabian deserts and our own Thar Desert bring in mineral dust. This dust subsides after the monsoon rain and lead to a few months of relatively clean air. As the monsoon retreats and high-pressure area forms over North India, our pollution levels creep up.

This pollution is a toxic mix of mineral dust (kicked up by construction activity and road traffic), soot, carbon monoxide, ozone, oxides of Sulphur and Nitrogen, and a host of other chemicals. Most of these pollutants are a result of combustion – of things we burn for various reasons.

While natural dust tends to be larger in size, the products of combustion react to form particles small enough ('PM2.5' or less than 2.5 microns diameter) to penetrate through to the lungs and enter our blood stream causing a myriad of health problems. Air pollution is the leading environmental cause of death worldwide and results in 1.1 million early deaths in India according to the Global Burden of Disease report.

Humans have been burning things for a long time now – to clear land for agriculture, for cooking and

heating, and powering the industrial revolution. The products of this burning can travel far and affect remote places. Scientists have found evidence of pollution from foundries and smelting dating back to the early Roman Empire in ice samples from Greenland, and in the blackened lungs of mummified bodies in Egypt and England. And historians have recorded that Roman courts considered civil claims over smoke pollution 2,000 years ago and under Emperor Justinian in 535, even tried a very early version of the Clean Air Act.

The advent of the industrial revolution and the large-scale exploitation of fossil fuels greatly increased air pollution and the post World War II boom led to severe episodes such as the Great London Fog of December 1952 that is estimated to have killed at least 4,000 people and by some estimates as many as 12,000.

The recognition of pollution resulting from automobiles and industries in places across Europe and the United States (especially Los Angeles) led to the development of emission control regulations and technology. The ensuing decades have seen much of the visible pollution from the western cities cleaned up.

Air pollution also impacts our climate in many ways. The small particles resulting from burning fossil fuels like coal and oil consist mainly of sulphates that tend to reflect sunlight leading to less of it reaching the ground – what scientists call “dimming” - and actually lowers the temperatures.

Some of the temperature rise we have experienced from increasing greenhouse gases (again mainly from burning fossil fuels) has been offset by these particles. Take away the pollution and we will actually see faster increases in temperature – as many European and North American cities that cleaned up are.

But there are more insidious effects of pollution on climate. The dimming effect is reducing how hot the Indian land mass gets and this, in turn, reduces the strength of the monsoon. The small particles serve as the nucleus around which cloud water droplets form – and the over-abundance of particles changes the behaviour of clouds and how they produce rain.

There is mounting evidence that these two effects may have resulted in a steady decrease of rainfall in the core monsoon region of India. A substantial portion of pollution in India also contains soot or “black carbon” that absorbs sunlight (unlike the sulphate particles) and these can actually “burn off” clouds by re-evaporating the water droplets. Soot has also been found deposited on snow and ice in high mountain areas where they can actually hasten melting. Couple this with the direct effects of ozone and black carbon pollution on agriculture (wheat crop losses alone are estimated to be between 5-15%) and you have a fairly grim set of consequences of air pollution.

Along with the health consequences of pollution, the reduced monsoon rainfall, enhanced melting of snow and ice, and agricultural losses should make us sit up and notice that what we have here is not just a week or two of discomfort, but a long-term change to the very natural systems that sustain us.

NGT gives nod to odd-even rule in Delhi; govt staff, women not exempt

<http://www.deccanchronicle.com/nation/current-affairs/111117/why-was-odd-even-not-applied-earlier-when-air-quality-was-worse-ngt-to-govt.html>

Earlier on Saturday, the NGT asked the AAP government the rationale behind implementing the odd-even scheme in the city.



The NGT on Friday said the scheme was a 'farce', and that it cannot be implemented from next week without its permission.

New Delhi: The National Green Tribunal on Saturday gave a conditional nod to the AAP government's decision to implement the odd-even car rationing scheme for five days from November 13, ordering that no exemption should be allowed to "any person or officer and two-wheelers".

