# Newspaper Clips
# December 1-15, 2017

## December 15

## FSSAI orders food safety audit in IITs, IIMs, AIIMS

http://indiatoday.intoday.in/story/fssai-orders-food-safety-audit-in-iits-iims-aiims/1/1110687.html

Food regulator FSSAI has ordered safety audits of canteens at 10 large educational institutes, including IITs, IIMs and AIIMS, in light of complaints with regard to food safety and hygiene standards.

The Food Safety and Standards Authority of India (FSSAI) said the audit will be done by empanelled 15 agencies, which will be given one month to submit their report.

The audit, the FSSAI said, has been ordered as a number of cases of food safety issues have been reported from hostels and canteens of various academic institutions in India.

"In view of this, the FSSAI has ordered special food safety audits of the canteens, cafeterias, hostel mess etc of 10 select large central institutes of higher education like IIT (Delhi, Mumbai, Chennai and Guwahati), AIIMS (Delhi and Jodhpur), IIM (Ahmedabad and Kozhikode), IISc Bangalore and IISER Kolkata," the FSSAI said in a statement.

To strengthen the food safety surveillance system, the FSSAI has taken up audits of food business operators through third-party audit agencies.

It has empanelled the 15 audit agencies in accordance with the Food Safety and Standard (Food Safety Auditing) Regulation, 2017.

The audit in select 10 institutes will help find out whether hostel mess, canteen or cafeteria where food is handled in these institutions comply with the safety and hygiene standards prescribed under the food safety law.

"These reports will give an insight into the existing standards of food safety and hygiene of these canteens, hostel mess etc and will help the FSSAI identify the gaps," the authority said.

The FSSAI expects that the results of these audits will serve as guidance to these institutions to improve and maintain the standards of food safety and hygiene on their premises, the statement said.

The authority has empanelled national and international food safety audit agencies like DNV, Bureau Veritas, Intertek, MS Certification, IRCLASS, SGS, BIS, TUV and Indocert, among others.

"For the time being, these agencies have been provisionally empanelled since the regulation is still at a draft stage," the FSSAI said.

## IIT-Roorkee team wins national award at Indian Roads Congress

https://telanganatoday.com/iit-roorkee-wins-national-award-indian-roads-congress

The team studied the existing IRC-58 code in depth to analyze the various gaps in the existing system and to recommend the necessary changes and modifications to make the IRC-58 code more robust.

Researchers from the Civil Engineering Department of the <u>Indian Institute of Technology (IIT) Roorkee</u> have been awarded the prestigious IRC National Award under the category of Bihar PWD Medal for Best Paper on Road Research for their research paper titled "Effect of modulus of Subgrade Reaction on Thickness of Rigid Pavement –A Case Study" during the Indian Roads Congress 78th Annual Session held in Bengaluru.

The award was presented to Prof. G.D. Ransinchung R.N., Surender Singh (Research Scholar), Prof. Praveen Kumar and Prof. Manoranjan Parida from IIT Roorkee for their research and study on addressing the shortcomings and flaws in the existing IRC-58, the only standard code available in India for construction of cement concrete pavement.

The team studied the existing IRC-58 code in depth to analyze the various gaps in the existing system and to recommend the necessary changes and modifications to make the IRC-58 code more robust.

The team analyzed various parameters related to the compacted subgrade soil, the sub-base and the cement concrete slab, and identifies the gaps and shortcomings in the current guidelines for construction. The study and the subsequent paper was an attempt to revamp the existing standard code "IRC:58-2015, Guidelines for the Design of Plain Jointed Rigid Pavements for Highways", the only standard code available in the country.

The team has concluded that modifications in the existing practices can help reduce the cost by around 20-25% and also be a great help for the PWD engineers, stakeholders and the rural engineering services who are looking at the implementation of the Pradhan Mantri Gramin Sadak Yojana (PMGSY).

"This is the need of the hour to revamp the present guidelines of concrete pavements. We suggested incorporation of various new parameters for revisions in the present guidelines. With these additions and changes there will be a significant improvement in terms of quality as well as reduction in the cost of project construction," Dr. Ransinchung said.

## <u>December 14</u>

## IIT दिल्ली के पांच छात्रों को सवा करोड़ का पैकेज

https://www.amarujala.com/delhi-ncr/campus/iit-delhi-5-students-got-placed-on-the-package-of-1-25-crore

आईआईटी दिल्ली में कैंपस प्लेसमेंट के पहले राउंड में बीटेक प्रोग्राम के छात्रों को पिछले वर्षों की तुलना में नौकरी के ऑफर में 17 फीसदी बढ़ोतरी हुई है, जबकि ओवरऑल यह बढ़ोतरी 10 फीसदी है।

इसके अलावा करीब पांच छात्रों को इंटरनेशनल पैकेज में एक से सवा करोड़ के बीच का पैकेज भी ऑफर हुआ है। प्लेसमेंट का दूसरा राउंड जनवरी 2018 में शुरू होगा। आईआईटी प्रबंधन के मुताबिक,

प्लेसमेंट के पहले राउंड में कंपनी से लेकर ग्रेजुएशन प्रोग्राम के छात्रों ने बेहतर उत्साह दिखाया है।

इंजीनियरिंग के कोर एरिया में छात्रों को नौकरी मिली है, यानी कंप्यूटर साइंस, मैकेनिकल और इलेट्रिक इंजीनियरिंग के अलावा विभिन्न पुराने और नए कोर्स में छात्रों को बेहतर नौकरी के विकल्प उपलब्ध हुए हैं।

## Nokia, IIT-Delhi to use AI to make networks more reliable

http://www.business-standard.com/article/news-ians/nokia-iit-delhi-to-use-ai-to-make-networks-more-reliable-117121400478_1.html

Nokia and the Indian Institute of Technology-Delhi (IIT-Delhi) have signed a Memorandum of Understanding (MoU) to use data science, analytics and Artificial Intelligence (AI) to make networks more efficient and reliable.

The collaboration will allow IIT-Delhi to leverage Nokia's technological leadership and expertise in communications networking to conduct research in these areas.

"New technologies require fresh thinking and working with the scholars of IIT-Delhi will allow us to push the boundaries of what is possible. The collaboration will help us to prepare for the future, for which skills in analytics and artificial intelligence are essential," Amit Dhingra, Vice President of Global Service Delivery at Nokia, said in a statement.

With networks becoming increasingly complex and data use growing exponentially, efficiency and quality-related challenges must be addressed pre-emptively to boost network performance and make services real-time, the company said.

Under the collaboration, IIT-Delhi research scholars from the applied mathematics, statistical and computer science fields will work with Nokia in India to develop software modules based on AI algorithms with machine learning, deep learning and predictive analytics.

"Working with major technology firms like Nokia allows us to develop new capabilities in advanced technologies. The collaboration will provide crucial exposure to our students and enable them to put theoretical topics to practical use," added B.R. Mehta, Dean of R&D at IIT-Delhi.

The self-learning and pre-emptive capabilities will help Nokia's service delivery to be 5G ready.

## December 13

## IIT Guwahati flagship event mentors over 100 NE students

http://www.assamtribune.com/scripts/detailsnew.asp?id=dec1417/city057

The winter session of the Ishan Vikas Programme – the flagship programme of IIT Guwahati to motivate the students of the Northeast and provide them with a platform to excel in higher education

– got under way from December 5.The fortnight-long event has been organised by IIT Guwahati at its campus, at IIT Delhi and IIT Bombay for more than 100 students from various schools across the Northeast India.

"Ishan Vikas is an outreach programme coordinated by IIT Guwahati for school and engineering college students from the north-eastern States. The aim of the programme is to introduce students from the north-eastern States to high-quality academic ambiance and thus render guidance on the career opportunities for higher studies," an IITG spokesperson said.

This year, in December, more than 100 students from various schools across the Northeast are visiting IIT Guwahati, IIT Delhi and IIT Bombay on the fortnight-long programme. Various activities that are taking place during the period are lectures, demonstrations, hands-on sessions in labs, workshops, quizzes, career counselling, cultural activities, health-care guidance, guidance on preparation for competitive exams, etc.

The programme is funded and supported by the Union Ministry of Human Resource and Development.

IIT Guwahati has been organising the programme since 2014 and has encouraged nearly 1,700 school students till date (December 2017) who have visited 24 institutes of higher education (15 IITs, 5 IISERs, 3 NIT and NIAS) across India.

Further, on a parallel front, until the summer of 2017, nearly 400 engineering college students were engaged in summer internships in various institutions for higher education.

The Ishan Vikas programme has provided an excellent platform for the young generation of the Northeast by exposing them to the intensive teaching and training, the state-of-the art equipment, cutting-edge research facilities, and most importantly, help them with a dream of being able to plan for higher studies.

## Make in India team arrives in Kota to promote 'maker's culture'

http://www.thehindu.com/news/national/andhra-pradesh/make-in-india-team-arrives-in-kota-to-promote-makers-culture/article21615948.ece

**Conducts workshop on ATV maunfacturing and designing at a college here**

The Make in India team consisting of experts, graduates from IIT Delhi and other prestigious institutes, arrived at NBKR Engineering College in Kota here in Nellore district on Wednesday.

They were here as part of a national initiative to promote 'maker's culture' and project-based learning approaches among the engineering students of different institutions across India.

DIYguru, India's first DIY learning platform, and others have taken up this initiative of enhancing maker's skills in the field of automotive design & engineering in partnership with Maker's Asylum, Vecmocon, Polaris, Google, Amazon and BAJA Tutor.

At NBKR, the team conducted a workshop on all-terrain vehicles (ATVs), in which students were given an overview of the automotive industry, Make-In-India initiative's involvement, BAJA and formula student competitions.

**Industry-ready**

Students were given a hands-on overview on design of roll-cage for ATVs and shown effective ways of designing and manufacturing an ATV.

NBKR director V. Vijay Kumar Reddy informed students of the opportunities available in automotive sector and encouraged them to participate in workshops that would make them industry-ready.

As part of this national initiative, they were training those students who were keen to do DIY projects in the fields of automotive engineering, aerospace, robotics, 3D printing, Internet of Things (IoT) and machine learning.

# 877 from IIT-M get jobs in first phase of placement drive

http://www.thehindu.com/news/national/tamil-nadu/877-from-iit-m-get-jobs-in-first-phase-of-placement-drive/article21437971.ece

**23 international offers were made**

The first phase of campus placement at the Indian Institute of Technology-Madras concluded with 62% of the students who registered getting offers.

