# Newspaper Clips
## November 9-10, 2014

### November 9

Amar Ujala ND 09/11/2014 P-7

# डीपीएस रोहिणी ने जीती आईआईटी विज

नई दिल्ली (ब्यूरो)। इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी (आईआईटी दिल्ली) में आयोजित टीसीएस आईटी विज के दिल्ली संस्करण में रोहिणी स्थित दिल्ली पब्लिक स्कूल ने बाजी मारी है। विजेता टीम अब मेगा फाइनल में हिस्सा लेगी। इस विज में दिल्ली-एनसीआर स्कूलों के लगभग 1300 छात्र-छात्राओं ने हिस्सा लिया। विजेता टीम में शामिल सयान चौधरी और ध्रुव खुराना को आईपैड एयर दिया गया। वहीं दिल्ली पब्लिक स्कूल आरकेपुरम की भरत कश्यप और शिवेन मियान की टीम रनर-अप रही।

Dainik Bhaskar ND 09/11/2014 P-11

**स्पेस साइंस.** दस वर्ष पहले शुरू हुए मिशन के जरिये बिग बैंग के बाद ब्रह्मांड के निर्माण से जुड़े कई रहस्य सामने आने की संभावना

# धूमकेतु पर उतरेगा पहली बार कोई स्पेसक्राफ्ट

• एमिली बरोन, लीन ट्वीटन

रिचर्ड ब्रानसन की कंपनी का स्पेस क्राफ्ट ध्वस्त होने के कुछ दिन बाद स्पेस साइंस के मोर्चे पर अच्छी खबर आ सकती है। यूरोपीय स्पेस एजेंसी (ईएसए) की 12 नवंबर को एक कॉमेट (धूमकेतु) पर रिसर्च यान उतारने की योजना है। इस तरह के पहले मिशन पर दस वर्ष से काम चल रहा है। इससे सोलर सिस्टम की उत्पत्ति के बारे में कुछ सुराग मिल सकते हैं।

धूमकेतुओं को पुराने सोलर सिस्टम की हड्डियां माना जाता है। सूर्य से बहुत अधिक दूर रहने के कारण डीप फ्रीज में उनका मेकअप सुरक्षित है। कॉमेट चुरीयूमोव-जेरासिमेन्को या 67 पी, वरुण ग्रह (नेपच्यून) की कक्षा के पीछे बर्फीली वस्तुओं के विशाल क्षेत्र कुइपर बेल्ट से आया है। ईएसए का रोसेटा स्पेसक्राफ्ट 67 पी के साथ उड़ रहा है। वह उसकी गैसों की कई रीडिंग ले चुका है। स्पेसक्राफ्ट से छोड़ा जाने वाला छोटा यान फिले (लैंडर) कॉमेट की सतह पर धीरे से उतरेगा। फिले वातावरण में हुए महाविस्फोट (बिग बैंग) के कुछ समय बाद ब्रह्मांड में व्याप्त स्थितियों के बारे में जानकारी दे सकता है। फिले केवल कुछ दिन तक पूरी क्षमता से काम करेगा। अगले वर्ष रोसेटा 67 पी के साथ अपनी उड़ान जारी रखेगा।

## क्या है स्पेसक्राफ्ट में

**आर्बिटर** — रोसेटा एक वर्ष तक 67 पी के चक्कर लगाएगा। कॉमेट के सूर्य की ओर बढ़ने पर उसकी सतह और वातावरण में परिवर्तन पर निगाह रखी जाएगी। प्रकाश की गति से चलने के बावजूद किसी भी जानकारी के धरती तक पहुंचने में 30 मिनट लगेंगे। इसके 46 पौंट के सोलर पैनल हमेशा सूर्य की तरफ रहते हैं। आर्बिटर से अलग होकर लैंडर 14 मील नीचे कॉमेट की सतह पर पहुंचेगा।

**लैंडर**— फिले में दस रिसर्च टूल और एक ट्रांसमीटर है। यह रोसेटा को डाटा भेजेगा। फिले विभिन्न क्षेत्रों के सैंपल लेने के लिए घूम सकता है। एक मॉनिटर मैग्नेटिक फील्ड और सौर हवाओं का अध्ययन करेगा। मुख्य बैटरी के खत्म होने पर सोलर सैल सूर्य के प्रकाश से ऊर्जा लेगा। विपरीत दिशा में होने पर रोसेटा और फिले एक-दूसरे को रेडियो सिगनल भेजेंगे। लैंडर सामान्य मनुष्य से भी छोटा है।

**हम क्या सीखेंगे**— यह मिशन सोलर सिस्टम के रहस्य बताने के अलावा धरती पर जीवन के बारे में हमें कुछ जानकारी दे सकता है। माना जाता है, धूमकेतु हमारे ग्रह पर पानी, बर्फ और आर्गेनिक रसायन लाए होंगे। 67पी के बर्फ के विश्लेषण से इस थ्योरी को बल मिल सकता है।

## आंकड़ों का सफर

- रोसेटा को कॉमेट के पास पहुंचने में दस वर्ष लगे हैं।
- अब तक 6 अरब किलोमीटर की यात्रा कर चुका है।
- रोसेटा तीन बार धरती और एक बार मंगल ग्रह के पास से निकल चुका है। इन ग्रहों के गुरुत्वाकर्षण से रोसेटा की गति 55522 किमी प्रति घंटा हो गई।

Nai Duniya ND 09.11.2014 P-1

उपलब्धि

जल्द शुरू होगी गुना-इटावा रेल लाइन, आईआईटी कानपुर ने दी ट्रैक को हरी झंडी

# अटल के बर्थडे पर पूरा होगा 29 सालों का सपना

**ग्वालियर (मप्र) (ब्यूरो)।** पूर्व प्रधानमंत्री अटलबिहारी वाजपेयी के जन्मदिन पर गुना-इटावा रेल लाइन का तोहफा ग्वालियर अंचलवासियों को मिल सकता है। रेल लाइन पर काम पूरा हो चुका है और चंबल पुल की जांच कर आईआईटी कानपुर की टीम ने भी हरी झंडी दे दी है। इसी महीने कमिश्नर ऑफ रेलवे सेफ्टी (सीआरएस) लाइन का फायनल निरीक्षण करने आ सकते हैं।