The NGT said that the odd-even scheme should be implemented "without any default" as and when PM (particulate matter) 10 level goes above 500 microgrammes per cubic metre and PM 2.5 level crosses the limit of 300 microgrammes per cubic metre during a span of 48 hours.

A bench headed by NGT Chairperson Justice Swatanter Kumar ordered that there should be no exemption to "any person or officer and two-wheelers" from the ambit and scope of the road rationing scheme and would be applied with equal vigour to all vehicles.

Earlier, the government announced exemptions for women drivers, two-wheelers and vehicles carrying children in school uniforms, besides VVIPs.

Saturday's decision came after the Central Pollution Control Board (CPCB) and the Delhi Pollution Control Committee (DPCC) told the bench that two-wheelers were more polluting than other vehicles, and emissions from motorbikes accounted for 20 per cent of the total vehicular pollution.

However, the tribunal exempted CNG vehicles, emergency services such as ambulance and fire, and vehicles carrying waste.

"The Delhi government would be free to declare the odd- even scheme strictly subject to conditions. In terms of the environment ministry's notification order and Graded Response Action Plan as and when PM 10 and 2.5 cross levels of 500 and 300 microgrammes per cubic metre respectively, it shall be mandatory for the Delhi government to implement the scheme without any default," the bench said.

Taking strong exception to the decision to increase parking fees in Delhi by four times, the NGT ordered the Delhi government and the authorities concerned to reconsider the decision.

The tribunal said, "The hike in parking fees will only benefit the contractors and would stress people by encouraging them to park vehicles on the roads instead, choking them in the process."

"The extra money collected would not come to the government for sure. You are only enriching the contractors through the order," it said.

While passing a slew of directives, the NGT said every entry point to Delhi should be properly managed by the city government, the corporations should ensure that there was no congestion, and neighbouring states such as Uttar Pradesh and Haryana should depute special forces at the border of the national capital to avoid traffic jams.

"All the private transporters who have been granted permit by the Delhi government shall provide vehicles to carry essentials in coordination with the Delhi Transport

Corporation as part of their corporate social responsibility.

"Since it is commonly agreed that sprinkling of water is a substantial solution for decreasing the pollutant level in the air, the same shall be done without default in future and in the coming week unless it rains," the bench said.

The bench also issued notices to the National Highway Authority of India (NHAI) and the National Buildings Construction Corporation (NBCC) to show cause why exemplary cost should not be imposed on them and the erring officials be imprisoned for violation of its order putting a ban on construction activities.

It constituted a team of officials from the CPCB and DPCC, and the special secretary of environment department of the Delhi government, which would collect data of ambient air quality and analyse all different parameters including PM levels, carbon monoxide, sulphur dioxide etc.

"All the samples are to be analysed in the CPCB laboratory and at the IIT Delhi," it said.

The tribunal took note of thermal power plants operating around Delhi and said there were 30 plants producing 11,000 megawatt of power which are one of the biggest factors for contribution to the pollution as they contribute 80 per cent sulphate and 50 per cent nitrate which add to the air pollution.

"If emissions from these plants are controlled or are upgraded with technology it could largely impact the pollution condition in Delhi," the NGT said.

During the two-hour hearing, the Delhi government came under a scathing attack from the tribunal which asked the AAP dispensation why it did not introduce odd-even car rationing scheme earlier this month when the air quality was worse.

The NGT bench also came down heavily on the city government's decision to exempt some categories of people from the odd-even scheme and enhance parking fees to control pollution, terming it as "absurd".

"Why didn't you introduce odd-even earlier when air quality was worse? Measures such as enhanced parking fees to decrease pollution are absurd," the bench asked.

The tribunal also questioned the government if the decision to introduce the odd-even scheme was taken with the consent of the Lieutenant Governor.

"Is odd-even scheme at the whim and thought of a particular officer or the Delhi govt as a whole. Is it being implemented with the consent of both the Lieutenant Governor and Delhi government," it asked.

The car-rationing scheme, which was enforced twice in the national capital in 2016, will be in place between November 13 and 17 from 8 am to 8 pm.