As many as 132 more students have been placed compared to last year. Of the 877 students who were placed during the event, 114 received pre-placement offers.

Last year, 745 students had been placed, including 73 pre-placement offers, IIT officials said.

This year, at the end of phase 1 on Sunday, 23 international offers were made in contrast to 10 for the whole of last year.

International recruiters included American companies like Microsoft, Uber, Indeed and Rubrik (a cloud data management company); and Japanese companies including Mercari, Softbank and Sekisui Chemical.

A total of 763 offers were made to around 1,100 students.

In departments such as Computer Science and Engineering, Electrical Engineering and Engineering Design, 90% of the students received placement offers.

The recruitment of post-graduate students also saw a 10% rise. Similarly, placement among research scholars also rose to almost 50%.

**Offers from start-ups**

A total of 32 start-ups made 85 offers. Most of the start-ups were looking to recruit for the Analytics / IT job profiles, placement officials said.

Manu Santhanam, advisor, Training and Placement said, "While the total number of students [excluding PPO] placed was not different compared to the same time last year, the actual percentage went up from 56% to 62% this year."

IIT-M director Bhaskar Ramamurthi said, "Post-graduate placements call for more creative matching of specialised job profiles to the knowledge and skills of candidates.

This significant increase in placement of PG students so early in the season is heartening."

The Institute's head of postgraduate placement S. Ashok Kumar said companies like UIDAI, Qualcomm, Intel India, ABInBev and Bajaj Autos were interested in recruiting Ph.D. scholars who had worked on projects of interest to these industries.

## Industry role key to tech incubator, says IIT director

http://www.thehansindia.com/posts/index/Andhra-Pradesh/2017-12-13/Industry-role-key-to-tech-incubator-says-IIT-director/344997



*IIT Tirupati Director Prof KN Satyanarayana, SPMVV V-C Prof V Durga Bhavani and others releasing the brochure of SSIIE-TBI on the premises of the SPMVV in Tirupati on Tuesday*

**Tirupati:** Three constituents are to be brought together in the research path, which are vital to get better innovations, observed IIT Tirupati Director Prof KN Satyanarayana. Addressing at a programme held by SPMVV Society for Innovation Incubation and Entrepreneurship – Technology Business Incubator (SSIIE-TBI) on the premises of Sri Padmavathi Mahila Visva Vidyalayam (SPMVV) here on Tuesday, he explained that the three constituents are students, faculty and industry.

SPMVV is already having young minds, who are free to think and come up with fresh ideas. They have experienced faculty as well whose knowledge and guidance should help the students to think new and in an innovative way. The most important third constituent is industry because they understand markets well and what to sell etc.

Bringing all of them to one common platform and get them involved is important to make a good innovation. As far as SPMVV is concerned, they need strong representation from industry without which they will have very limited perspective of taking the initiative forward. Prof Satyanarayana has explained the concept of incubation they followed at IIT Madras and emphasised the need for multi institutional collaboration.

SSIIE-TBI CEO Y Mallikarjuna Reddy explained that SSIIEE-TBI started functioning from October 2017 as an initiative of SPMVV and national Science and Technology Entrepreneurship Development Board (NSTEDB), which provides a vibrant ecosystem and caters to the demands of business incubators. It offers entrepreneurs much needed infrastructure support and critical mentoring to turn their dream into reality.

It will also be inclined towards development of women entrepreneurs by mentoring them towards starting, owning and growing of their startups. SPMVV V-C Prof V Durgabhavani has said that the Central government has already sanctioned Women Technology Park and the University has applied for women bio-technology park which may be sanctioned by the end of this financial year.

The Trainers Centre by the UN is running in the varsity, she added. The integration of international outlook with local talent by having support from all quarters the institution will march forward. Later, the IIT Director has launched the brochure and newsletter of SSIIE-TBI. SPMVV Engineering College Director Prof K Ramakrishna Rao, SSIIE-TBI Secretary Prof S Jyothi and others took part.

### Govt to extend all help to clean energy researchers: Dharmendra Pradhan

http://www.hindustantimes.com/education/govt-to-extend-all-help-to-clean-energy-researchers-dharmendra-pradhan/story-ECRnkEWxavHKYKNwIMWsvN.html

**Laying emphasis on clean energy, the minister urged students at IIT Bombay to contribute to the development through their research and innovations.**



Solar Panels put up on the terrace of a building at the IIT Bombay campus in Mumbai. Union minister Dharmendra Pradhan said at a conference at the institute recently that there was no alternative to affordable, accessible, clean, sustainable energy, and that the government was committed to extend all kinds of cooperation to Indian institutions and researchers.

Union minister Dharmendra Pradhan on Tuesday stressed on the importance of energy in the development of the country, and assured the students of Indian Institute of Technology Bombay (IITB) that the government was committed to extend all kinds of cooperation to the institutions and researchers.

Speaking at the 6th International Conference on Advances in Energy Research at IIT Bombay, Pradhan said that scientific innovations could only be beneficial to the country's economy if the general public was able to reap the benefits of such innovations.

"There is no alternative to affordable, accessible, clean, sustainable energy, and our government is committed to extend all kinds of cooperation to our institutions and researchers," he added.

Pradhan also enumerated the government's initiatives for moving towards cleaner sources of energy, adding that India had become one of the first economies to make solar energy available to public in the state of Andhra Pradesh. Government also provided clean fuel to households across the nation.

"The government has provided clean fuel to 21 crore 50 lakh households out of a total of 25 crore homes in the country so far. Before, only 13 crore households had LPG," Pradhan said.

"With the efforts of our government, every village in India will get electricity by December 31 this year. This is our commitment and it is near completion," he said. Prime Minister Narendra Modi had launched another project of electrification of four crore houses by December 21, 2018, he added.

Laying emphasis on clean energy, the minister urged the students to contribute to the development through their research and innovations.

"Without energy, one cannot imagine a modern economy. That is why I put it lightly that if IIT Bombay's energy school wants, our country can progress," he added. "There is no dearth of scientific innovation, research, papers, and products but there must be a synergy of policy, industry and institution."

The three-day conference at IIT Bombay, started on Tuesday.

## December 12

## जिस आईआईटी से करेंगे पीएचडी, वहीं बनेंगे प्रोफेसर

https://www.livehindustan.com/career/story-phd-scholars-of-iit-will-be-directly-appointed-as-professors-1692891.html

भारतीय प्रौद्योगिकी संस्थानों (आईआईटी) में प्रोफेसरों के करीब 33 फीसदी पद रिक्त हैं। तमाम प्रयासों के बावजूद इस कमी को दूर करने में आईआईटी विफल रहे हैं। वजह यह है कि योग्य उम्मीदवार नहीं मिलते। इस समस्या को दूर करने के लिए आईआईटी अब अपने पीएचडी छात्रों को

ही प्रोफेसर नियुक्त करेंगे।

मानव संसाधन विकास मंत्रालय के सूत्रों ने इसकी पुष्टि करते हुए कहा कि इस संदर्भ में कैबिनेट के लिए एक नोट तैयार किया जा रहा है। जबकि प्रस्ताव को पूर्व में आईआईटी काउंसिल की मंजूरी मिल चुकी है। प्रस्ताव के तहत जो छात्र आईआईटी से पीएचडी करेंगे, उन्हें आईआईटी में सहायक प्रोफेसर के रूप में नियुक्ति का मौका दिया जाएगा।

## प्रतिभा पलायन की समस्या कम होगी

मंत्रालय के अनुसार, आईआईटी में रिक्त पदों पर लंबे समय से भर्ती नहीं हो पा रही है। खासकर नए खुले आईआईटी में यह समस्या ज्यादा गंभीर है। 23 में से 7 आईआईटी ही पुराने हैं। इसलिए यह निर्णय लिया गया है कि पीएचडी छात्रों को यह मौका दिया जाए। इससे फायदा यह है कि आईआईटी से पीएचडी करने वाले छात्र संस्थान की जरूरतों को बेहतर तरीके से समझ भी सकते हैं। दूसरे, यदि उन्हें पीएचडी शुरू करने के दौरान ही यह आश्वासन मिल जाए कि उन्हें आईआईटी में प्रोफेसर नियुक्त किया जाएगा तो वह निजी क्षेत्र में या विदेशों को पलायन का विचार त्याग देंगे। मंत्रालय ने कहा कि इसके लिए कैबिनेट की मंजूरी चाहिए। क्योंकि इसके लिए नियुक्ति संबंधी नियमों में बदलाव करने पड़ेंगे।

## पीएचडी करने वालों की संख्या में इजाफा होगा

मंत्रालय का कहना है कि यदि यह योजना साकार होती है तो इससे एक और फायदा यह होगा कि आईआईटी में पीएचडी करने वालों की संख्या में भी इजाफा होगा। पिछले कुछ समय से आईआईटी में पीएचडी करने वालों की संख्या घट रही है। वजह यह है कि ज्यादातर छात्र बीटेक के बाद ही नौकरी पकड़ लेते हैं। इसलिए एमटेक और पीएचडी के लिए आईआईटी के अपने छात्र कम पड़ रहे हैं। बाहर से भी अच्छे छात्र कम आ रहे हैं।

## Int'l workshop on Physics of Semiconductor Devices organised at IIT Delhi

http://www.business-standard.com/article/news-ani/int-l-workshop-on-physics-of-semiconductor-devices-organised-at-iit-delhi-117121201283_1.html

A four-day 19th International Workshop on Physics of Semiconductor Devices (IWPSD-2017) began on Tuesday at IIT Delhi.

Chairman Indian Space Research Organisation (ISRO) and Secretary, Department of Space A.S. Kiran Kumar formally inaugurated the event.

The main objective of the workshop is to provide an international forum to deliberate and share the emerging semiconductor Research and Development (R&D) fields in electronics; Very-large-scale integration (VLSI) technologies, Sensors, GaN (Galium Nitride) Materials and Devices, Crystal Growth and Epitaxy, Photovoltaics, Organic Semiconductors and Semiconductors for Quantum Computing among other.

Special emphasis was given on the role of semiconductor technologies in defence, space and other civilian applications.

A number of prominent Industries in the area of semiconductor R&D showcased their products along with a special industry session, mainly organized to promote 'Make in India' theme for exploring possibility of establishing semiconductor and electronics chips manufacturing in India.