1985 से लटकी गुना-इटावा रेल लाइन के जल्द शुरू होने की संभावना है। लाइन का काम लगभग 6 महीने पहले पूरा हो गया था, लेकिन चंबल नदी पर बने पुल के एक पिलर में निरीक्षण के दौरान रेलवे अधिकारियों ने दरार देखी थी। इस खामी को दूर करने के बाद पुल की जांच आईआईटी कानपुर से करवाई गई। संस्थान की टीम ने दो माह पहले जांच कर रिपोर्ट डिप्टी चीफ इंजीनियर (निर्माण) को सौंप दी है। यह जांच रिपोर्ट पॉजिटिव आई है। सीआरएस इस महीने लाइन का जायजा लेने के लिए आ सकते हैं। सीआरएस से हरी झंडी मिलने के बाद ही गुना-इटावा रेल लाइन के शुभारम्भ की तैयारी शुरू कर दी जाएगी। रेलवे उच्च पदस्थ सूत्रों की मानें तो चूंकि अगले महीने 25 दिसंबर को पूर्व प्रधानमंत्री अटलबिहारी वाजपेयी का जन्मदिन है। इसी दिन नई लाइन का शुभारंभ किया जा सकता है। इटावा के नजदीक ही अटल जी का मूल गांव वटेश्वर स्थित है।

## 10 साल लगे 36 किमी ट्रैक में

गुना-इटावा रेल लाइन प्रोजेक्ट का सर्वे 1985 में हो चुका था। गुना से इटावा तक कुल लंबाई 348.25 किमी है। गुना से ग्वालियर तक का काम तो 2002 में पूरा हो चुका था। इसके बाद भिंड से गुना तक 36 किमी के ट्रैक को बनाने में 10 साल से अधिक समय लग गया। क्योंकि यहां चंबल, कुंवारी और यमुना नदी पर पुल बनाए गए। इसके साथ ही कई बार काम भी बीच में ही रुक गया।

## रेलवे बोर्ड तय करेगा

आईआईटी कानपुर ने हरी झंडी दे दी है। यह रेलवे बोर्ड तय करेगा कि लाइन का शुभारंभ कब करना है।

**धर्मेन्द्र कुमार पांडे**
डिप्टी चीफ इंजीनियर (निर्माण)

## यह मिलेगा लाभ

- कानपुर, टूंडला से सीधी कनेक्टिविटी मिलेगी। अभी कानपुर के लिए सिंगल ट्रैक होने से वक्त लगता है।
- हावड़ा से सीधी कनेक्टिविटी हो जाएगी।

Times of India ND 09/11/2014 P-19

# Similarly educated couples last, says study

**Adam Lusher**

If he knows what's good for him, the modern gentleman will prefer brains, not blondes — according to a new study of marriage. In what may be interpreted as both a victory for feminism and a sign that men now stand even less chance of winning an argument with their wives, researchers have discovered that marriages today have the best prospects of survival when both partners have the same level of education.

The generation of husbands who married in the early '90s, the researchers found, was also the first to be happy with wives who were as smart — or smarter — than them. This, the study confirmed, was a reversal of the fifties, when Marilyn Monroe starred in *Gentlemen Prefer Blondes*, and when a marriage was most likely to last when a husband was better educated than his wife (and could presumably flatter him by saying that he knew best).

After her team analysed the fortunes of thousands of American couples who had married from the '50s to 2004, Professor Christine Schwartz, of the University of Wisconsin, said they had discovered "trends towards a more egalitarian model of marriage in which women's status is less threatening to men's gender identity". Her findings suggest a seismic shift from the '50s, where the man was traditionally the breadwinner, and the wife was expected — as one home economics textbook of the era advised — to "have dinner ready for him on time (and) offer to take off his shoes. Speak in a low, soft, soothing and pleasant voice..."

© Klaus Tiedge/Corbis

**GENTLEMEN PREFER BRAINS:** The husbands of the '90s were the first to be happy with a smarter wife

Despite the feminism of the '60s and '70s, the preference for a less educated wife (or the fear of a cleverer one) appears to have endured until at least 1980. Between 1950 and 1979, the researchers found, marriages where a woman was better educated than her husband were 34% more likely to end in divorce than unions where the husband could (perhaps quietly) claim to be cleverer than his wife.

This has now reversed: the researchers found husbands and wives with the same levels of educational achievement were more likely to stay together than couples where the husband was better educated than his wife. They also found substantial — but not conclusive — suggestions in the data that marriages where the wife is better educated than the husband may now actually be more stable than unions where the man could convince himself that he was the cleverest.

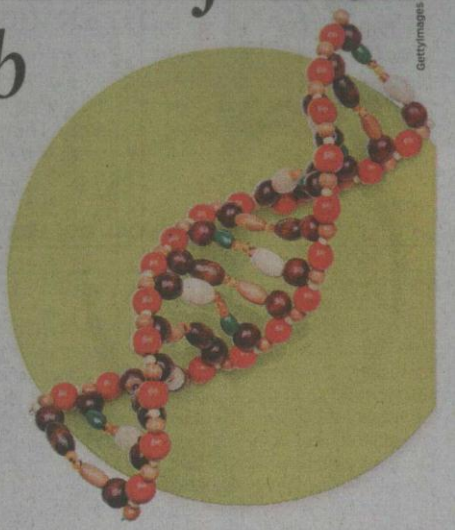
The researchers speculated that the changes may be a society's adaptation to women's progress at work and in education, where girls now outperform boys in many countries — including the UK, where last year they opened up a record lead over their possible future husbands in terms of GCSE results. The study said: "Our findings may be an example of how changes in the labour market and education have induced progress towards gender equality in the home. Couples marrying in the early nineties were among the first for whom wives' educational advantage was no longer associated with a higher risk of divorce. Couples with the same education levels are now less likely to divorce." The study concludes: "Our results speak against the fears that women's growing educational advantage has had more negative effects on marital stability." THE INDEPENDENT

Times of India ND 09/11/2014 P-17

# Counting calories from a cheek swab

*The DNA diet, in which the weight-loss plan is personalized to one's genes, gains ground in India*

Shobita.Dhar@timesgroup.com




When that favourite pair of denims doesn't fit, you know you've put on weight. But now, a different kind of 'gene' reveals why you could be piling on those pounds.

Scientists working in the field of nutrigenomics have discovered how mutations in certain genes have a direct link to weight gain. With just a small cheek swab, geneticists can decode weight-loss clues hidden in your DNA and help experts devise personalized weight-loss programmes. For example, your genetic fingerprint can tell if fats are your biggest enemy or carbs. Or, whether hiring a personal trainer will benefit you at all.

The DNA diet is gaining ground with customers in India. "Earlier, with our regular diet based on traditional indicators like BMI and hip-waist ratio, people were typically losing 1.5 kg per month but that is now up to 2 to 2.5 kg per month," says Vandana Luthra, founder of VLCC which introduced the DNA-Fit diet three months ago. Currently, almost 12,000 clients are on the diet.