Under the policy, private vehicles are allowed to run based on the last number of their licence plates.

Odd-numbered cars are allowed to run on odd dates while even-numbered cars can only run on even dates.

NIT-Trichy bags FICCI 'univ of the year' award

<https://timesofindia.indiatimes.com/city/trichy/nit-trichy-bags-ficci-univ-of-the-year-award/articleshow/61611225.cms>

Trichy: The FICCI higher education summit held in New Delhi has declared the National Institute of Technology (NIT), Trichy as 'The University of the Year'.

Director of NIT-T, Mini Shaji Thomas received the award, on Thursday night at the summit, from Dr Anil Sahasrabudde, AICTE chairman, in the presence of professor emeritus M M Sharma, Institute of Chemical Technology, Mumbai.

FICCI adopted an elaborate two stage screening process for selecting the top institutes for the awards. The first stage consisted of online application followed by shortlisting institutes based on their merits and a final jury evaluation based on a face-to-face presentation, said a press release from NIT-T.

Evaluation parameters included curriculum & pedagogy (changes in coursework to accommodate trends, global standard in education imparted), technology (effective use of leading-edge technologies for pedagogy and curriculum delivery, use of technology for daily administrative activities), research (patents, research output flow, funds procured employability), institutional social responsibility, students (development of students, outreach to new students) and faculty (ability to adapt to change, professional development, attrition rate).

NIT-T, having undertaken a major academic transformation couple of years back and appearing

almost on top of the list in terms of research publication, scored high on many of the yardsticks set for the award. The institute has made provisions for increasing the intellectual property of the institute with support for patenting.

NIT-T was all set to augment its faculty strength with the completion of the faculty recruitment process, according to the release, stating that NIT-T was ranked 11th amongst all technical institutions including the IITs and first amongst all NITs in the MHRD's National Institutional Ranking Framework (NIRF) during 2017.

November 11

Doctoral program in entrepreneurship launched by IIM-B

<https://www.brainbuxa.com/education-news/doctoral-program-in-entrepreneurship-launched-by-iim-b-7475>



Indian Institute of Management Bangalore (IIMB) has launched a doctoral program on entrepreneurship. According to the institute, the main aim of the program is to provide the required push which will further boost the entrepreneurship in the country and to create a pool of teachers specializing in the field.

According to the institute, the path of entrepreneurship in the country has seen its fair share of ups and downs with many sectors still open to the risk of the unknown. However, the trend is still an emerging trend and there is still lots to discover and therefore, must not be ignored.

The process entrepreneurship demands extensive research into various cultures and segments and the program aims to provide a new initiative which will redefine the India's job and business ecosystem.

NS Raghavan Centre for Entrepreneurial Learning (NSRCEL) Chairperson K Kumar stated "there is a

global movement to include entrepreneurship in the curriculum of mainstream education and that a lot of research still needs to be done on the subject. IIMB is India's first management school to offer an entrepreneurship specialization in FPM."

The program will be of five year duration with first two year including the coursework.

IIT-Madras develops app to capture real-time data on road accidents

<https://timesofindia.indiatimes.com/city/chennai/iit-madras-develops-app-to-capture-real-time-data-on-road-accidents/articleshow/61596626.cms>



CHENNAI: Tamil Nadu health minister C Vijay Baskar on Friday launched a mobile app to record road accidents in the state.

The app, developed by IIT-Madras, will capture real-time data from all government hospitals in the state. As a pilot, the app has collected information in trauma and postmortem impressions from five hospitals.

"Our aim is to reduce the number deaths due to the accident and also find out how such accidents can be prevented," said Vijay Baskar while launching the app at a conference at IIT-Madras.

The target of Sustained Development Goal (SDG) is to halve the number of global deaths and injuries from road traffic accidents by 2023. "To achieve this, it is essential to ensure timely referral and definitive treatment for the injured victims within the golden hour," the minister said.

The app will be used to study six major categories -- road accidents, fall injuries, assault cases, surgeries, head injuries and mode of patient transfer.

