# Newspaper Clips
## May 21, 2015

**Amar Ujala ND 21/05/2015 P-17**

### आईआईटी, एनआईटी, ट्रिपल आईटी में एडमिशन की व्यवस्था बदली

# अब एक साथ आवंटित होंगी सीटें

अमर उजाला ब्यूरो

**कानपुर।** इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी (आईआईटी), इंडियन इंस्टीट्यूट ऑफ इन्फॉरमेशन टेक्नोलॉजी (ट्रिपल आईटी) और नेशनल इंस्टीट्यूट ऑफ टेक्नोलॉजी (एनआईटी) में एडमिशन की व्यवस्था बदल गई है। अब सीटों का आवंटन एक साथ होगा। इस पर ज्वाइंट सीट एलोकेशन अथॉरिटी (जेओएसएए) और ज्वाइंट एडमिशन बोर्ड (जैब) की मुहर लग गई है। यह पहला मौका है, जब प्रतिष्ठित प्रौद्योगिकी संस्थानों में एडमिशन के लिए सीटों का आवंटन एक साथ होगा। सीट आवंटन की प्रक्रिया 25 जून तक पूरी कर ली जाएगी। इससे पहले सीटों का आवंटन अलग-अलग होता था। आईआईटी की सीटें जेईई एडवांस, एनआईटी और ट्रिपल आईटी की सीटें जेईई मेन से भरी जाती थीं।

आईआईटी में एडमिशन के लिए 24 मई को ज्वाइंट एंट्रेंस टेस्ट (जेईई) एडवांस 2015 का आयोजन किया जा रहा है। इसमें देश के 1.24 लाख 741 स्टूडेंट शामिल होंगे। आईआईटी कानपुर परिक्षेत्र के चेयरमैन प्रो. टी सन्मुगराज ने बताया कि कानपुर परिक्षेत्र के 13945 स्टूडेंट पेपर देंगे। इसके लिए यूपी, उत्तराखंड और मध्य प्रदेश में 37 एग्जामिनेशन सेंटर बनाए गए हैं। जेईई एडवांस का आयोजन आईआईटी मुंबई कर रहा है। मुंबई में ही 2 मई को जेओएसएए और जैब की मीटिंग हुई थी। इसमें आईआईटी, ट्रिपल आईटी और एनआईटी की सीटें एक साथ भरने का फैसला हुआ है। इसके मुताबिक शैक्षिक सत्र 2015-16 के कॉमन सीट एलोकेशन (संयुक्त सीट आवंटन) का ब्योरा वेबसाइट http//jeeadv.iitb.ac.in पर उपलब्ध करा दिया जाएगा।

संयुक्त सीट आवंटन में सेंट्रल और स्टेट गवर्नमेंट के 88 इंस्टीट्यूट शामिल हैं। इनका ब्यौरा जल्द ही जारी होगा। 88 इंस्टीट्यूट के संयुक्त सीट आवंटन पर जो खर्च आएगा, उसका निर्वहन सेंट्रल, स्टेट गवर्नमेंट करेंगे।

### पुरानी आईआईटी

कानपुर, दिल्ली, मुंबई, रुड़की, गुवाहाटी, खड़गपुर, चेन्नई, हैदराबाद, भुवनेश्वर, इंदौर, पटना, वाराणसी, मंडी (हिमाचल), रोपर, जोधपुर और गांधी नगर।

### नई आईआईटी

गोवा, आंध्र प्रदेश, छत्तीसगढ़, केरला, कर्नाटक और जम्मू एंड कश्मीर।

Business Line ND 21/05/2015 P-21

# ISRO set to replace foreign-leased transponders in two years

## Plans three GSAT launches in the next two years, says Chairman Kiran Kumar

OUR BUREAU
Bengaluru, May 20

The Indian Space Research Organisation (ISRO) is planning to replace the 96 foreign-leased transponders with indigenous built ones within a couple of years.

"ISRO is planning three GSAT launches in the next two years related to communication and broadband satellites. The main purpose of these launches are to replace the transponders leased by foreign satellite players, other than those in the 'C' Band," AS Kiran Kumar, Chairman, ISRO, said on the sidelines of the World Metrology Day Celebrations organised by Metrology Society of India (Southern Region) at CMTI.