While VLCC draws up the tailored weight-loss plan in-house (see box), they outsource the DNA to NutraGene, a genomic health company. In September, XCode Life Sciences, a genetic assessment firm in Chennai, launched '100&Life', a five-year wellbess programme that tests over 300 genetic markers to determine the risk of Type 2 diabetes, obesity, cardiovascular disease and stroke. The test also reveals other details relevant to good health like how fast you metabolize caffeine, sensitivity to salt, if you need to take folate, and whether you are lactose and gluten intolerant. It determines your fitness endurance levels too. This information is used by XCode's nutritionists and fitness trainers to devise a diet and exercise plan, and suggest changes in lifestyle to help you maintain a healthy weight as well as reduce the risk of developing the above-mentioned disorders. "One of our customers lost as much as 10 kg with DNA diet," says Saleem Mohammed, director, XCode Life Sciences.

In a feedback video on XCode website, Chennai-based software engineer Bharat Kumar reveals how he solved the mystery of his increased appetite. The DNA test, among many other things, revealed that he had propensity to not feel full despite having a full meal. So he ended up overeating all the time. "As a result I started putting weight around the middle," says Bharat, 38, who has been on XCode's DNA-based wellness program for a few months. He claims he has been losing a kilo a month and has found relief from work-related stress and palpitations.

These diets don't come cheap — undergoing a DNA test at VLCC can cost Rs 8,000, but if you sign up for one of their slimming packages, priced at Rs 6,000 and above, then you pay only Rs 1,500 for the test plus the price of the chosen package. 100&Life at XCode is priced at Rs 14,999 for five years.

While the steep costs and shortage of trained technicians has prevented DNA diets from becoming as popular in India as they are in the West, experts here advise caution as the program needs to accumulate more scientific evidence through clinical studies. "Genetic tests provide probable results because nutrigenomics is still a developing science. For instance, we still haven't identified all gene mutations responsible for excess weight gain. Therefore, a DNA test for obesity may not always provide accurate results," says Dr Shweta Rastogi, a Mumbai-based clinical dietician.

## WE TOOK THE TEST

The DNA analysis of this reporter showed mutations in her PPARG or peroxisome proliferator-activated receptor-gamma gene. I was told this meant I am predisposed to enhanced fat storage and absorption and also have a higher tendency to regain lost weight. The mutation also indicates a bigger risk for developing metabolic disorders, like Type 2 diabetes.

On the flip side, my ADBR3 and ADBR2 genes presented no risk of mutation, which in simple terms meant that my body would respond well to exercise by boosting metabolism, accelerating weight loss and slashing my risk for metabolic disorders. Carbohydrate-rich foods in my diet like roti, rice and bread were replaced by fibre-heavy bran roti, dalia and brown rice. One hour of cardiovascular exercise – walking, swimming, jogging, etc – was also recommended. The analysis made it clear that even while maintaining a healthy diet, exercise is essential for me to keep the weight off. Common sense, from a chromosome.

**November 10**

Aaj Samaj ND 10.11.2014 P-7

# आईआईटी और हॉर्वर्ड होते हुए मोदी की टीम में पहुंचे जयंत

नई दिल्ली (एजेंसी)। केंद्र सरकार में शामिल किए गए जयंत सिन्हा आईआईटी दिल्ली से पढ़ने के बाद कॉरपोरेट जगत में शामिल होने के लिए हॉर्वर्ड बिजनेस स्कूल गए थे लेकिन तकदीर उन्हें सत्ता के गलियारों में ले आई। वरिष्ठ बीजेपी नेता और पूर्व वित्त मंत्री यशवंत सिन्हा के बेटे जयंत सिन्हा को रविवार को मोदी मंत्रिमंडल में शामिल किया गया। 51 साल के जयंत कुछ समय पहले तक एक निवेश कोष प्रबंधक और प्रबंधन कंसल्टेंट थे लेकिन इस साल उन्होंने झारखंड की हजारीबाग सीट से चुनाव लड़ा और लोकसभा में पहुंचे। उनसे पहले हजारीबाग सीट से उनके पिता यशवंत सिन्हा चुनाव लड़ा करते थे। पहली बार सांसद चुने जाने से पहले तक वह करीब 25 सालों तक कॉरपोरेट जगत से जुड़े रहे थे।

सांसद बनने के बाद जयंत संसद की तीन समितियों, लोक लेखा समिति, वित्त संबंधी स्थायी समिति और अधीनस्थ विधान संबंधी समिति के सदस्य रहे। जयंत ओमिदयार नेटवर्क इंडिया एडवाइजर्स के पार्टनर और प्रबंध निदेशक रहे हैं। एक समय वह मैकिंजे एंड कंपनी के पार्टनर और करेज कैपिटल मैनेजमेंट के प्रबंधक निदेशक भी रह चुके हैं। उन्होंने हॉर्वर्ड बिजनेस स्कूल से विशेष उपलब्धि के साथ एमबीए की डिग्री हासिल की थी।

उन्होंने ऊर्जा प्रबंधन और नीति में पेनसिल्वेनिया यूनिवर्सिटी से एमएस और आईआईटी दिल्ली से बीटेक किया है। जयंत टेनिस के बेहद शौकीन हैं और उनकी पत्नी पुनिता कुमार सिन्हा भी एक निवेश प्रबंधक हैं। वह ह्यद ब्लैकस्टोनह्व ग्रुप में वरिष्ठ प्रबंध निदेशक पद पर रह चुकी हैं।

# Jayant Sinha's journey from IIT to Harvard to Modi's ministry

http://indiatoday.intoday.in/story/iit-jayant-sinha-narendra-modi-harvard/1/399918.html

He went to IIT Delhi and came out with flying colours, and from there he went to the Harvard Business school to enter the corporate world.

Today, Jayant Sinha, son of BJP veteran and former Finance Minister Yashwant Sinha, is a member of the Narendra Modi's Council of Ministers.

51-year-old Jayant, an investment fund manager and management consultant so far, was elected to the Lok Sabha in May this year from Hazaribagh in Jharkhand, a seat once represented by Sinha senior. He has been associated with the corporate world for nearly 25 years before he entered Parliament as a first-time MP.

Since becoming an MP, Jayant has also been a member of three parliamentary committees - Public Accounts Committee, Standing Committee on Finance and Committee on Subordinate Legislation.

He had been a partner and managing director, Omidyar Network India Advisors. He was once a partner at McKinsey and Co and Managing Director, Courage Capital Management.

He did his MBA with distinction from Harvard Business School and MS in Energy Management and Policy, University of Pennsylvania and BTech with Distinction from IIT, Delhi.