A.S. Kiran Kumar in his inaugural address emphasized the need for creating and adopting indigenous technologies. He highlighted that many of the devices used in space missions are being fabricated at GAETEC (A DRDO unit), but the scope is tremendous.

Chairman DRDO and Secretary Department of Defence R&D Dr S Christopher presided over the function.

While extending all possible help to establish the semiconductor foundry/chip manufacturing in India, he expressed the hope that the electronics chip manufacturing industries would explore the incentives under 'Make in India' and tap the huge Indian Electronics market particularly the solar power and LED lighting.

Scientific Advisor to Raksha Mantri Dr G Satheesh Reddy stressed the need for development of navigation grade sensors, MEMs pressure sensors and accelerometers, T/R modules based on GaN technology, large format and low pitch IR detectors.

Director IIT, Delhi Prof. V Ramgopal Rao mentioned that IWPSD is the oldest international conference held in India in the area of semiconductor technology.

Renowned scientists and technologists from USA, Europe, Asia Pacific and other countries and over 130 internationally acclaimed plenary speakers were invited on the occasion.

## Delhi University, IIT among 100 seeking world-class university tag from UGC

http://www.business-standard.com/article/current-affairs/delhi-university-iit-among-100-seeking-world-class-university-tag-from-ugc-117121201056_1.html

The UGC had in September started inviting applications from all institutions that are keen to enter the top 100 of global rankings with the government's assistance

The University Grants Commission (UGC) has received 100 applications, maximum being from public institutions, including seven IITs, for the Human Resource Development Ministry's ambitious 20 world-class institutions project, according to an official data.

The 90-day deadline of receiving applications from all institutions expires today.

Under public sector, 10 central universities, 25 state universities, six deemed to be universities, 20 institutions of national importance and six stand-alone institutions have applied.

Under private sector, nine private universities and 16 deemed to be universities have applied in brown field category and eight institutions have applied in the green field category.

"Overwhelming response to the idea of institutions of eminence. This is how world-class uiversities were built in various countries. The same thing will happen in India," Union HRD Minister Prakash Javadekar said.

Among those who have applied from the public sector are seven Indian Institutes of Technology (Madras, Delhi, Bombay, Kharagpur, Kanpur, Guwahati, Roorkee), Delhi University and Jawaharlal Nehru University, Jadhavpur University, Goa University, Panjab University and Mangalore University.

From the private sector, the O P Jindal Global University, Ashoka University, Manipal University and Amity University, among others, have applied for the tag.

The UGC had in September started inviting applications from all institutions that are keen to enter the top 100 of global rankings with the government's assistance.

The Centre wants to establish a total of 20 'Institutes of Eminence' -- a distinct category of deemed-to-be- universities, supporting them to become "World Class" institutions.

By March-April 2018, 20 (10 each from public and private category) institutions will be accorded the eminence status with a mandate to achieve the world-class status over a period of 10 years.

The selected institutions will have the freedom to choose their own path to become world-class institutions.

"They will be provided with greater autonomy to admit up to 30 per cent foreign students, to recruit up to 25 per cent foreign faculty, to offer online courses up to 20 per cent of its programmes, to enter into academic collaboration with top 500 in the world ranking institutions without permission of the UGC," a senior HRD Ministry official said.

The instituions will also be free to fix and charge fees from foreign students without restriction and will have a flexibility of course structure in terms of number of credit hours and years to take a degree and fixing of curriculum.

As per the guidelines issued by the UGC, institutions in the top 50 of the National Institute Ranking Framework (NIRF) rankings or those ranking among top 500 of the Times Higher Education World University Rankings, QS University Rankings or Shanghai Ranking Academic Ranking of World Universities were eligible to apply.

New institutions were required to submit a 15-year vision plan to be among the top 500 globally ranked institutions, while existing institutions among the top 500 had to offer a plan to improve their ranking to be among the top 100 in the next 10 years.

A screening committee will go through the applications and select the institutions.

## NDLI to provide J&K students free online access to 1.5 cr learning resources

http://www.dailyexcelsior.com/ndli-provide-jk-students-free-online-access-1-5-cr-learning-resources/

J&K's Department of Libraries and Research today rolled out the maiden initiative of linking up with National Digital Libraries of India (NDLI) to provide free worldwide access to the students and academicians in the State to around 1.5 crore downloadable e-books and journals.

The unique initiative was launched on the sidelines of a workshop on 'Digitized Libraries' organized by the Department of Libraries and Research here this morning.

The workshop was inaugurated by the Minister of State for Education, Priya Sethi.  Director Libraries and Research, Mukhtar-ul-Aziz, Professor IIT Kharagpur, ParthaPratim Das, Chief Librarian NDLI, N Gopal Chattopadhayay and other senior officers of the Libraries Department were present on the occasion.

National Digital Libraries of India is an online repository of the e-books under the aegis of Union Human Resource Development Ministry. It has been developed by Indian Institute of Technology (IIT) Kharagpur.

The repository hosts content in multiple languages on multiple subject domains including technology, science, humanities, agriculture and others with educational material available from primary to PhD level. The learning resources include e-books, journals, articles, thesis, manuscripts, audio and video lectures.

To integrate J&K's libraries with the online repository of National Digital Libraries of India, the State's Libraries Department has already launched a massive digitization programme under which all the libraries in the State are going to be digitized in a phased manner. The National Digital Libraries of India will be also imparting training to the staff of the Libraries Department in J&K regarding the use of online services.

Speaking at the inauguration of the workshop, Priya Sethi said in the age of internet, massive changes are occurring in life and it has become necessary to adopt and take benefit from new technological inventions and digital interventions.

She said the new initiative will help the students to get online access to the best possible educational resources within and outside the country. "Once our libraries are fully digitized, joining hands with NDLI will contribute a lot in facilitating the teaching-learning process and the research work," she said.

Speaking on the occasion, Director Libraries, Mukhtar-ul- Aziz said the department has computerized all District and some Tehsil level libraries in the State so far and in the process to make all State libraries fully digitized in a more user-friendly way. The aim of this project is to integrate all national libraries, which will be centrally linked with central server to facilitate J&K students to take advantage of the massive learning resources available online.

# December 11

## IITs, JNU, DU seek to become 'Institutes of Eminence'
http://www.hindustantimes.com/education/iits-jnu-du-seek-to-become-institutes-of-eminence/story-RXG81srbmV9yqkHBfzz35J.html

**In 2016, the government announced plans to create 20 world class universities in India -- 10 each from the private and public space.**

Many of India's best-known universities and colleges, including Delhi University, Jawaharlal Nehru University, Panjab University, most of the top Indian Institutes of Technology (IITs) and a number of state universities have joined the race to be named institutes of eminence.

Several people familiar with the matter said that, till Monday evening, the human resources development (HRD) ministry had received 73 applications from institutions wishing to be named institutes of eminence, which will come with significant financial and academic autonomy, and, for government institutions, financial support.

Among those who have applied are the seven IITs at Madras, Delhi, Bombay, Kharagpur, Kanpur, Guwahati and Roorkee, as well as Jadavpur University, Goa University and Mangalore University. From the private sector, OP Jindal Global University, Ashoka University, Manipal University and Amity University have applied.

The deadline is December 12, and ministry officials expect close to a hundred applications.

So far, they added, six private institutions have also applied to be named institutes of eminence. The private institutes will not be eligible for government funding if they get the tag.

The ministry is expected to start on the process of shortlisting institutes soon.

"The response has been overwhelming and we are hoping to get more applications by tomorrow, which is the last day. Central and state universities, and IITs have also applied ," said a senior University Grants Commission (UGC) official on condition of anonymity.

In 2016, the government announced plans to create 20 world class universities in India -- 10 each from the private and public space. Existing as well as upcoming institutions can bid for the tag. Since then, the name has changed from world class university to institutes of eminence.

The UGC has already notified the UGC (Institutions of Eminence Deemed to be Universities) Regulations, 2017, for private institutions and UGC (Declaration of Government Educational Institutions as Institutions of Eminence) Guidelines, 2017, for public ones.

Unlike other institutions, the 20 institutes with the status of eminence will get greater autonomy to start new courses, set fees, admit foreign students, hire foreign faculty, and collaborate with foreign educational institutions without seeking government approval.

The government will invest Rs10,000 crore over the next few years in the 10 public higher education institutions short-listed.

"The objective is to provide for greater academic, financial, administrative and other regulatory autonomy to 10 public and 10 private higher educational institutions to emerge as world-class teaching and research institutions. They will have an emphasis on multi-disciplinary initiatives, high-quality research, global best practices and international collaborations," said a senior HRD ministry official, who asked not to be identified.

The institutions will be evaluated by a panel of experts and the names of the selected institutes of eminence are expected by March 2018.

Government institutions which are ranked among the top 50 by the HRD ministry in their respective categories such as engineering, general universities or management are eligible to apply for the status. The institutions were all asked to present a report on how they plan to achieve excellence over the next 15 years.

## JEE Advanced 2018: Top 10 IITs and how they rank on domestic and international rankings

http://www.timesnownews.com/education/article/jee-advanced-2018-top-10-iit-delhi-bombay-madras-ranking/144030

Indian Institute of Technology, IIT have long inspired lakhs of students in the country and with good reason. Not only do they have the best facilities for engineering and technical education in the country, they are recognized the world over as a center excellence. And with JEE Main 2018 online application forms out, the process for admissions to IITs is also on. Candidates interested in getting through the IITs have to clear the JEE Main examination first to write the entrance test for IITs – the JEE Advanced

2018. But how do these colleges rank amongst themselves and more importantly at a global level. Here is the list of Top 10 IITs and how they rank on domestic and international rankings.