Explaining the launches, Kiran Kumar said: "We have launched the GSAT 16 offering 48 transponders in November, and GSAT 15 will go up during this October with transponders. We are coming up with a series of satellite launches to bridge the gap as GSAT 17 and GSAT 18 will be launched during 2016."

The claims of huge shortage of transponders by private players will be bridged by ISRO in a phased manner.

In total, the country needs 150 additional transponders and not 500 as claimed by private users.

### Atomic clocks

Kiran Kumar said ISRO has plans of developing indigenous atomic clocks.

"These clocks help satellites send signals to the ground for record the time of reception. This will help measure the time difference along with velocity of light that help us study the separation of the two objects," he explained.

*Atomic clocks, which we plan to develop indigenously, give us accurate frequency and time measuring capability and stability to our satellites*

AS KIRAN KUMAR
Chairman, ISRO

The development of the clock in collaboration with National Physical Laboratories is not for immediate deployment but to replace imported atomic clocks in Indian satellites in future.

He said: "This independent equipment gives us accurate frequency and time measuring capability and stability to our satellites. This will mean each of our satellites will carry domestic atomic clocks that determine what the distance between the satellite and ground receiver."

### Regional navigation

On the development of the country's own regional navigation system through Indian Regional Navigation Satellite System (IRNSS), Kiran Kumar said:

"We have four satellites now, remaining three will be launched by March 2016. Many users including entrepreneurs have shown interest in the system."

Commenting on the recent unseasonal rain in the country which affected crops, Kiran Kumar said: "ISRO can generate images at real time but the Indian Meteorology Department (IMD) is yet to develop any suitable model based on current information.

"The IMD-based studies and algorithms should be able to predict future weather patterns and they should come up with models which make use of adequate amount of information," he explained.

### Venus sojourn

Reacting to reports of ISRO's plan for a Venus sojourn, Kiran Kumar said it was still in the preliminary stage. "At present, an advisory committee on science headed by former ISRO chief Prof UR Rao has been asked to study future planetary exploration including Mars, Venus or any other planetary systems."

Mint ND 21/05/2015 P-12

# B-Schools want to retain autonomy

**New Delhi:** Hundreds of independent business schools on Wednesday decided to seek legal opinion on their demand for an Indian Institute of Management (IIMs)-like status— independent yet having the power to grant degrees.

These B-Schools also decided to ask the human resource development ministry to allow them to offer degrees without compromising their present autonomous character. The move comes in the wake of plans to introduce a bill that seeks to grant IIMs the power to grant degrees in place of their current post-graduate diplomas in management. **PRASHANT K. NANDA**

Financial Express ND 21/05/2015 P-9

# Patenting science fiction

## Patents are taking a step towards an imagined future

PRATIK KANJILAL

Multinational corporations which fund research routinely file patents that they may operationalise, sell, hoard or just forget about at a later date. This year, some of them have been quietly patenting devices and applications that are straight out of the pages of science fiction. The latest could have been named 'Son of Google Glass', except that it has been developed by Microsoft. Stripped of the bizarre techno-legal cant in which patent claims must be filed, US Patent No 9019174, favouring game producer Robert Jerauld, describes augmented reality spectacles which scan people in the wearer's field of view and delivers their 'computed emotional states'—it tells you how they feel. This technology is straight out of Philip K Dick, fit to be banned from boardrooms and blackjack tables. It is fit to be banned everywhere, actually, since it opens a new front in the relentless, ongoing invasion of privacy. Besides, knowing the truth about every human interaction is not something that the average human can bear with equanimity. We need our little half-truths.

Microsoft's glasses pick up audio and video of its subjects and compare body language, posture and observable signs like flushing with online human and primate databases (is there a difference, really?). The company has been interested in augmentation but its earlier efforts were less revolutionary. In 2012, a patent went to Kathryn Stone Perez of the XBox incubation unit for a system which tags objects in the visual field with information available about them, without interfering with the viewport in the way that RoboCop's live data feed or Luke Skywalker's targeting system did.