An avid tennis player, he is married to Punita Kumar-Sinha, an investment manager and former Senior Managing Director at The Blackstone Group.

Jayant has been active in Hazaribagh, assisting his father's election campaigns since 1998. He has also worked on a variety of projects in Hazaribagh and Ramgarh districts such as fostering self-help groups, distributing solar lanterns, improving drinking water quality, and getting village roads built.

Besides campaigning for his father, Jayant has worked with party veteran Murli Manohar Joshi and Arun Shourie on the BJP's manifesto during the 2009 Lok Sabha elections.

# IIT-Kharagpur team in 'Nobel for students' race

Sujoy Khanra,TNN | Nov 9, 2014, 12.00 AM IST

http://timesofindia.indiatimes.com/city/kolkata/IIT-Kharagpur-team-in-Nobel-for-students-race/articleshow/45083551.cms?

KHARAGPUR: The IIT campus here was agog with excitement on Saturday as 53 teams competed with each other in pursuit of social change. They were vying for the Hult Prize, dubbed the 'Nobel Prize for students' by Nobel laureate Md Yunus.

The competition began at 11.30am at the Rajiv Gandhi School of Intellectual Property Law with three to five members in each team. After slogging through the day with their respective projects on 'childhood education in slums', Veditum, comprising 3rd to 5th-year-students, was declared the winner among 18 shortlisted teams.

They now have the opportunity of turning their ideas into reality with $1 million in seed funding.

The fact that technocrats also make the most successful social entrepreneurs was formally acknowledged by Md Yunus when he created the Hult Prize, the world's largest student movement for social impact in partnership with former US president Bill Clinton and the Clinton Foundation, four years ago. "If you can create a real business, the beginning of a prototype, you can change the world," Yunus had said.

Kartik Pal, one of the student-organizers, said, "The Hult Prize Foundation is an accelerator for budding social entrepreneurs emerging from universities. It is dedicated to the world's next wave of social entrepreneurs," he said, while coordinating with judges Arnab Chakraborty, founder, International Business Facilitators, Samaresh Shah, founder, White Canvas, and Debashish Basu, partner and advisory leader, Enterprise Intelligence Analytics.

Chakraborty told TOI, "Corporate social responsibility should be made compulsory for all, and Section 135 of the Companies Act should be amended accordingly."

IIT Kharagpur is the only IIT, and among the only four Indian institutions and 75 finest academic institutions chosen worldwide, to host this event. The winners at each of these institutions will go to the semi-finals in one of these six cities — Shanghai, Boston, San Francisco, London, Dubai and Sau Paulo.

Last year's Hult winners were students from Indian School of Business, Hyderabad, with the idea of 'Nano-Health

Initiative', addressing the issue of chronic diseases faced by slum-dwellers with a service cost of Rs 90 per person.

Veditum will advance to the semi-finals at BITS, Pilani. The winning team will get a chance to be mentored by brand ambassador of Hult Prize at IIT-Kgp, IIT-Kgp alumnus and principal architect and director of Total Environment, Kamal Sagar.

# NIT BHOPAL TOLD TO SCRAP 20 ROMOTIONS

Hindustan Times (Indore)

BHOPAL: The Union human resource development ( HRD) ministry served a notice to Maulana Azad National Institute of Technology (MANIT) to revert the promotions of about 20 professors and associate professors who were ‘unlawfully’ promoted last year.

According to sources, MANIT director Appu Kuttan had given promotions to assistant professors as associate professors and associate professors to professors by relaxing rules. After the promotions, some associate professors raised objections.

“We have received the notice from HRD ministry... the ministry was misled as registrar gave wrong information to it. But, we will form a committee and the committee will take decision on it after checking all the facts”, he said.

He denied giving the promotions out of turn.

**Hindustan ND 10/11/2014** P-1

# आईआईटी से 3.5 साल में बीटेक

हिन्दुस्तान
एक्सक्लूसिव

नई दिल्ली | अनुराग मिश्र

आईआईटी से अब साढ़े तीन साल में भी बीटेक किया जा सकेगा। इस योजना को कुछ आईआईटी अगले साल से शुरू करने जा रहे हैं। बचे समय में छात्रों को अपना कारोबार करने की छूट होगी।

**कैसे जल्द होगा बीटेक :** आईआईटी दिल्ली के एक वरिष्ठ अधिकारी ने बताया कि नए नियम के तहत बीटेक के लिए जरूरी क्रेडिट नंबर चार साल से पहले पूरे करने होंगे। नए सिस्टम के तहत छात्र लेक्चर, प्रयोगशाला और वर्कशॉप के जरिए क्रेडिट स्कोर हासिल कर सकेंगे। छात्रों को इसका फायदा आगे की पढ़ाई में मिल सकेगा।

**कितने क्रेडिट प्वाइंट चाहिए :** आईआईटी खड़गपुर के निदेशक पार्थ चक्रवर्ती का कहना है कि अगर कोई छात्र सात सेमेस्टर में करीब 176 से 182 प्वाइंट हासिल कर लेता है तो उसके सामने अगले छह माह के लिए विकल्प खुले होंगे।

**बचे समय में करेंगे कारोबार :** उन्होंने कहा कि छात्रों को इस नए नियम का फायदा यह होगा कि वह चाहें तो इन छह माह किसी कंपनी में इंटर्नशिप करें या अपना कारोबार करें या फिर एमटेक कोर्स के क्रेडिट प्वाइंट अर्जित करें। इससे आगे की पढ़ाई का समय कम हो जाएगा।

## प्रोविजनल मार्कशीट मिलेगी

समय से पहले बीटेक करने पर छात्र को प्रोविजनल मार्कशीट साढ़े तीन साल में ही दे दी जाएगी ताकि उसे नौकरी तलाशने में दिक्कत न हो। हालांकि उन्हें डिग्री चार साल के बाद ही मिलेगी। **-पार्थ चक्रवर्ती**
निदेशक, आईआईटी खड़गपुर

## विदेश में नियम लागू

स्टेनफोर्ड, हारवर्ड, मैसाचुसेट्स इंस्टीट्यूट ऑफ टेक्नोलॉजी

## अधिकतम 8 साल का वक्त

आईआईटी से बीटेक की डिग्री पाने के लिए न्यूनतम साढ़े तीन साल और अधिकतम आठ साल का वक्त रहेगा।

**Times Of India ND 10/11/2014** P-17

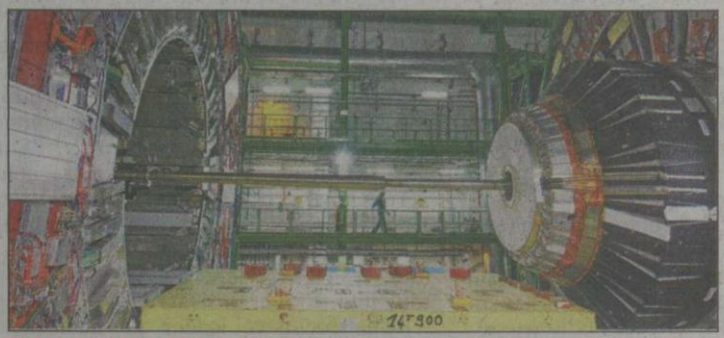
# Higgs Boson not discovered yet: Study

**London:** The elusive Higgs Boson may not have been discovered despite claims of it being detected last year, according to a new study.