Before we get to the list, there is a word of caution. Every publication has different parameters on which they rank an institute. In order to provide a standard ranking, the NIRF or National Institutional Ranking Framework for domestic ranking and QS World University Rankings (By Subject) for International rankings have been taken as reference points. Candidates are advised to understand the parameters used to assess their choices.

| Name of the Institute | NIRF Ranking/ Domestic Ranking | QS World University Ranking (By Subject)/ International Ranking |
|---|---|---|
| IIT Madras | 1 | 110 |
| IIT Bombay | 2 | 78 |
| IIT Kharagpur | 3 | 150 |
| IIT Delhi | 4 | 71 |
| IIT Kanpur | 5 | 129 |
| IIT Roorkee | 6 | 231 |
| IIT Guwahati | 7 | 332 |
| IIT Hyderabad | 10 | Not Available |
| IIT Tiruchirapulli | 11 | Not Available |
| IIT Rourkela | 12 | Not Available |

Interestingly, while in the domestic ranking, IIT Bombay ranks higher than Delhi, international ranking places IIT Delhi 7 places ahead of IIT Bombay at 71 against the formers 78th rank. Also, while IIT Madras is at the top place in domestic rankings, international ranking makes IIT Delhi the best IIT in the country. The disparity in the ranking parameters is the cause of the wide fluctuations. Students planning for IITs should accordingly give due consideration to the choices available.

# IIT Roorkee researchers develop a chemical sensor for detection of explosives

http://www.firstpost.com/tech/news-analysis/iit-roorkee-researchers-develop-a-chemical-sensor-for-detection-of-explosives-4253483.html

Researchers at **Indian Institute of Technology, Roorkee**, have synthesised a new compound that can be used to develop **sensors** for detecting picric acid, which is a major component of explosives.

The new compound, called beta-dicyanovinyl substituted porphyrinogen, has been found to be capable of detecting picric acid at even as low a level as 1.12 parts per million. The colour of the substance changed from reddish-pink to purple as per concentration of picric acid. The substance can be reused any number of times, according to Dr Muniappan Sankar, leader of the research team.

The same substance can also be used to detect cyanide and fluoride ions even when they are hidden within a mixture of other anions by unique colour changes. The simultaneous and independent 'naked-eye' detection of picric acid, cyanide and fluoride ions is the added advantage of the new chemo sensor.

Like picric acid, cyanide and fluoride ions can also be detected at very low concentrations, at micromolar or ppm levels. The minimum dose for fluoride is 13 micromolar and for cyanide 8.4 micromolar. Here also the detection is through change in colour.

Though cyanides are highly toxic, they also find use in a wide range of industrial processes from electroplating, metallurgy and heap leaching of gold ore to steel manufacturing and as raw material for synthetic fibers, resins and herbicides. "Release of cyanide ions into the environment due to its increased usage in industrial applications raises the risk for accidental or intentional release as a toxic contaminant. Both biological and environmental aspects necessitate development of selective cyanide-receptors," explained Dr Sankar.

Similarly, fluoride-containing compounds such as sodium fluoride or sodium monofluorophosphate are used in topical and systemic fluoride therapy for preventing tooth decay, besides various products associated with oral hygiene. But soluble fluoride salts, of which sodium fluoride is the most common, are toxic, and have resulted in both accidental and self-inflicted deaths from acute poisoning.

Dr. Sankar conducted the study in collaboration with colleague, Mandeep K. Chahal. They have published a report of their work in Royal Society of Chemistry's journal *Dalton Transactions*.

## December 9

## IIT Kharagpur becomes India's first university to get ISO Certification

http://www.millenniumpost.in/kolkata/iit-kharagpur-becomes-indias-first-university-to-get-iso-certification-274500

Central Library at IIT Kharagpur has received ISO 9001:2015 Certification thereby becoming the first library in the country to have this certification.

According to a senior professor at the institute, the two unique innovations introduced in the library in recent times have given its library an edge. The National Digital Library of India (NDLI) commissioned by the Ministry of Human Resource and Developed by IIT Kharagpur has democratised the face of education in India. This online digital treasure-trove has already been able to bring in as many as 1.26 crore books, journals, periodicals and research materials from nearly 100 leading institutions across the country and the world at one's fingertips.

IIT Kharagpur also released the mobile app in April 2017 giving one who has a smartphone the opportunity to access the collection anytime and from anywhere in India.

An innovative "Reading Lounge" established at the Central Library recently has advanced facilities like video conferencing, conducting presentation and e-book readers for accessing e-books, computers with sophisticated touch screen monitors etc.

Commenting on the new feather in IIT KGP's cap, Director Partha Pratim Chakrabarti said: "We are trying to develop more innovations by taking suggestions from students and others on how we can utilise this in the best possible manner and create more special features like the Lounge, NDL, etc."

The Central Library at the premier institute is one of the largest and finest technical libraries in Asia. It has been catering to the needs of the 10,000 students who are undergraduates, postgraduates, research scholars, 700 faculty members and more than 1,000 staff members of the 19 departments, 9 centres, 12 schools and 15 research facilities of the Institute.

# AICTE's new ruling to bring transparency in fee charged by technical colleges

http://digitallearning.eletsonline.com/2017/12/aictes-new-ruling-to-bring-transparency-in-fee-charged-by-technical-colleges/



All India Council for Technical Education (AICTE) has asked all the technical institutions to publish complete details list of fees on their respective websites.

The step is supposed to bring transparency so that no student is duped and the colleges will not be able to charge students for any other costs. Colleges failed to adhere to the new rule, will be fined double the total fees collected per student by AICTE. In addition to this new rule, the council is likely to suspend approval for NRI and supernumerary seats given to any institution for an academic year.

The new rule also states that the institutes affiliated to AICTE are not allowed to have names in a way that the abbreviated form of their name matches the country's premier institutes such as IIM, IIT, IISc, NIT or government bodies such as AICTE, UGC, MHRD, GoI.

The notification issued by the council, reads, "The applicant shall also not use the word(s) Government, India, Indian, National, All India, All India Council, Commission anywhere in the name of the Technical Institution and other names as prohibited under the Emblems and Names (Prevention of Improper Use), Act, 1950." The notification also extends to foreign universities/institutions

operating in India by opening their own centres or having entered into partnerships with domestic institutions.

According to a senior official, the purpose of this rule is to avoid confusion. He also added that the naming of institutes in similar lines that of the country's premier institutes is often done to mislead students and to get more admissions.

# December 8

# IIT-DELHI SAYS NO TO UNDUE PUBLICITY TO PLUMP PACKAGES
HTTP://WWW.DAILYPIONEER.COM/CITY/IIT-DELHI-SAYS-NO-TO-UNDUE-PUBLICITY-TO-PLUMP-PACKAGES.HTML

The prestigious Indian Institute of Technology Delhi (IIT-D) is not only known for excellence in academic standards but also for maintaining high values and ethics, as contrary to the other institutes which take pride in declaring the highest paid jobs bagged by their students in the campus placements, the IIT-D follows the policy of not mentioning the high-value packages in their placement.

The IIT Delhi claims that it follows the precedent because it feels that undue publicity to packages have the effect of 'devaluing' national placements over the international ones. It is well-known that many international companies prefer hiring IIT students over others, at handsome packages, much higher than Indian companies usually afford to pay.

For students, getting placed in a multinational company is no less than a badge of honour, however many of them prefer to settle abroad afterwards. A senior professor of Delhi University (DU) who didn't wish her to be named said that the government spends lakhs of rupees on each IIT student and it is the "public" money that is being spent on their education. "After which finding a well-off job they easily migrate abroad, this is a setback to us both in terms of brain drain and money drain," she said.

Experts opined that with the state of research and innovation not very appealing in our institutes it's a necessity not to profess the high-end placements as it will set a wrong example in front of those who aspire to enter such institutes. In that case, they may be inspired to enter such institutes, only to get a well-off jobs rather than for doing the research.

However, the students who bagged international jobs were quite excited. Nikhil Chaturvedi has got an offer with Microsoft at their Redmond office in the US. "I love coding and this will be a great platform to hone my skills," said Nikhil who also interned with Microsoft.

However, at the ongoing placements at IIT-D more than 500 students were hired with over 25 international offers. The placement season had 'kick-started' on December 1 with more than 200 offers including 20 international ones were made on the inaugural day itself. The offers came from multinational companies in Singapore, Hong Kong, US, Amsterdam and Japan. The phase 1 of the placements will continue till December 15 afterwards the phase 2 will commence from January 2018.

The IIT Delhi also feels that mentioning high-value packages in placements will have a devaluing effect on core jobs over finance and consulting jobs.

# IIT placements jump up by 30%; more than 900 offers received by IIT Kharagpur in first 6 days

http://www.businesstoday.in/current/economy-politics/iit-placements-jump-up-30-percent-900-offers-iit-kharagpur-first-6-days/story/265542.html

Things are looking great for IIT students as around 50-60 per cent of students have already been placed within a week since placements began. Placements for some of the older IITs are, in fact, up by 30 per cent from last year. It must be mentioned here that 2016-2017 was a slow year for placements.

Economic Times quoted Debasis Deb, Chairman of the career development centre at IIT Kharagpur that last year placements had slowed down but this year they are back to 75 per cent. Although around 75-79 per cent students across IITs usually get placed during the annual recruitments, but last year the average had dipped to 66 per cent of overall students. This year the numbers are catching up with the general trend.

Leading the IITs is IIT Kharagpur that has bagged more than 900 offers in the first six days itself. Debasis Deb mentions that it is an all-time record and that placements have jumped by 27 per cent from the same period last year. Things are similarly upbeat at IIT Madras where 144 companies have offered 540 jobs to its students. According to the Economic Times report, more than 53 per cent of students at IIT Guwahati have also landed jobs.

Placements at IIT Roorkee and IIT (BHU) Varanasi have also shot up by 30 per cent. At IIT BHU 527 students out of 1,055 students - that is 50 per cent - have already been placed.  IIT Roorkee too has received 600 offers, a significant hike from last year's 500 offers in the same period.

"Recruiters are hiring in big numbers this year as most companies are building teams for innovation and research," said NP Padhy, professor-in-charge, training and placement, IIT Roorkee, as mentioned in Economic Times.

Companies like Goldman Sachs, Samsung, Citi, and Microsoft have all gone to IIT campuses this year. This year Apple Inc., Nasdaq and Rubrik have also debuted. A host of Asian companies from Japan, Taiwan, South Korea and Singapore have made their way into recruitments as well.

Out of the companies, Microsoft is offering the fattest paycheck of Rs 1.39 crore across campuses.

This is only the first phase of the final placements and will continue till mid-December. Placements will resume in January and continue till March-April after a short break.

# IIT Varanasi ties up with Tata Motors for innovative programs in education and research

http://www.timesnownews.com/education/article/iit-varanasi-ties-up-with-tata-motors-for-innovative-programs-in-education-and-research/142355

Mumbai: The country's third largest car maker Tata Motors has partnered with IIT Varanasi to launch innovative programs in education and research, aimed at bridging the gap between academic excellence and business know-how. As a first step of this technological collaboration, the two entities

will work in areas of mutual interest, with an aim to cater to the future engineering needs of the industry and academia, as per a release issued today.