'Objects' could refer to animate and inanimate entities—a horse, a jockey and a track could constitute a system of entities. Layer on the performance record of the two living beings, along with the ambient temperature and relative humidity, which alters the behaviour of the track, and a punter observing the race through Microsoft's glasses would suddenly have an unfair advantage over the other sporting gentlemen. It would be a specific betting advantage, limited by the format of the sport. But let 'Son of Google Glass' lose in the game of life which we play every day, and it would become a foregone conclusion.

In March, Boeing flew higher than Skywalker with Patent No 8981261, securing the rights to a technology that's straight out of *Star Trek* and Isaac Asimov's *Foundation* stories—the force field. Filed by Boeing researcher Brian J Tillotson, it is not a real force field as envisioned in sci-fi, which constantly blocks access to all hostile incoming influences, from energy beams to ballistic missiles. Boeing's concept—there is no working model yet—only detects impending shock waves and 'attenuates' their energy. Having detected the wave, it uses an electromagnetic arc to ionise the intervening material, whether gas or liquid. That scrambles and absorbs some of the energy which would have impinged upon the target, reducing or even cancelling the damage inflicted. Someday, such a gizmo could provide cover to strategic assets, just like in the movies.

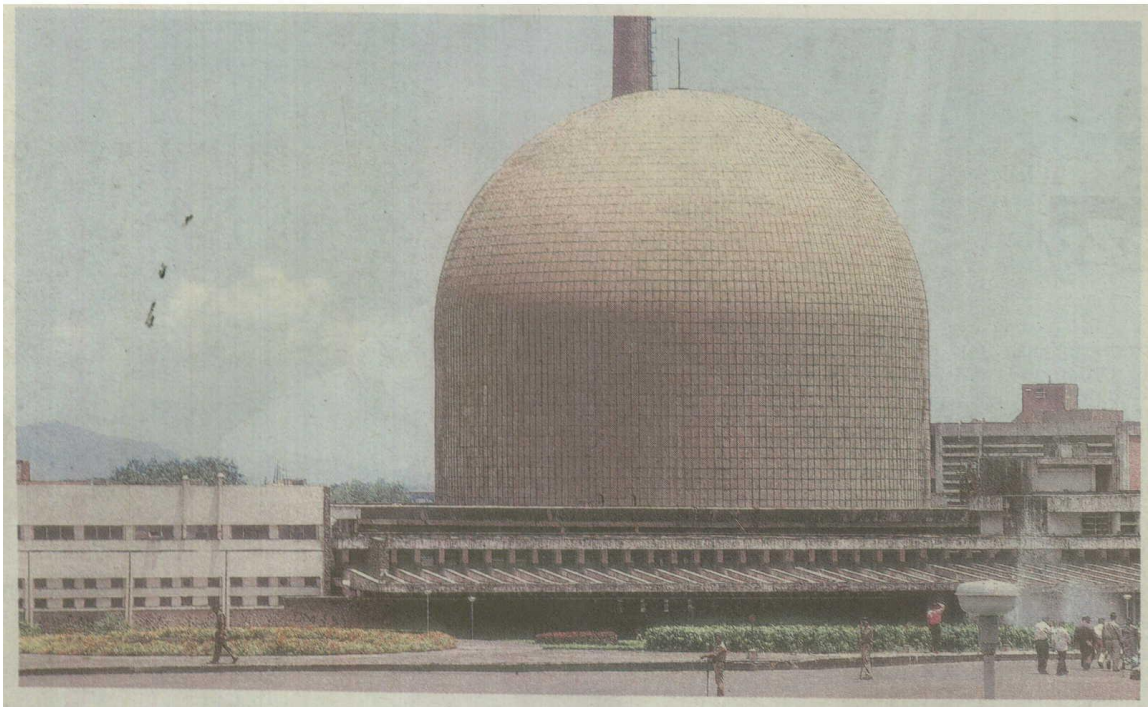
**In March, Boeing flew higher than Skywalker with a new patent, securing the rights to a technology that's straight out of *Star Trek*—the force field**

Patent No 20150123965, filed by David Molyneaux of Microsoft and awarded last Thursday, describes an augmented reality system which is spawned by a trigger event and overwrites parts of the real topography with 'synthetic image elements'. Multiple objectives could be served by such a synthetic environment. You could use it to tune out of a boring party and play paintball with fellow bored guests in, say, a simulation of the Oval Office.