Many calculations indicate that the particle discovered last year in the CERN particle accelerator in Switzerland was indeed the famous Higgs particle.

Physicists agree the CERN experiments did find a new particle that had never been seen before, but according to an international research team, there is no conclusive evidence that the particle was indeed the Higgs particle.

The research team has scrutinized the existing scientific data from CERN about the newfound particle and published their analysis in the journal Physical Review D.



**PREMATURE CELEBRATIONS?** CERN facility near Geneva in Switzerland

"The CERN data is generally taken as evidence that the particle is the Higgs particle. It is true that the Higgs particle can explain the data but there can be other explanations, we would also get this data from other particles," said Mads Toudal Frandsen, associate professor at the Centre for Cosmology and Particle Physics Phenomenology, Department of Physics, Chemistry and Pharmacy at the University of Southern Denmark.

The researchers' analysis does not debunk the possibility that CERN has discovered the Higgs particle. That is still possible — but it is equally possible that it is a different kind of particle. PTI

Times Of India ND 10/11/2014 P-17

# First man-made object set to land on comet

## European Space Agency's Rosetta Spacecraft To Deploy Its Lander Philae On Wednesday

Kounteya.Sinha
@timesgroup.com

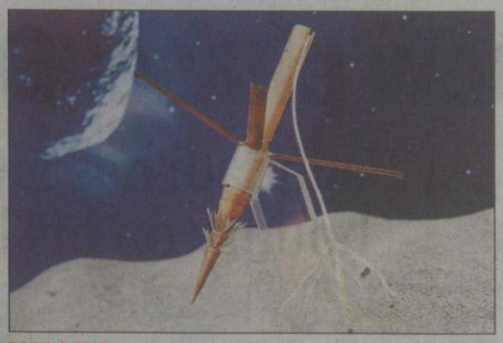
**London:** Space history will be made this week when the first man-made object will make the daring attempt of landing on a comet.

The European Space Agency's Rosetta mission will deploy its lander, Philae, to the surface of Comet 67P/ Churyumov–Gerasimenko on November 12. Rosetta (supported by scientists in the UK) has been mapping the comet's surface; making important measurements of its gravity, mass and shape; assessing its gaseous, dust-laden atmosphere; and probing its plasma environment.

Once Rosetta has released the Philae lander on November 12 it will continue to follow the comet around the Sun and as it moves back out towards the orbit of Jupiter.

Comets are considered to be primitive building blocks of the solar system and may have helped to 'seed' Earth with water, perhaps even the ingredients for life. But many fundamental questions about these enigmatic objects remain, and through a comprehensive, in situ study of the comet, Philae aims to unlock the secrets within.

Rosetta will release Philae on Nov 12 at a distance of approximately 22.5km from the centre of the comet. Landing will be about seven hours later. During the seven-hour descent, Philae will take images and conduct science experiments, sampling the dust, gas and plasma environment close to the comet.



DARING FEAT

It will take a 'farewell' image of the Rosetta orbiter shortly after separation, along with a number of images as it approaches the comet surface.

The first sequence of surface science experiments will begin about an hour after touchdown and will last for 64 hours, constrained by the lander's primary battery lifetime.

Long-term study of the comet by Philae will depend on for how long and how well the batteries are able to recharge, which in turn is related to the amount of dust that settles on its solar panels. The Rosetta satellite will drop a small robot from a height of 20km. If all goes well, the lander will free-fall towards the comet, making contact with the surface somewhere in a 1km-wide zone.

European Space Agency said: "The Rosetta orbiter will continue to study the comet and its environment using its 11 science instruments as they orbit the Sun together. The comet is on an elliptical 6.5-year orbit that takes it from beyond Jupiter at its furthest point, to between the orbits of Mars and Earth at its closest to the Sun."

Business Line ND 10/11/2014 P-22

BREAKTHROUGH

# NASA tests aircraft with shape shifting wings

## Future planes to be lighter, quieter

PRESS TRUST OF INDIA

Washington, November 9

NASA has successfully flight tested a revolutionary shape changing aircraft flap for the first time, which could pave the way for lighter, quieter and more fuel-efficient airliners. Researchers replaced an airplane's conventional aluminium flaps with advanced, shape-changing assemblies that form seamless bendable and twistable surfaces.

Flight testing will determine whether flexible trailing-edge wing flaps are a viable approach to improve aerodynamic efficiency and reduce noise generated during takeoffs and landings, NASA said. The Adaptive Compliant Trailing Edge (ACTE) project is a joint effort between NASA and the US Air Force Research Laboratory (AFRL).

"This flight test is one of the NASA Environmentally Responsible Aviation (ERA) Project's eight large-scale integrated technology demonstrations to show design improvements in drag, weight, noise, emission and fuel reductions," said Fay Collier, ERA project manager at NASA's Langley Research Centre in Hampton, Virginia.

During the initial ACTE flight, the experimental control surfaces were locked at a specified setting. ACTE technology is expected to have far-reaching effects on future aviation.

"Advanced lightweight materials will reduce wing structural weight and give engineers the ability to aerodynamically tailor the wings to promote improved fuel economy and more efficient operations, while reducing environmental impacts," NASA said. "We expect this technology to make future aircraft lighter, more efficient, and quieter. It also has the potential to save hundreds of millions of dollars annually in fuel costs," said Rigney.

Times Of India ND 10/11/2014
P-17

# Shape-shifting aircraft wings clear Nasa test

**Washington:** Nasa has successfully flight-tested a revolutionary shape-changing aircraft flap for the first time, which could pave the way for lighter, quieter and more fuel-efficient airliners.

Researchers replaced an airplane's conventional aluminium flaps with advanced, shape-changing assemblies that form seamless bendable and twistable surfaces.

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The Adaptive Compliant Trailing Edge (ACTE) project is a joint effort between Nasa and the US Air Force Research Laboratory (AFRL).