Tata Motors and IIT Varanasi have signed an initial pact, which will be valid for five years, to give effect to the partnership, under which joint R&D projects will also be undertaken for the development of new technologies in various engineering domains, the release said.

"Through this Memorandum of Understanding (MoU), we intend to have a multi-dimensional partnership with IIT BHU, which will help us retain our competitive edge and develop next-gen engineering skills, not only within the company but also that of our academic partners with future ready faculties," Tata Motors' chief human resources officer Gajendra Chandel said on the tie-up. "With fast-changing technologies and market conditions, we understand the need to articulate a clear roadmap towards a world-class, competent, talented and innovative workforce," Chandel added.

This partnership will help Tata Motors bridge the gap between academic excellence and business know-how, to create industry ready resources besides supporting Make in India, Skill India and Startup India programmes, he said. "This partnership will enable joint research in specific areas which will feed into the future products of Tata Motors, as well as advanced training of students. We are looking that at the end of the program we will have created a talent pool which is ahead of the curve, acquiring advanced knowledge, and narrowing the skills-gap," IIT (BHU) Varanasi Director Rajeev Sangal said about his university's collaboration with the domestic auto major.

## December 7

### Fresh IT boom in making? Tech firms are season's top recruiters

https://timesofindia.indiatimes.com/business/india-business/it-wave-at-iits-tech-firms-are-seasons-top-recruiters/articleshow/61955107.cms?



MUMBAI: Placement 2017 has been about IT companies indulging in bulk hiring.+ On most campuses, tech firms have emerged as the largest shoppers for talent. Each company has identified its favourite college and picked up a large number of graduates-a throwback to the IT boom era. Is this the start of the Big IT Bang again?

IIT Kanpur witnessed the biggest wave as Intel picked a full-class size of 59 candidates. It came with two profiles -hardware and software- and picked up computer science graduates for coding and

electrical engineering students for hardware openings.

"I am seeing a growth in core and IT field+ . The bulk recruiters are very cautious. When they are getting good slots and meeting our nine-pointers with an internship experience abroad and carrying a resume with an idea, they cannot stop themselves from recruiting them," said IIT Roorkee placement head N P Padhy.



**PLACEMENT 2017 TRENDING**

Bulk recruitment by IT majors at IITs this placement season

| Institute | Company | Offers |
|-----------|---------|--------|
| IIT Bombay | Samsung | 45 |
| IIT Delhi | Intel | 32 |
| IIT Kanpur | Intel | 59 |
| IIT Madras | Qualcomm | 28 |
| IIT Kharagpur | EXL | 19 |
| IIT Guwahati | Tata Motors | 19 |
| IIT Roorkee | Microsoft | 23 |

Some of the companies, say placement heads, had plans to pick up fewer students but ended up taking many more. "They came with a plan to pick up five or six, but ended up taking 23," he added. But bulk recruitment was still largely seen in the top brands, reflecting the fact that the big wave may have just started.

At IIT Bombay, Samsung picked 30 students from campus placements and 15 others were offered pre-placement offers. Candidates will be placed in the Korea, Noida, Delhi and Bangalore offices. Last year, the company hired 22 students.

"Compare last year's placement with that of this year and in every way, it is 25 per cent better. Companies are picking up more students, the pay is better and so are the profiles," said a placement team member from IIT Kharagpur. The spike is evident across campuses that crossed the 500 mark in terms of students placed by Day 5. And bulk recruitment has only helped prop up the numbers. IIT Guwahati placement dean Kaustubh Mohanty said the trend is a result of the government's policy and encouragement provided to the core engineering sector. "The hiring is more this time and we are delighted about it. Moreover, the core companies are preferring MTech students for hiring," added Mohanty. Many companies that visited IITs said the top 5 per cent of the graduates were improving each year. "Some of the students in fact wowed the recruiters when they spoke of the research they had done and already had come up with ideas for products that they could develop if hired," added Padhy.

# IIT-Madras students get 540 job offers in first four days
http://www.deccanchronicle.com/nation/current-affairs/071217/iit-madras-students-get-540-job-offers-in-first-four-days.html

**The placements of post-graduate students and research scholars have increased by 10 per cent and 19 per cent.**

**Chennai:** In a bright start to the placement season, students from IIT Madras has got 540 offers from 144 companies in the first four days which is an increase of 10 per cent compared to last year.

The placements of post-graduate students and research scholars have increased by 10 per cent and 19 per cent.

Companies like Qualcomm, Intel India and Unique Identification Authority of India (UIDAI) and Bajaj Auto showed interest in recruiting PhD scholars this year.

IIT Madras has the equal number of PG and UG students. "This significant increase in the placement of PG students so early in the season is heartening. It also demonstrates that companies with high-end engineering and technology positions are thronging to IITM to recruit its highly-qualified PG students," IIT Madras director Bhaskar Ramamurthi said in a release.

"This increase shows that IIT-M students are being increasingly preferred for research-oriented positions by the Industry," said Professor Manu Santhanam, advisor, Training and Placements, IIT Madras.

"This year there is a lot of emphasis on domain knowledge. Companies are looking for quality candidates with good academic credentials, especially for the Research Positions," he said.

The institute has received 22 international offers so far. "Even though the 'Graveyard' session, which was held mainly to facilitate interviews with recruiters in the U.S., was scrapped this year, the total number of international offers has increased from 10 last year to 22 in the first four days," he added. The first phase of placement season has started on December 1.

# CRFI best cancer research award for staff of IIT-Bombay
http://www.assamtribune.com/scripts/detailsnew.asp?id=dec0717/city062

Dr Deepak S Chauhan and colleagues from the Department of Biosciences and Bioengineering at Indian Institute of Technology (IIT)-Bombay have been chosen for the Cancer Research Foundation, India (CRFI) Best Research Award-2018.The award carries cash prize and a citation. Dr Chauhan and his research team from IIT-Bombay have synthesised polymer gold nanoparticles heated by near-infra red light for killing cancer cells. They have collaborated with the Tata Memorial Centre, Mumbai for their research.

According to Dr Mouchumee Bhattacharyya, vice-chairperson and head of the Scientific Advisory Committee, CRFI, the use of nanotechnology or targeted nanoparticles in the treatment of cancer has opened a new vista in the field of oncology, including the possibility of destroying cancer cells with minimal damage to the surrounding healthy tissue and organs.

Use of conventional cancer chemotherapy distributes the chemotherapeutic drug non-specifically in the human body. Thus these drugs affect both cancerous and normal cells. Earlier, the major challenge for using nanotechnology was that, nanoparticles degrade before they can deliver the intended drug to destroy cancer cells.

However, using near-infra red light heating technology, researchers from IIT-Bombay have overcome this problem. They have named this nanoparticle as Toco-Photoxil and have successfully tested it on animals.

Dr Manigreeva Krishnatreya, general secretary of CRFI, said that Toco-Photoxil could be used in cancer patients only after safely conducting Phase-I clinical trial to translate the new technology to treat cancer patients in the real-world settings. Further, the new nanoparticle is inert and biodegradable, which makes it safe for use in human beings, he said.

## Do Indian educational institutes take plagiarism seriously? Educationists weigh in

http://www.thenewsminute.com/article/do-indian-educational-institutes-take-plagiarism-seriously-educationists-weigh-72790

While there are now regulations mandating that all institutions mandatorily check for plagiarism, a revision of academic culture is still needed.*for representation*



Of the several cases that he has found of students plagiarising their work, Kalyan Arun, a professor of New Media in Asian College of Journalism (ACJ) in Chennai, remembers one in particular.

The giveaway in that case? There were 23 punctuation marks put at the exact same places as in the original report.

Another student, Kalyan recalls, tried to argue that a substantial part of his assignment being the same as another report was a "cruel coincidence".

Talk to most professors in higher education in India, and you'll find that plagiarism is a serious problem in the country. And it isn't only a problem with students.

Take for instance, the case of BS Rajput, who was the Vice-Chancellor of Kumaun University in Uttarakhand. In 2002, seven Stanford University physicists made multiple allegations of plagiarism against Rajput in a letter to then President Dr APJ Abdul Kalam. This involved one instance of him allegedly copying an entire paper written by Renata Kallosh, one of the signatories to the letter. Rajput resigned the next year.

More recently, in 2014, Puducherry University Vice Chancellor Chandra Krishnamurthy was accused of falsely claiming to have written a number of journal articles and plagiarising a book. She was reportedly sacked over these allegations in 2016.

**Getting tough on plagiarism?**

The All India Council of Technical Education (AICTE) recently directed technical universities to mandatorily install anti-plagiarism software for all academic as well as research and development projects. The move is a step towards a zero-tolerance approach towards plagiarism.

At the surface level at least, educational institutes today seem to be a stricter approach to plagiarism. However, the system as it currently exists is still not ideal.

In ACJ for instance, an assignment is put through the check only if a faculty suspects the work to be copied, says Kalyan. Students faulting on assignments are failed in the particular module, though they can make up by scoring more in others.

If a student is found to have plagiarised over the permissible limit in special projects and dissertation (where 60% of unique content is a must), the student is failed for the semester, and has to clear the backlog next year.

Andrew, a Professor who teaches Masters' students in the Social Work department at Loyola College in Chennai, reveals that they do not put day-to-day assignments through plagiarism checks, either. However, research papers and dissertations are mandatorily put through a plagiarism checker.

**Kalyan says that more often than not, it is not very difficult to tell if a student's work is not their own. "There are tell-tale signs like changes in writing style and quality," he says. Other times, multiple students copying from similar online sources is also a giveaway.**

However, other professors say that's not always the case. TS Gopi Rethinaraj, Associate Professor at the Department of Natural Science and Engineering at NIAS, Bengaluru, for instance, says that there are cases of plagiarism that can pass undetected. "If a student has copied from vernacular sources or cleverly paraphrased something, it may fall through the cracks," Gopi notes.

**Why is plagiarism so pervasive?**

Triveni Mathur, Director, Symbiosis School of Media and Communication, Bengaluru, points out that with the advent of the internet and easier access to information, the temptation to copy has also increased.