Or you could overlay unpleasant parts of your personal environment with something more cheerful. Theoretically, you should be able to paper over the boss with a pleasant picture of sunset in Ranikhet, Uttarakhand. The patent application states: "It will be understood that the configurations and/or approaches described herein are exemplary in nature, and that these specific embodiments or examples are not to be considered in a limiting sense, because numerous variations are possible." Sounds like it was dreamed up for gaming environments, but its makers know that it will flourish in real life.

*pratik.kanjilal@expressindia.com*

Mail Today ND 21/05/2015 P-9



# Waste water treatment to BARC up the right tree

By **Akash Vashishtha** in New Delhi

AS NARENDRA Modi government works towards achieving the Swachh and Swastha Bharat mission, the Bhabha Atomic Research Centre (BARC) has come up with a solution to manage municipal waste and polluted water.

Scientists at the India's premier nuclear research centre have devised four technologies that could go a long way in tackling the country's rising problem of uncontrolled municipal waste and treat the largely polluted ground and surface water for drinking.

Enlarging the scope of radiation, scientists have developed the use of Gamma rays to cleanse municipal sewage sludge. According to official estimates, Indian cities and towns generate about 38,254 million litres per day (MLD) of sludge (0.1 per cent solid content in the sewage) of which only about 11,787 MLD is treated, leaving a capacity gap of 26,467 MLD.

"The high frequency radiation renders the pathogens inactive and degrades the toxic chemicals inside the sludge which presently is disposed into the sea or is incinerated, involving vast energy, or goes into the landfills after being transported through huge distances, causing environment degradation," said Lalit Varshney, Head of the Radiation Technology Development Division, BARC.

The sludge, a vital source of macro and micro nutrients like Nitrogen Phosphorous, Potassium, Zinc, Iron and Copper, after being treated, becomes a healthy organic fertiliser for the crops. These plants could be set up both at Sewage Treatment Plants or elsewhere.

In yet another mechanism, Nisargruna plant has been developed for processing the biodegradable waste materials generated in kitchens, vegetable markets, slaughter houses, food and fruit processing units, agro-waste, biological sludge created in the effluent treatment plants of food, paper and textile industries and biomass. The technology produces organic manure and biogas after biomethanation.

**Scientists at the nuclear facility believe that the newly developed technologies offer vast Make in India opportunities**

The Plasma Technology, which breaks down the hazardous and toxic compounds at high temperatures at garbage dumps, has also been upgraded by the scientists. While inorganic materials are converted into vitrified mass, organic materials could be pyrolysed or converted into gases like hydrogen, carbon monoxide and other lower hydrocarbon gases. These gases further could be employed in other uses.

In what it calls as spin-off technologies, developed in the course of atomic research, the agency has also developed a coated Polysulfone membrane, which can separate the microorganisms up to 99.99 per cent when used in an online domestic water purifier.

According to scientists, the device, does not require electricity or any addition of chemicals and effectively removes all suspended particulates, colour and odour from the contaminated ground water, unlike a conventional Ultraviolet treatment-based membrane.

The ultrafiltration membrane also removes secondary pollutants like fluorides, aluminum, arsenic and iron.

The Bhabha Atomic Research Centre (top) has come up with a new solution to manage waste water, which could go a long way in treating polluted water (left).

## WATER IS SILENT KILLER IN INDIA

- Cities generate 38,254 MLD of sludge of which only about 11,787 MLD is treated, leaving a capacity gap of 26,467 MLD
- 276 districts in 20 states have high levels of fluorides above the permissible levels of 1.5 mg/l
- Ground water in 387 districts in 21 states is laced with nitrates above the maximum permissible levels of 45 mg/l
- Ground water in 86 districts of 10 states has exceedingly high levels of Arsenic
- Iron, which is allowed in water only up to 1 mg/l for it to be drinkable, has leached into the ground water in 297 districts across 24 states
- Ground water of 113 districts in 15 states poisoned with impermissible levels of hazardous heavy metals, lead, cadmium and chromium