A variable geometry airfoil system called FlexFoil was developed that can be retrofitted to existing airplane wings or integrated into brand new airframes.

"This flight test is one of the Nasa Environmentally Responsible Aviation (ERA) Project's eight large-scale integrated technology demonstrations to show design improvements in drag, weight, noise, emission and fuel reductions," said Fay Collier, ERA project manager at Nasa's Langley Research Centre in Hampton, Virginia.

**Replacing a jet's conventional flaps with twistable ones could pave the way for lighter, quieter & more fuel-efficient aircraft, say researchers**

During the initial ACTE flight, the experimental control surfaces were locked at a specified setting. Different flap settings will be employed on subsequent flights to collect a variety of data demonstrating the capability of the flexible wings to withstand a real flight environment.

The flaps have the potential to be retrofitted to existing airplane wings or integrated into new airframes.

ACTE technology is expected to have far-reaching effects on future aviation.

"Advanced lightweight materials will reduce wing structural weight and give engineers the ability to aerodynamically tailor the wings to promote improved fuel economy and more efficient operations, while reducing environmental impacts," Nasa said.

"The first flight went as planned — we validated many key elements of the experimental trailing edges," said Thomas Rigney, ACTE Project Manager at Armstrong. PTI

Financial Express ND 10/11/2014 P-12

# Putting teacher training on track

## We need high quality institutes with an intake capacity of a few thousand seats each, and a strong accreditation and monitoring framework that helps raise the bar for teacher education

ASHISH DHAWAN

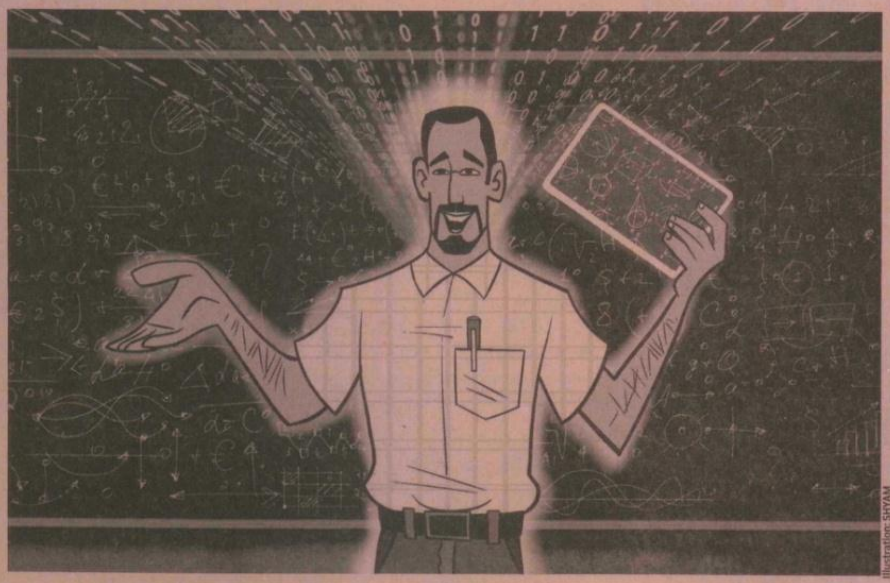

Illustration: SHYAM

Less than 6% of the 6.6 lakh teacher education programme graduates who appeared for the recent Central Teacher Eligibility Test (CTET) conducted by CBSE were able to clear it. Our current teacher preparation system is failing those who choose this profession and is in urgent need of reform. We need to honour the commitment of those entering the teaching profession by taking steps to create high-performing teacher education institutes (TEIs) that are building effective and motivated teachers.

Currently, we have 13 lakh seats spread across 16,000 TEIs in the country. A majority of TEIs came into existence between 2004 and 2008 when their number quadrupled from 3,000 institutions with 2.7 lakh seats to 12,000 institutions with over 10.7 lakh seats. This growth occurred mainly through the expansion of privately-run TEIs, which today account for 93% of total institutions. This expansion was not based on any projected demand for teachers and was without any stringent quality standards, resulting in excess capacity being created in some states, with little or none in others.

Many committees over the years have made numerous well-thought recommendations for raising the standard of TEIs, including the 2012 Justice Verma Committee. But few recommendations have been implemented and the system continues to languish. What our country needs is fewer, high quality institutes with an intake capacity of a few thousand seats each, and a strong accreditation and monitoring framework that helps raise the bar of quality for TEIs and creates meaningful checks on their performance. We need to move from paralysis to action.

**Define vision and quality standards for teacher education institutes:** Currently, TEIs only require one-time recognition from the National Council for Teacher Education (NCTE). Another significant quality assurance measure that exists is an opt-in accreditation by the National Assessment and Accreditation Council (NAAC). However, only 2% of TEIs have volunteered for such an accreditation. At the state level, joint review missions monitor the overall performance of TEIs through random sampling.

Each of these processes is operated independently with few linkages and coordination. There is a need to create an overarching vision and define quality standards for TEIs to ensure alignment and strong linkages across these processes and process owners. Accreditation of TEIs must be mandatory to make this quality assurance measure meaningful.

> We need to set up centres of excellence in teacher education. Teaching being a practice-based profession, these centres must be integrated with model lab schools (just as medical institutes such as AIIMS are integrated with a hospital) to enable research that can then be made available to the rest of the ecosystem

**Strengthen TEI accreditation framework and process:** The current NAAC framework focuses on inputs such as curriculum, infrastructure, teaching-learning, student support, management and innovation. We need to include outcome parameters such as TET performance of students, placement percentage, pass percentage of students, etc, as part of the TEI rating framework.

As we increase the number of TEIs that need to be accredited, we have to ensure that the process is fair, transparent and easily accessible. We have to take the outdated paper-intensive process to an online one that speeds up data collection and processing, and enables the results to be posted in the public domain in real time. TEIs have three months to prepare for inspection—this is excessive and should be reduced. Finally, TEIs are expected to directly sponsor and plan the travel/stay arrangements for assessors when they visit them for inspection. There is an inherent conflict of interest in this. Building in assessor travel and stay expenses into the overall fee to be paid to the accreditation agency by the TEI can be one way to minimise corruption in the process.

**Rationalise and consolidate existing TEI capacity:** States such as Maharashtra and Karnataka have excess TEI capacity with 4-5 times the number of seats as their demand for teachers. Others, such as Bihar, are starved for capacity—the demand for teachers in Bihar is more than 30 times the current TEI capacity. We have to rationalise TEI capacity so that it is in line with the demand for teachers in a particular state.