"The ability to write original content is extremely important. But it seems to be getting harder, simply because consuming material online does not directly translate to you gaining knowledge. You need to really absorb what you're consuming to be able to understand it," she says.

**Gopi notes that particularly in lower tier institutes, plagiarism may not even be seen as the serious offence that it is. This often leads to students not even realising that they are committing an offence by plagiarising.**

"Imagine if this student goes into a Masters course not knowing that simply paraphrasing what someone is saying without citation is plagiarism. They stand to be seriously mortified or even penalised during their Masters," says Gopi.

He also points out that in most institutes, plagiarism in daily assignments and course work is not taken as seriously as that in final term papers or dissertation. This results in students not internalising the process and importance of writing original content.

**What needs to be done**

AK Mishra, Dean, Academic Research at IIT Madras, warns however that plagiarism is not a black and white issue. A plagiarism software may sometimes throw up a mechanical result where, in a particular chapter, the percentage of unoriginal content is high. However, in a section like literature review, not having a lot of unique content may be deemed permissible.

"Only an expert can tell the difference," Mishra says, "However, the chapter where the student has to write their own arguments and research, we insist that original content is close to 100%," he says.

Mishra says that they follow a system in IIT to ensure that a student's thesis is scrutinized properly. "We ask the guide to give a chapter wise analysis of the 'similarity index'," Mishra says. He explains that by doing so, the guide has seen the existing research quoted or cited in that chapter and has deemed it necessary there.

Gopi says that what is missing is a uniform system that ensures maximum compliance from across the cross-section of educational institutes. "The state and bodies like UGC issue strict guidelines on research misconduct. Institutes which can't afford or access proper plagiarism checking software should not only be assisted, but also mandated to use the software on a regular basis," Gopi asserts.

**Gopi also feels that writing workshops and guidelines about correct citation and writing unique content should start from high school. In tertiary education, it should be taken up much more seriously. Strict action against defaulters, particularly among faculty, is also necessary, he adds.**

"When it comes to faculty, usually a person's record of being published in reputed journals is a good indicator of authenticity of their work. However, if a faculty is found guilty of plagiarising, the individual institutions should take strong action regardless of the position the person holds," he says.

# December 6

# IIT-D DEVELOPS INDIGENOUS BREATH ANALYZER

HTTP://WWW.DAILYPIONEER.COM/CITY/IIT-D-DEVELOPS-INDIGENOUS-BREATH-ANALYZER.HTML

The researchers at Indian Institute of Technology Delhi (IIT-D) have developed a low cost state-of-the-art indigenous version of breathalyser used to detect alcohol content in blood from one's breath sample.

They developed 'smart alcohol sensors' to be implanted in breathalysers which are used to detect the level of intoxication of individual suspected of driving while under the influence of alcohol. It detects the percentage of alcohol or ethanol in blood by detecting PPM of ethanol/alcohol in one's breath. The IIT researchers claim that the indigenous variety developed by them is not only cost-efficient but also more 'effective' as compared to alternatives available in the market and those used by the police.

Commercial alcohol sensors/breathalysers that are available in the market including the one used by police to detect drunken-drive cases have mostly imported parts (only assembled in India) and cost somewhere between Rs 10,000 to Rs 50,000. While that developed by IIT would cost approximately Rs 500 only, told IIT. Also commercial sensors available in the market are fuel cell based and are to be kept moist for keeping it operative.

The IIT-D made alcohol sensors are small silicone based chips which can be produced large in number thus reducing the cost or per chip. The one produced by IIT are wafer scalable which eventually makes it cost effective.

Dr. Saakshi Dhanekar , INSPIRE Faculty at Centre for Applied Research in Electronics (CARE) is working on the project since last 8 years. She along with the PhD student Priyanka Dwivedi is out with the advanced stage of the Breathalyzer after developing its Laboratory Prototype.

Also, the most attractive feature of this sensor is room temperature operation, which was achieved by using a combination of metal oxide and silicon nanostructures.

"Our alcohol sensor even works at room temperature, while the one that are commercially available has inbuilt heater to provide the optimum temperature required for it to operate. In our version it has been done away with," said Saakshi Dhanekar, CARE, IIT-D.

She also claimed that the device developed by them has quite good 'sensitivity' towards ethanol (alcohol) and also high level of 'selectivity' as compared to sensors available in the market.

With high selectivity the Breathalyzer would work with more accuracy as it can detect ethanol even if in small traces in ones breathe from that of other compounds like methanol, acetone, toluene, benzene etc that may be present in ones breath and also in atmosphere.

However, for its large scale commercial production its must for the industries to step-in and show interest and IIT-Delhi is trying to scale up industries for it.

# Tiny sensors attached to body will help examine effect of air

http://www.business-standard.com/article/pti-stories/tiny-sensors-attached-to-body-will-help-examine-effect-of-air-117120601134_1.html

As the national capital and some north Indian states battle severe air pollution, a team of researchers will use tiny sensors attached to the body to find out the amount of pollutant a Delhiite inhales everyday.

The multidisciplinary team of researchers, including computer scientists, doctors and exposure scientists from nine institutes in the UK and India - led by the University of Edinburgh - will examine links between long-term exposure to air pollution and health over a four-year period.

"The Delhi Air Pollution: Health and Effects (DAPHNE) project brings together best-in-class researchers from India and the UK to address the pressing problem of the health effects of sustained exposure to high levels of air pollution," Professor D K Arvind of the University of Edinburgh, who is leading the study, said.

"We believe this innovative research, funded by the UK research councils over the past 15 years, could eventually help millions of people in Delhi and countless other global cities," the professor said.

According to a statement by the University of Edinburgh, air pollution levels in Delhi reached more than 16 times the safe limit, prompting the local government to declare an emergency situation.

The DAPHNE project involves 760 pregnant women, who will wear the air pollution monitors attached as adhesive patches and scientists will record the health of the mothers and their children following birth.

The researchers will also focus on 360 young people with asthma in order to examine the level of exercise they can tolerate amid air pollution.

The researchers would use battery-powered respiratory monitors, known as 'RESpecks' and the air pollution monitors, called 'AIRSpecks', utilise 'Speckled Computing', a technology being pioneered by scientists at the University of Edinburgh.

"'Specks' are tiny devices that can be placed on everyday objects, and people, in order to sense, compute and communicate data. In the DAPHNE project, these sensors transmit each person's data wireless to their mobile phone, enabling the user to monitor their individual exposure to pollution," the statement said.

The project will also provide for larger versions of the same types of monitors, with additional sensors to measure concentrations of nitrogen dioxide and ozone, it said, adding, "These will be attached to lamp posts in order to create a network of monitors to measure air pollution levels across Delhi."

The data from the solar-powered lamp post monitors will then be uploaded via cellular network and shared with those taking part in the study.

The information will enable users find the cleanest and shortest route between places in the city based on up-to-date information, personalised to their condition.

The devices have been developed at the Centre for Speckled Computing in the School of Informatics at the University of Edinburgh.

According to the statement, the project was awarded 1,165,209 pounds by the UK's Medical Research Council and Natural Environment Research Council, and is funded in India by the Department of Biotechnology and the Ministry of Earth Sciences.

The Indian partners include Sri Ramachandra University, Chennai, AIIMS, Delhi, Delhi University College of Medical Sciences, IIT Delhi, IIT Kanpur and INCLEN, which is a 'not for profit' research organisation conducting multi- disciplinary studies on high priority global health issues.

The UK Partners include the University of Edinburgh (Centre for Speckled Computing, School of Informatics and Centre for Cardiovascular Science), Imperial College (National Chest and Heart Institute) and the Institute for Occupational Medicine.

## December 5

## Assembly-Based Designs for 3D Modeling Simplified by Researchers
http://electronics360.globalspec.com/article/10536/assembly-based-designs-for-3d-modeling-simplified-by-researchers

Geometric modeling is essential for populating virtual environments and designing real objects, ranging from furniture and car assembly to 3D modeling of chemical compounds and medical devices. Creating 3D models from scratch is a tedious and time-consuming process that typically requires expertise from the person building them.



**A lamp and a chair fully automatically synthesized by component in the database.**

Researchers from Stanford University, University of California at San Diego, Adobe Research and IIT Bombay have collaborated on a novel computational framework for assembly-based 3D modeling that automatically suggests to users which parts to use and where to place the part in the actual design.

Given a partial object, for example, a basic chair back, the team's method proposes a set of potential complementary components from a repository of 3D shapes, like the seat and chair legs. In examples, the researchers were able to show that their method automatically suggests complementary parts based on any shape proposed. The software suggests placement in the assembly as well. For instance, in designing a desk, the method can automatically predict whether the next step in the process is to add a drawer, and furthermore, whether that drawer should be placed in the center of the table, the left-hand side or the right-hand side.

If a user wants more design control, the method provides an interactive capability. Given the partial assembly of part of a sofa, or a basic shape of a sofa, the algorithm first proposes a set of possible components. Then the user gets to choose which component to use in their design. The method predicts where the piece is placed. When evaluated, the new approach demonstrated significant improvement over state-of-the-art retrieval techniques.

"Our method leads to a modeling tool that requires minimal or no user inputs," said Minhyuk Sung, lead author and a computer science Ph.D. student at Stanford, advised by coauthor Leonidas Guibas, professor of computer science and electrical engineering at Stanford. "We've come up with novel solutions to two key technical components in assembly-based modeling: part retrieval and part placement."

A key contribution of the research is that the method allows users to pull unlabeled data obtained from anywhere on the internet, making the process of automating 3D model design more efficient. Existing techniques for computational design of 3D models typically include a detailed step for labeling and indexing parts required for the design. The new technique doesn't require the models used to train the algorithm to be consistently segmented into labeled parts. Instead, it can learn from un-annotated inconsistently segmented collections of models in online repositories.

In the future, researchers plan to augment their framework with capabilities to further manipulate and customize retrieved parts, providing even better compatibility with the initial query. To make the modeling process even more interactive and intuitive, the researchers intend to add more fine-grained suggestions.

# December 4

## IIT Kharagpur, IIT Madras, IIT Bombay placements: Up to 40% more offers this year, higher packages

http://www.businesstoday.in/current/corporate/iit-kharagpur-madras-bombay-iit-campus-placements-up-job-offers-salary-packages/story/265235.html

This weekend saw placement season 2017-18 kick-off at various IITs around the country, and early reports suggest that it's turning out to be a promising year for the students, with opening day offers up by anywhere from 16% to 48%. For instance, Day 1 offers at IIT-Kharagpur went up to 188 compared to 127 offers last year. Similarly, the first day at IIT-Madras saw 35 more offers than last year, totalling 195.