## THE NEW-EDGE TECHNOLOGY

- Radiation hygienisation of municipal sewage sludge. This will be done by using gamma rays to eliminate pathogens and toxins in water
- Nisargruna plant will process biodegradable waste materials generated by kitchens, vegetable markets, slaughter houses, food and fruit processing units, agro-waste, biological sludge
- Plasma Technology will be used to break down hazardous and toxic compounds at high temperatures at garbage dumps
- Coated polysulfone membrane can filter out micro-organisms with 99.99 per cent accuracy when used in a domestic water purifier
- Ultrafiltration membrane, removes secondary pollutants like fluorides, aluminum, arsenic and iron from water

For producing potable water from brackish hard water, removal of heavy metal contaminants, microbes, treatment of saline water in rivers and streams and for extensive industrial uses, BARC has also launched Thin Film Composite Charged Nanofiltration Membranes. The technology also finds tremendous use in domestic water purification.

In addition, a Dip-n-Drink Membrane has been introduced which could be taken to remote locations during disaster conditions to purify water.

"All these technologies are fully developed and offer vast Make-in-India opportunities for entrepreneurs," G. Ganesh, head of the BARC's Technology Transfer and Consultancy and Scientific Services, said.

Tribune ND 21/05/2015
P-14

# IIM-L team takes over campus at Paonta Sahib

SOLAN, MAY 20

A team of officials from the Indian Institute of Management (IIM), Lucknow, today took over the campus of Himachal Institute of Technology, Rampur Ghat, as a temporary campus for IIM Paonta Sahib. A batch of 60 students will be admitted to IIM-Paonta Sahib in the first session beginning August.

The team, comprising administrative head Dinesh Saksena, engineer Sumit Singh and principal of ITI Paonta Sahib PD Sharma, today inspected the site and measured the available area to put in place various facilities. — TNS

# CWTS Leiden rankings give PU top position in country

Hindustan Times (Chandigarh)

CHANDIGARH: The CWTS Leiden rankings -an annual global university ranking based exclusively on bibliometric (statistical analysis of written publications) indicators- on Wednesday placed Panjab University (PU), Chandigarh, on the top position in the country, in inter-institution collaborative publications, with 68%.

*HT FILE PHOTO*

In 2014, PU was ranked second in the country.

It is followed by Jadavpur University with 67.5% publications. For the ranking, publications from 2010-2013 have been counted. At world level, PU is ranked at 631th position.

In 2014 rankings, the university was ranked second in the country. Based on research papers, the annual global ranking is compiled by Centre for Science and Technology Studies at Leiden University in the Netherlands for 750 institutes. The first edition of rankings was published in 2007.

Among publications in international collaboration, PU is number one in the country with 41% publications, followed by AMU with 35.2% publications. Last year too, PU secured top position.In the parameter of collaboration with industry, PU is placed at 10th place, while IIT, Bombay, leads the chart. Last year, the university was at ninth position.

IMPACT FACTOR

In the impact factor, PU has slipped to ninth spot when compared proportion of the publications of a university, which belong to the top 10% most frequently cited, is compared with other publications in the same field and same year.In the same parameter, IIT Roorkee, IIT Delhi and IIT Guwahati are ranked first, second and third, respectively. At world-level, PU is ranked at 573 position. Last year, it was ranked at 5th position in the country. When compared, proportion of PU publications to top 1% most frequently cited, it is ranked 10th, while IIT Roorkee tops the chart. In another parameter, where we compare it with top 50% most frequently cited, it is at 13th position, while Anna University tops the chart.

METHODOLOGY

The rankings are based on publications in Thomson Reuters' Web of Science database in the period 2010-2013. Book publications, publications in conference proceedings and publications in journals not indexed in web of science are not included. Within web of science, only so-called core publications are included, which are publications in international scientific journals.

NATURE JOURNAL GIVES PU TOP RANK

Nature journal has recently given PU top rank in the country by comparing the citation rates in Elsevier's Scopus database of all Indian institutions, which had produced more than 2,000 papers between years 2010 and 2014.

High citation scores have been the strong point of the university that helped it in becoming the top-ranked university of the country in the Times Higher Education World University Rankings for the last two years.