We should also identify good TEIs through the outcomes-oriented accreditation framework and consolidate teacher education in these. Here we can learn valuable lessons from China—it relies on 100 large-scale normal universities to train teachers as against India's 16,000 TEIs.

**Set up flagship centres of excellence in teacher education:** Unlike professional training institutes such as IITs, IIMs and AIIMS, currently there is no institute for teacher education that is highly aspirational and that sets the gold standard for the ecosystem. As we look at consolidating our existing capacity, we also need to build centres of excellence in teacher education within our best central universities. Teaching being a practice-based profession, these centres of excellence must be integrated with model lab schools (just as medical institutes such as AIIMS are integrated with a hospital) to enable continuous pedagogical research that can then be made available to the rest of the ecosystem.

The quality of our teachers is the most basic determinant of the quality of our education system. We hope that the soon-to-be-launched Madan Mohan Malviya Teachers Training programme will take the requisite steps to ensure that our teachers receive the required direction and guidance that can develop them into great educators.

*The author is founder & CEO, Central Square Foundation, a venture philanthropy fund and policy think tank focused on improving the quality of school education in India*

Financial Express ND 10/11/2014 P-12

## INTERVIEW: UDAY SALUNKHE

WELINGKAR INSTITUTE OF MANAGEMENT DEVELOPMENT & RESEARCH

# 'We need more research in green energy space'

*In October, students of the Welingkar Institute of Management Development and Research, Mumbai, visited Sweden to understand innovation systems, under the India-Sweden Innovation Accelerator (ISIA) programme. "Our students have gotten exposed to the latest international developments in the fields of renewable energy and a detailed picture of the green energy space in India," says Uday Salunkhe, Group Director, Welingkar Institute. In an interaction with* FE's **Vikram Chaudhary**, *he adds that such projects (with Swedish companies) will open new career opportunities for them. Excerpts:*

**What is the India-Sweden Innovation Accelerator (ISIA) programme?**

The ISIA is a part of the intergovernmental cooperation between India and Sweden in the area of new and renewable energy technology. Financed by the Swedish Energy Agency (SEA) and supported by the ministry of new and renewable energy and Bureau of Energy Efficiency, the ISIA focuses on the business of renewable energy and energy efficiency. The Swedish companies collaborate with their Indian counterparts, sharing technology, expertise and innovations as per the specifications of Indian ecosystem. This can not only boost bilateral trade and business opportunities in the space but may also mitigate some of the energy challenges and constraints faced by us today.

**How did Welingkar institute get involved in the ISIA?**

Welingkar with its broad innovation focus has been in collaboration with Malardalen University's School of Innovation, Design & Engineering, which has been a part of the ISIA. The programme has members from IIT Mumbai, Consulate General of Sweden in Mumbai, and Sweden Energy Agency. Early this year while planning a trip to India, along with 11 Swedish companies working in the space of renewables, the ISIA was looking for suitable business partners and research assistance in India. And Welingkar emerged as an appropriate choice. It was a point where they felt the need to streamline cooperation for a long-term relation around innovation, entrepreneurship and sustainable energy systems between India and Sweden.

**In which all ways have Welingkar students benefited from the ISIA initiative?**

Our students have gotten exposed to the latest international developments in the fields of renewable energy and a detailed picture of the green energy space in India. They have learnt about the technological advances and innovations in clean energy space globally. Some have associated themselves with Swedish energy companies and even created business strategies, which were highly appreciated by the SEA. In fact, ten students were given an opportunity by the SEA and Malardalen University to visit Sweden. Going ahead, successful completion of the projects (with Swedish companies) is likely to open new career opportunities for them. The companies would like to induct them, as they have already expressed.

**Will Welingkar remain associated with the ISIA in the future too?**

We will be happy to collaborate with Swedish companies in other relevant industry sectors since it leads to a win-win situation for both the countries, and for our students.

**What have been the other, recent initiatives undertaken at Welingkar?**

Early this year we hosted a Design Innovation Workshop with MIT Media Lab which saw a pan-India participation. Innovative minds teamed up in multi-disciplinary groups giving shape to their ideas under guidance of experts from across the globe. Some of the conjured products have been taken up for prototyping by the industry. Similarly, we had InterDesign 2014, in collaboration with the International Council of Societies for Industrial Designers. We had industrial design experts working under the core theme of Humanising a Metropolis. The teams worked on brainstorming solutions to the challenging infrastructural and social needs of any growing metropolis. Global Peace Initiative was another initiative promoting global peace as we commemorated the lives lost in the 26/11 terror attacks in Mumbai.

Hindu ND 10.11.14 P-9

# Dictating the culinary choices of students

## With a new government led by Narendra Modi in place, the 'Bharatiya Sanskriti Rakshaks' have been emboldened to demand separate vegetarian mess in institutions of higher education

Janaki Nair

A recent attempt to revive culinary segregation, reportedly among the well-fed denizens of institutions of technical learning, with the endorsement of the Ministry of Human Resource Development (MHRD), is designed to control what students eat on campus. In response to the anguished plea purportedly by some parents of youngsters who join IITs, IIMs and medical schools across the country, the MHRD has thought fit to ask these august institutions to report as to what steps they are taking to safeguard *Bharatiya sanskriti* (Indian culture); in other words, to promote vegetarianism.

The immediate provocation is what the complainants — one being Shankarlal Satendra Kumar Jain, speaking on behalf of parents — call the propagation of *Paschyatik sanskriti* (western culture) through the sly introduction of eggs, meat and fish into the diets of the hard-working students who make it to these institutions (at least one complaint has come from Kota, Rajasthan, which hosts the academic centres that prepare students to crack the tough entrance exams to these institutions).

In a letter sent to several institutions of higher learning, the 'Bharatiya Sanskriti Rakshak' as the group describes itself, claims that previous complaints to the MHRD fell on deaf ears, and met with the response: "IITs, etc are institutions of learning, not for [saving] religion." With the new government led by Narendra Modi in place, the 'Bharatiya Sanskriti Rakshaks' have been emboldened to demand separate vegetarian mess in these halls of learning.

### 'Meatarian cuisines' not western

We know too well that "meatarian cuisines" (a term coined by social activist and academic Kancha Ilaiah) are no western imposition. It calls for a high degree of wilful ignorance on the part of Indians to make such an assertion.

The Kodavas' famed love for pork (and rum), even at weddings, may make the Rakshaks shudder, but most wedding guests are happy eating it. The Nairs and Chettiars; Mangaloreans and Kurubas; Nadars (Hindu and Christian) and Gowdas; even the Gowd Saraswats are no closet 'meatarians'. Enough said.