Even IIT-Bombay, which last year saw the worst Day 1 figures in 5 years, is optimistic for this placement season. IIT Roorkee, meanwhile, reportedly crossed the landmark figure of 400 job offer within just two days.

Even the salary packages are more attractive this year. Microsoft (US) is one of the highest paying firms this year, though official data is not yet released. The software giant is believed to have offered the highest package of Rs 1.4 crore, inclusive of bonuses and stock options, for profiles in their Redmond headquarters and picked about a dozen students from across campuses. Uber, which has picked up one candidate each from IIT-Bombay and IIT-Madras, is next on the generous pay masters list, having offered a package of Rs 99.8 lakh.

Some of the fattest domestic salary packages so far have come from Tower Research, Blackstone and WorldQuant, reportedly offering around Rs 42-45 lakh per annum, followed by Microsoft India's offers of around Rs 34 lakh per annum, Schlumberger (Rs 31.5 lakh) and Goldman Sachs (Rs 32.5 lakh).

A big first for placement season 2017-18 is Apple Inc's debut on the list of marquee recruiters on a couple of IIT campuses. The American multinational tech giant reportedly picked five students for its Bengaluru office from IIT Kharagpur, and a yet-undisclosed number of students from the Madras campus. Other first-time recruiters on different campuses include Rubrik, a cloud data management firm, NASDAQ, Dubai-based Dunia Finance, Halma plc and Mercari Japan Ltd.

Citibank, EXL Services, HSBC, American Express, IBM Research, Isro, ONGC, Qualcomm, Oracle, Flipkart, Walmart, JP Morgan, Airbus, Samsung, Deloitte and Ola are among the other leading companies vying for talent on the opening weekend across campuses.

"Data Analytics and software are the two booming sectors this year," said Debasis Deb, the chairman of Career Development Centre at IIT-Kharagpur. The first rounds of placements are expected to be completed by December 15, before recommencing in January. Here's wishing IITians the very best.

## IIT-KGP Collaborative study paves way for futuristic tech
https://tecake.in/iit-kgp-collaborative-study-paves-way-futuristic-tech

Pioneering research by IITKgp Faculty has opened up opportunities for the development of quantum devices. Prof. Sajal Dhara who joined the Department of Physics at IIT Kharagpur in 2016, has found harmful mass particles of polaritons which are composed of half-light and half-matter. Prof. Dhara and his contributors at the University of Rochester and ICTS, Bangalore have found new insights on the mass of such absorbing particles. The modern understanding is supposed to inspire a giant leap towards futuristic technology development.

The investigation has been highlighted in the honoured 'Nature Physics' journal in their October 2017 issue. The contributors included in this work are Dr C. Chakraborty, Dr K. M. Goodfellow, Dr L. Qiu, Dr T. A. O'Loughlin, Prof. G. W. Wicks, and Prof. A. N. Vamivakas, all from the University of Rochester and Prof. Subhro Bhattacharjee from ICTS, TIFR.

Light is an electromagnetic wave, though it also displays particle properties with zero mass. Matters on the other hand made of atoms with a certain mass. Investigators can artificially create a combined particle state that is made of half-light and half-matter, known as polaritons.

Prof. Dhara Stated that "You can imagine a caricature version of polaritons just like tiny fireflies being laws of physics which is distinct from our classical world."

We all know that light gets bounced by a mirror. Let's imagine what will happen between two mirrors: light will reflect back and forth and gets trapped in the space between mirrors, thus forming an optical cavity. Whenever any light is an emitting gas of atoms, in this case, it is called excitons is placed inside the optical cavity, particles of light get absorbed and re-emitted several times before it finally leaks out from the hole. In this process, the exciton and the photon lose their individuality and forms a composite state altogether known as exciton-polaritons. Mass of such polaritons thus formed is lighter than the mass of an electron by a factor of 0.00001.

This unique ultra-low mass characteristics of these particles are what would lead to the possible devices of future dissipation-less polaritonic devices close to room temperature or as a householder would put as 'ushering an era which will witness a giant leap from smart electronic to smarter polaritonic devices, realizing the dream – the future is here.' This research will also lead to the improvement of a new generation of optoelectronic devices.

Exciton-polaritons are Bosons which obey the well-known Bose-Einstein statistics found by S. N. Bose and A. Einstein who also foretells a new condensation state of such particles known as Bose-Einstein condensation.

Prof. Dhara who is the leading author of the paper continued "So far BEC has been accomplished at ultra-cold temperatures close to -273 degree Celsius. One of the main concerns in this field is due to the possibility of realization of Bose-Einstein Condensation of gas made of exciton-polaritons closer to room temperature. This will open up probabilities for the development of quantum devices. We can now imagine dissipation less polaritonic devices in future that can work at room temperature."

The new conclusions that the work presented by Prof. Dhara and coworkers shows that the particles not only have ultra-low mass but it can also become harmful if the particles become charged up with additional electrons.

Prof. Dhara has received substantial funding from MHRD, ISIRD and the SERB Ramanujan Fellowship research grant for expanding his lab facilities at IIT Kharagpur. One of the long-term goals of the 'Nanoscale Optoelectronics' lab would be to study the light-matter interaction for the advancement of futuristic technologies and basic science.

## IIT Ropar's explosive detector can take place of sniffer dogs

https://timesofindia.indiatimes.com/city/chandigarh/iit-ropars-explosive-detector-can-take-place-of-sniffer-dogs/articleshow/61909609.cms

ROPAR: Indian Institute of Technology, Ropar (IIT Ropar) has developed a sensor that can detect even minute quantities of nitroaromatics -- the organic chemicals used to make various explosives -- including Trinitrotoluene (TNT). Since, it relies on chemical properties of nitroaromatics, the detector would be more accurate than sniffer dogs. Though effective, the method of scanning by sniffer dogs is not foolproof.

The institute has already developed these sensors in aqueous form and work is on to make it available in solid form "very soon".

The research is being conducted in coordination with security agencies in India. The aqueous-sensors have already proven their effectiveness in tests by changing the colour of various bags, containers and another objects in which the nitroaromatics were stored.

Aqueous sensor will also help monitor pollution

Numerous terror events worldwide have highlighted the need for highly sensitive and a portable explosive sensing device in a variety of environmental conditions.

The explosives prepared by using nitroaromatics remained challenging targets," said associate professor at the chemistry department of IIT-Ropar Narinder Singh. It's under his supervision that postdoctoral fellow Gagandeep Singh is conducting the research.

"We have prepared gold nanoaggregates derived from organic nanoparticles which are proven to be selective sensors for nitroaromatics including picric acid," the faculty member points out.

"Picric acid is available in form of a powder and is a common constituent of many powerful explosives with a remarkable low detection limit. When the picric acid comes into contact with these nanoaggregates, there is a significant change in colour," he says.

"To develop a selective, portable, fast, and sensitive method for detection of picric acid at very low concentrations was need of the hour. With the help of these sensors, it would be easy to avert terrorist threats as well as monitor environmental pollution," he adds.

So far, aqueous sensor can also be used with the help of brushes. The brush dipped in aqueous-

sensors will immediately change its colour from red to purple after coming in contact with any nitroaromatic.

It is a portable, sensitive and quick mode to trace nitroaromatics during frisking or checking at airports, railway stations or other such places.

The nitroaromatics are extensively used in industry for various purposes involving the synthesis of dyes, polymers, pesticides and pharmaceuticals.

Amongst the various nitroaromatics, picric acid has been exhaustively utilized by military powers for a long time in lethal weapons.

This acid poses an acute health risk due to its high solubility, and can easily contaminate soil and groundwater. Undetected traces have adverse health effects on all animals, including humans.

# December 3

## Placement Begins At IIT Delhi; Microsoft, Uber among Recruiters
http://theinsidercarnews.com/2017/12/03/placement-begins-at-iit-delhi-microsoft-uber-among/

The number of worldwide offers that were given to prospective candidates also increased this year to 11 from last year's three, it said.

Apart from top MNCs like Microsoft, Apple, American Express, Uber, Goldman Sachs, P&G, Texas Instruments, IBM, Mitsubishi and Samsung, Indian companies like SAIL, BHEL, Infosys and Tata Motors were also making lucrative offers. ISRO had already gave six offers, thereby taking the total tally to 99, according to a release from IIT-Madras.

"Many companies arriving for IT profiles and IT companies are elevating their salary proposals to Rs 25 Lakh each year from Rs 16 Lakh each year to get a seat in early day slots", claimed placement head at IIT Roorkee, NP Padhy, to the media in an interview.

Day one saw about 20 global offers from companies like Uber, Microsoft, Optiver, NEC Japan, Rubric.

In Kanpur, five students were offered packages worth Rs 1.3 crore each, while three from IIT Bombay also received pay packages of over Rs 1 crore.

The graveyard session saw the participation of 9 companies and a total of 315 students sat through the session for placements.

Meantime, America's multinational private equity firm Blackstone is known to have made offer of Rs 44 lakh per annum for its domestic positions.

At IIT Bombay, PPOs (pre-placement offers), or job proposals given to candidates who at companies did internship, in IT segment outnumbered fiscal services PPOs in 2017. Most profiles are for software, followed by research and development, analyst, consultant and management profiles.

The first session of the 2017 placement season at the Indian Institute of Technology - Madras saw almost 100 job offers, nine of which were overseas and six in space research. Kaustubha Mohanty, professor-in-charge of training and placements at the institute, said, "This year, we had 41 companies visiting the campus on day one, 11 more than last year". 52 job offers from 17 companies with eight of them from Goldman Sachs and seven from consulting firm Boston Consulting Group were brought on the first day.