It would be extended to all the government hospitals under the programme, said Venkatesh Balasubramanian of the department of engineering design at the IIT-Madras.

"While the aim is to increase the survival rate of the injured people, we will be able to do research

on the reasons for the cause of trauma with the type of injuries. This will also help us prevent accidents," he said.

Australia-India Trauma System

The 182-year old Madras Medical College will be part of the Australia-India Trauma System (AITSC), which brings together the two governments, industry, clinicians and researchers to improve information and resources and pilot new systems of emergency care.

The state initiative is being led by the Tamil Nadu Accident and Emergency Care Initiative (TAEI), a new wing formed under the state health department to bring down fatalities in road traffic accident.

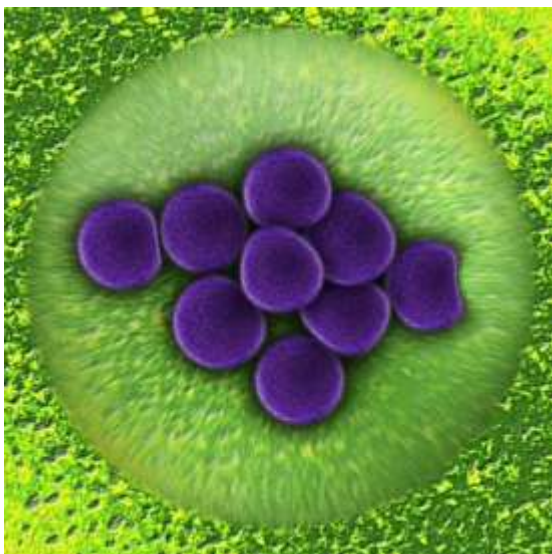
The TAEI was formed after the state had been continuously topped the country in the number of road accidents and fatalities.

The TAEI, in co-ordination with the IIT-Madras and the National Trauma Research Institute (Australia), organised the two-day conference at the IIT-M to discuss various issues including kinds of road accidents, the available pre-hospitalisation facilities, number of trauma care centres and facilities besides research on trauma.

"We aim at bringing the best practices to Tamil Nadu. AITSC is led by AIIMS in New Delhi," said the health minister.

IIT Roorkee discovers molecule to kill drug-resistant-bacteria

<https://www.siasat.com/news/iit-roorkee-discovers-molecule-kill-drug-resistant-bacteria-1255303/>



Roorkee: Researchers from Biotechnology Department at Indian Institute of Technology (IIT) Roorkee have developed a pioneering technique to reverse the drug resistance and enable antibiotics to effectively kill the bacteria.

The Drug-Resistant Bacteria uses 'efflux pumps' a system that acts as tiny motors to eject out the antibiotic from the cell's interior which prevents the drug from reaching its specific target area and thus helps bacteria to survive even in the presence of the antibiotic.

The groundbreaking research was led by Dr Ranjana Pathania, Department of Biotechnology at IIT Roorkee who discovered a molecule that would obstruct the expelling of the antibiotic from the cell's interior which would successfully lead the antibiotic reach its target thus killing the bacteria.

The molecule named as 'IITR08027' disrupts the cell's proton gradient responsible for the efflux of antibiotic by energizing the pumps. This molecule, when used in combination with fluoroquinolones, inhibits the efflux which allows the killing of bacteria in the cell.

The research published in International Journal of Antimicrobial Agents explained how the molecule can successfully effect the drug-resistant bacteria. The team has conducted a trial against the multi-drug resistant clinical strains of *Acinetobacter baumannii* which when combined with fluoroquinolones has given positive results.

Elaborating the mechanism of the drug's resistance Dr Ranjana Pathania said: "Antibiotic resistance in bacterial pathogens has been one of the major issues that plague the healthcare 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," he added.

A new search engine in the making which could beat Google at its game

<http://www.businessinsider.in/A-new-search-engine-in-the-making-which-could-beat-Google-at-its-game/articleshow/61581672.cms>



When it comes to searching information, we are automatically programmed to go to search engines. Even as the current search engine algorithms are great at working with fact-based queries and providing structured answers, they are surprisingly ineffective at answering subjective and personal questions.