## Canada varsity, IIT-Bombay to use AI to make Pune a smart city

http://www.hindustantimes.com/world-news/canada-varsity-iit-bombay-to-use-ai-to-make-pune-a-smart-city/story-InB3gOWKKJ5Hwt1Sk6dpZL.html

Four areas have been identified for the long-term partnership — affordable housing, rural immigrants arriving in large numbers in Pune, cyber security and digital systems interoperability.
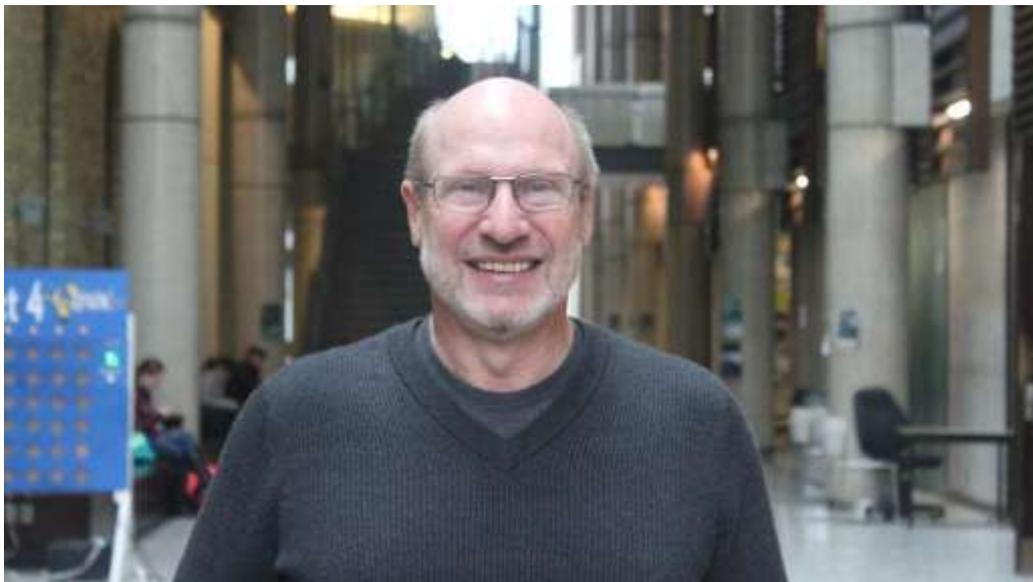


Mark Fox, the University of Toronto professor who is leading the collaboration with Pune for the smart city project. (Courtesy University of Toronto)

Artificial intelligence (AI) will be deployed as part of a collaboration involving the University of Toronto and IIT-Bombay to make Pune a truly smart city.

This will be among the first of the projects to be tackled under a recent memorandum of understanding signed by the Pune Smart City Development Corporation Ltd, IIT-Bombay and University of Toronto (UofT).

Four areas have been identified for the long-term partnership — affordable housing, rural immigrants arriving in large numbers in Pune, cyber security and digital systems interoperability.

The objective, according to a the statement from the university, is to "focus on finding solutions to urban problems by tapping into technology-based 'smart solutions' that aim not only to improve economic growth for the city of approximately six million but also to create a more sustainable and resilient region".

That project is being headed by Mark Fox, distinguished professor of urban systems engineering at the university, and will use AI to standardise the sheer volume of data generated by the city. "The development of data standards could help Pune and other Indian cities improve the analysis, design and delivery of city services," according to the statement.

In an interview at his office in Toronto, Fox, who has been in the AI field since 1974, said a virtual "Tower of Babel" currently exists in terms of how data related to urban services is available. Creating "knowledge representation" that is "logical" will help to better "analyse and optimise" how the public is served, he added

"These definitions are machine understandable and we can build intelligent systems that use those definitions to do analysis," he said.

When Fox travels to Pune in early December, the aim will be to identify initial areas of the partnership. He said the advantage of this relationship was that the university has more than 220 faculty members who work in urban research across a range of disciplines.

Fox, the statement said, is an expert "on ontologies that provide precise city data, analysed and culled from many different sources — key to digital systems interoperability — and designs computational searches that can look for solutions to urban problems".

He was first interested in working in India in 2015 as the initiative for creating 100 smart cities by 2020 came on stream. Pune will be a test case and possibly, a "template" for AI that can be leveraged to find solutions in a rapidly urbanising nation.

## December 2

## Climate change impact on wind speed may lead to more power generation, says IIT-B study

http://indianexpress.com/article/research/climate-change-impact-on-wind-speed-may-lead-to-more-power-generation-says-iit-b-study-4964193/

The IIT-B study also derived that wind potential is set to increase substantially over the next three decades, with Rameshwaram topping at 29 per cent higher wind energy generation capacity, followed by Jakhau (24 per cent) and Kanyakumari (19 per cent).



Notably, winds blowing during the Southwest monsoon have been found to be the most potential ones to harness energy.

A wind assessment study recently conducted by the researchers at the IIT-B has revealed that even as climate change poses a constant threat to future generations, it could also prove to be a boon with increased generation of wind-powered electricity. The study, published in the Meteorological Applications, suggested that power generation from offshore wind turbines, if set up at Rameshwaram and Kanyakumari, off Tamil Nadu coast, and Jakhau along the Gujarat coast, could increase anywhere between 30 and 45 per cent.

At present, India generates power from onshore wind turbines. However, with the union government eyeing an expansion through offshore installations, these can be potential sites for power generation in the future, revealed the study.

As a part of their study, Sumeet Kulkarni from the Risk Management Solutions Department at IIT-B, along with senior scientists M C Deo and Subimal Ghosh from the Department of Civil Engineering, have studied winds in two time-slices — 1979 to 2005 and 2006 to 2032. The results obtained revealed an increase in the wind speeds in the future, thereby confirming the possibility of higher power generation.

Kulkarni said the efficiency of wind potential extraction greatly depends on future climatic conditions too, which are likely to vary due to sustained greenhouse gas emissions. "This, because greenhouse gas emissions have a direct effect on ambient temperature capable of altering air pressure and wind circulations," he added.

Notably, winds blowing during the Southwest monsoon have been found to be the most potential ones to harness energy. But, this holds true for Jakhau and Kanyakumari, both located along the west coast which experience strong winds during the season, typically between June and September. With only weak pulses of pre-summer and monsoon winds reaching Rameshwaram, situated on the east coast, this site has better potentials during the Northeast monsoon months, underlined the IIT-B team.

However, Kulkarni said, as changing climate is believed to trigger more events like the El Nino (Southern Oscillation (ENSO) in the years ahead, the overall circulation of winds could be affected, which could be used for more power generation.

El Nino usually makes an onset during October, and usually, its cycle lasts for a year, effecting winds during winter and subsequent summer months. Kulkarni said, "It has been found that during El Nino years, the Sea Surface Temperatures (SST) are higher in winter, thus interfering in the wind circulation patterns across the Indian peninsular regions — also the locations where the sites under study are located. The changing behaviours of wind circulation could mean that there can be more power generation possible even during winter months."

Senior scientist Roxy Mathew Koll of the Indian Institute of Tropical Meteorology (IITM), Pune, who has been appointed as a member of the Inter Panel Committee for Climate Change (IPCC) this year to study oceans reiterated the occurrence of extreme El Nino and La Nina conditions in the years ahead.

Koll said, "It is true that wind circulations are affected by ENSO and has the capacity to alter the overall tele-connections. We will experience El Nino and La Nina, which will be far stronger than those recorded ever," adding, that the winds blown during Southwest monsoon are much stronger than those during the winter monsoon (Northeast monsoon).

The IIT-B study also derived that wind potential is set to increase substantially over the next three decades, with Rameshwaram topping at 29 per cent higher wind energy generation capacity, followed by Jakhau (24 per cent) and Kanyakumari (19 per cent). Thus, the actual extractable wind energy, the team suggests, will improve by 46 per cent at Rameshwaram, Jakhau (by 40 per cent) and Kanyakumari (by 35 per cent) in the coming decades.

However, Koll is of the opinion that India needs to study and explore more in the area of energy generation using wind power, given the vast coastline it inhabits. "In fact, we can also become the market leaders in the South Asia region and there is definitely huge scope, similar to solar power, for this method of power generation," he added.

# December 1

## First round of central funds boost for five IITs and NIT
http://indianexpress.com/article/education/first-round-of-central-funds-boost-for-five-iits-and-nit-4961165/

The institutions will pay the principal of the loan through internal accruals such as tuition fees and research earnings over 10 years.

The Higher Education Funding Agency (HEFA) on Wednesday sanctioned a batch of interest-free loans worth Rs 2,000 crore to six educational institutions, among these the IITs in Mumbai, Madras, Delhi, Kanpur and Kharagpur, besides NIT Suratkal.

HEFA was set up to help centrally-funded institutions like IITs, IIMs, NITs and central universities improve their performance in international rankings by financing their infrastructural expansion through a 10-year loan. On Wednesday, HEFA approved the first batch of loans.

Out of the Rs 2,066 crore sanctioned, about Rs 520 crore will go to IIT Bombay, Rs 200 crore to IIT Delhi, Rs 359 crore to IIT Kanpur, Rs 527 crore to IIT Kharagpur, Rs 302 crore to IIT Madras and Rs 90 crore to NIT Suratkal.

The institutions will pay the principal of the loan through internal accruals such as tuition fees and research earnings over 10 years.

The government, on the other and, will pay the interest accrued on the loans to HEFA through budgetary provisions.

IIT Bombay proposes to use the loan to build a research park, faculty housing and a boys' hostel. IIT Delhi too will construct hostels for boys and girls and build a central research facility on its Sonepat campus. IIT Kanpur plans to set up a research complex and an engineering core lab, while IIT Kharagpur will set up centres of excellence.

IIT Madras has planned an electrical sciences block and an innovation centre and NIT Suratkal will use the loan money to buy equipment. HEFA is a non-banking financial company set up as a joint venture between the Union government and Canara Bank.

## GSITI, IIT-Hyderabad sign MoU for collaboration in research

http://indiatoday.intoday.in/story/gsiti-iit-hyderabad-sign-mou-for-collaboration-in-research/1/1101397.html

Hyderabad, Dec 1 (PTI) The Geological Survey of India Training Institute (GSITI) and the Indian Institute of Technology, Hyderabad (IIT-H) have signed a Memorandum of Understanding (MoU) on collaboration for academic and research programs leading to Ph.D. degree.

The MoU was signed by Vijay Kumar Chittora, Deputy Director General & Head, M-V, GSITI and Sumohana Channappayya, Dean (R&D) IIT-Hyderabad here yesterday, GSITI said in a release.

"This collaboration between two premier institutes will pave the way to carry out research in the field of earth sciences and could lead to significant outcome in the field of mineral discovery, augmentation of natural resources and mitigation of various natural hazards and other areas of societal interest," it said.