It is this gap that IIT Kharagpur professors and Microsoft are trying to fill. They are trying to build a system that can form the basis for a deeper and more meaningful search engine.

Queries based on human experiences and personal opinions are not easy for a standard search engine to comprehend and hence at several instances they fail to answer questions such as - 'How to make small talk with new friends', 'People's favourite memories from school', 'How does it feel to immigrate to a new country and many more'.

The researchers at IIT-K are conducting a study to extract meaningful information from social conversations to help search engines answer social list queries better by deploying artificial intelligence and machine learning. For instance, the team is using multi-word hashtags, basically idioms, from Twitter to conduct a detailed study so that the search engine can give answers more accurately.

The researchers have in fact collected around four million hashtags that were trending between January 2015 and June 2015, and used a SVM (Support Vector Machine) classifier to conduct this research. Some of these hashtags were #foreveralone, #awkwardcompanynames, #childhoodfeels, and #africanproblems.

"While traditional search engines may struggle with such deeply human queries there are online platforms specifically tailored for personal opinions and conversations — social media. Twitter, specifically, has become a forum for people to create sustained online conversations held together by a common hashtag," Microsoft's Senior Applied Researcher Manish Gupta told the media.

"The algorithm used to conduct this study forms the basis for a better search engine for social platforms which can assist users looking for subjective information and trusted opinions," he said.

Microsoft currently owns search engine Bing. Earlier this year, Apple switched the default provider of its web searches for Siri on iOS and Spotlight on the Mac to Google from Microsoft's Bing. That means now if you ask Siri to search something on the internet, you will get Google results instead of Bing on iOS and Spotlight -- a system-wide desktop search feature of Apple's macOS and iOS operating systems. Apple's web browser Safari on Mac and iOS already use Google search as the default provider, thanks to a deal worth billions to Apple (and Google) over the last decade.

Given Microsoft's work to advance the field of artificial intelligence, the company has been confident that Bing would be at the forefront of providing a more intelligent search experience for its customers and partners. However, by associating with IIT-K to roll out a more meaningful search engine, the tech giant is looking to take on rival Google head-on, and find its place back in the market.

IIT-Madras launches executive MBA degree program

<https://timesofindia.indiatimes.com/city/chennai/iit-madras-launches-executive-mba-degree-program/articleshow/61578308.cms>

CHENNAI: Department of Management Studies (DoMS) at IIT-Madras has launched a two-year executive MBA (EMBA) degree program for working professionals.

The aim of the program is to offer knowledge that is in sync with the current industry requirements in domains like digital economy, future manufacturing and global strategy.

The program is designed for blended weekend learning and the classes would be held on alternate weekends. The classes will begin in January 2018.

Institute officials said the major aspects of the course include equipping mid-career working professionals with three main aspects - functional and broad industrial domain knowledge, integrative perspective of boundary-spanning business decisions and leadership traits to contribute in a global business setup.

The eligibility criteria for admissions include a first class bachelor's degree in any discipline and minimum three years of industry experience. Selection will be made through DoMS entrance examination and personal interview.

The last date to apply is November 30, 2017. Interested candidates can apply online on <https://doms.iitm.ac.in/emba/>.

Speaking about the launch, faculty coordinator R P Sundarraj said, "With over 50 years of experience and expertise in imparting management education, exploring leading edge research and conducting specialised training, IIT-Madras is uniquely positioned and carved a niche for itself in the business and academic worlds."

R K Amit, another faculty coordinator, said, "The EMBA program draws its strength from the DoMS's faculty who have been involved in high impact research and teaching in the frontier areas of management."

‘Govt aims to create job opportunities for youth, ensure rapid economic growth’

<http://thehitavada.com/Encyc/2017/11/11/%E2%80%98Govt-aims-to-create-job-opportunities-for-youth,-ensure-rapid-economic-growth-.aspx>



INDIA is a country with over 1.2 billion people, 379 million (31) of which are in the age group of 18 to 35 (Census 2011). Despite being educated many of these young people are looking for jobs. The Government aims to create employment opportunities for youth, while focusing on rapid economic growth.

The Government's assumption is that support for innovation will enhance entrepreneurship development which will in turn accelerate economic growth, opined Professor Pramod K Jain, Director, Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Manufacturing (PDPM IIITDM), Jabalpur. Professor Jain, Director, PDPM IIITDM was addressing inaugural ceremony of two-day National Innovation Drive 2017 being organised on 'National Convention on Digital Initiatives for Higher Education' at Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Manufacturing on Friday.

The event is being organised as per directives of Ministry of Human Resource Development, Central Government. As a part of national convention on Digital Initiatives for Higher Education, MHRD, GoI has directed all institutes of higher education to popularise this digital initiatives amongst students and invoke in them the culture of innovation so as to make 'Make in India' campaign a success. As a part of this initiative, the Institute is organising series of events on innovation amongst students of different institutes of higher learning in Jabalpur. Professor Jain further added that to focus on innovation and use of technology, the MHRD has set up Rashtriya Aviskar Abhiyan (RAA), a convergent framework that aims at nurturing a spirit of inquiry and creativity, love for Science and Mathematics and effective use of technology amongst children to encourage and support to heights of academic excellence and research.

Professor S S Sandhu, Dean of Students' Welfare, Rani Durgavati University who was present as keynote speaker, spoke about innovation and role of sub and unconscious mind in fulfilling aim to innovate. Explaining about the power of sub and unconscious mind, Professor Sandhu disclosed about roadmap of the goal. He explained that to achieve a goal, one has to stimulate his sub and unconscious mind and to define his thought clearly to the mind. Following which, he makes a clear picture of his thought and implants picture of those thoughts/desires deep in sub and unconscious mind.

Earlier, competitions like Hackathon on 'Digital India', poster session on 'Benefits of Plastic Money in Online Transactions' and others were organised for students. Later, a panel discussion was also organised on 'Digital India' which was attended by Professor Jain, Director PDPM IIITDM, Jabalpur, Professor Sandhu Professor V K Gupta, Professor A Ojha and Moderator Dr S K Jain.

NIT Agartala to set up rubber, bamboo research centres

<http://morungexpress.com/nit-agartala-set-rubber-bamboo-research-centres/>

Agartala, November 11 (IANS) The National Institute of Technology, Agartala, (NITA) has initiated to set up rubber and bamboo research centres to boost industries and employment in the northeastern region, a top official said here on Saturday.

"As Tripura is the second largest rubber producer in India, after Kerala, a viable rubber research centre can be set up in the NITA to boost the rubber cultivation, industries and employment," NITA Director Ajoy Kumar Roy told the media.

"Like other northeastern states, Tripura is a good bamboo growing area and a bamboo research centre is also necessary for the same purpose. A huge variety of bamboo are growing in Tripura, Mizoram and other northeastern states," he added.

Bamboo is also known as "green gold" in the northeastern region.

With over 75,000 hectares of land under plantation, Tripura produces over 60,000 tonne of rubber annually. The market value of the rubber produced in the state is over Rs 650 crore, of which 90 per cent is sent outside the state earning about Rs 620 crore.

India's second industrial rubber park has come up in Tripura's Bodhunagar area to boost the polymer industry.

The state government has also been developing India's first Bamboo Park at Bodhunagar industrial estate, 25 km north of here, at a cost of Rs 30 crore on 100 acres of land to help expand bamboo-based industries.

Roy, who got Padma Shri this year for his outstanding contribution in science and engineering, said: "In quest of effective industrial collaboration, NITA has signed Memorandum of Understanding (MoU) with three corporate and training institute.

"These are Oil and Natural Gas Corporation, North Eastern Electric Power Corporation and Bangalore-based iBuild."

He said that another MoU was signed between NITA and IIT Madras. These MoU would assist NITA to collaborate academic and research activities in the areas of mutual interest.