But here is incontrovertible evidence from K.S. Singh's painstaking and meticulous Peoples of India project: "In spite of the higher value attached to vegetarianism, only about 20 per cent of [Indian] communities are vegetarian. There are vegetarians who eat eggs, fertilised or non-fertilised. There are also vegetarians who abstain from onion and avoid garlic. Men are mostly non-vegetarian; women consume alcohol in a number of communities. Smoking is common, chewing of tobacco and the use of snuff is also very widespread, and the chewing of betel is common in several communities." He concluded: "We are, therefore, largely a drinking, smoking and meat-eating people."


ILLUSTRATION: SATWIK GADE

**In spite of the higher value attached to vegetarianism, only about 20 per cent of Indian communities are vegetarian**

It is the dangerous ignorance of what happens, and is supposed to happen, in universities that is of more interest here. For some time now, feminists, among others, have made efforts to point out that a university is not, and cannot, be a family. It is structured precisely to encourage critical thinking about naturalised spaces such as the family, about such ascribed categories such as caste and religion. There is much learning in universities and institutes of higher education but, equally important, there is much unlearning too — of habits, of attitudes, of stereotypes and of prejudices — as students of all castes, tribes, regions, languages and sexualities mingle, in the process learning tolerance for others.

### Cultivating tolerance

Tolerance is not just a passive putting up with but an active acceptance of, and engagement with, difference. This is why legions of students, in different parts of the country accept the imposition of one regional cuisine as a culinary limitation of their mess cooks, rather than as a perpetration of violence on their food cultures. They realise that new institutional spaces fashion whole new ways of being. So many students set aside their taste for mustard sauce, fermented fish, coconut gravies, and goat head curry until they can go home to satisfy their taste buds.

It is striking that the call for the "separate" mess comes a full circle from a century ago, though emerging at a very different point. In the early twentieth century in the princely state of Mysore, for instance, caste-based hostels were established as a way of ensuring greater inclusion of those previously excluded from institutions of elementary and higher education.

Adi Karnatakas, Lingayats, Kurubas and Vokkaligas were able to enter schools and colleges in the big towns only because of the sectarian hostels in these places. The preservation of their distinctive food cultures was the premise on which families allowed attendance at school. (They still retained some injunctions against women's education).

We have travelled a long way from those days: our democratic republic carved out a new space in the university system, through which new futures could be imagined. After a brief interregnum of communal dining, are we returning to a newly secularised caste order? And is it just a co-incidence that this call comes at a time when we may be justifiably proud of the greatest achievement of all: namely, that our students and faculty members are finally reflecting the complex mix of tribe, caste, region, religion, gender, and sexuality that constitutes our democratic republic?

There are clearly many reasons to urgently educate the petitioners, especially since their ignorance contradicts the other current move to ensure a requisite level of patriotic pride in the (largely imagined) ancient past while striving to achieve global rankings. Even Ayurveda, with which our present Minister for Health and Family Welfare Harsh Vardhan is so enamoured, is replete with 'meatarian' recipes: anthropologist Francis Zimmermann reminds us that Ayurveda sanctions the use of deceit, if necessary, to urge those who are hesitant to eat meat for therapeutic purposes.

Will institutions capitulate to the new demand? Will the petitioners next demand information about the food habits of the teachers, and staff and whether they are of a *satvik* or a *tamasik* quality? We don't know yet, but if they do, it will be an aggressive assault on civilisational values, and not their protection.

*(Janaki Nair is Professor of History at the Centre for Historical Studies, Jawaharlal Nehru University.)*

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# Building chaos

## Unplanned construction invites disaster

WHEN a scientist recently cautioned that unplanned haphazard construction in the hills can lead to a repeat of the Kangra quake of 1905, wreaking havoc in the state, it should have been a wake-up call. Similar warnings issued by Disaster Management Authority officials and environmentalists have been ignored with impunity. The state lies in the seismic zones IV and V. The capital leads the way to unplanned growth and towns like Kullu and Dharamsala follow. Shimla's precarious location on a steep ridge in this earthquake-prone region, combined with weak construction techniques and a burgeoning population, put it at serious risk of an earthquake disaster. Buildings and roads in Shimla as well as sidewalks have been constructed on steep slopes. And the growing population has not been taken into account.

A study conducted by IIT professionals from Mumbai and Madras reveals that if an earthquake hits the state with its epicentre in Sundernagar-Mandi at midnight, 17 per cent of the total 8.13 lakh population in Shimla district would be injured. The government remains oblivious to such warnings. Or else what is the rationale behind regularising illegal constructions, as was recently announced? An ordinance to amend the Town and Country Planning Act will be issued soon. To what extent the safe building norms are complied with is anyone's guess. As it is, only a mere 2 per cent of the buildings in the state are earthquake resistant. New construction invariably has the same structural problems as the existing weak buildings.

Building safety standards require non-shrink grouts and fibre -- reinforced plastics to be incorporated for repair, restoration work and strengthening. A damageability assessment of buildings should also be undertaken, along with an assessment of retrofitting requirements. Seismic belts around door and window openings are a must. However, multi-storey structures remain concrete monstrosities that are architecturally unsound and aesthetically an eyesore. In the event of a temblor measuring 8 on the Richter scale, the state capital may collapse like a pack of cards. Does anyone care?

# IIT-Indore tops in quality research among new IITs

— By Our Staff Reporter | Nov 10, 2014 12:52 am

http://freepressjournal.in/iit-indore-tops-in-quality-research-among-new-iits/

**Indore :** The Indian Institute of Technology Indore has taken the lead among the eight new IITs in quality of research.

Abstracting and indexing database Scopus has rated IIT Indore as the top amongst the new elite institutes followed by seven IITs of Ropar, Patna, Bhubaneswar, Hyderabad, Gandhinagar and Jodhpur.

Equipped with strong research facilities, IIT Indore climbed up two positions from its last year's ranking and bagged the top slot while IIT Hyderabad which shared top position along with IIT Ropar last year slipped four notches down. Ropar stood second this year. Bhubaneswar which was on seventh position last year rose up to fourth position this year while Jodhpur slipped two positions down and hit the bottom of the rankings. Patna which was on second position last year climbed down by one notch.

According to information, Scopus h-index not only rated IIT Indore as top institute among the new IITs on maximum number research publications but also on quality of research.

This elite institute promotes young teacher and PhD scholars to publish research papers in reputed journals and pushes for inter-disciplinary research. It is also increasing the number of PhD students every year.

To promote students in research and to encourage them for innovation, IIT Indore launched a new scheme this year: Promotion of Research and Innovation for Undergraduate Students (PRIUS). "The scheme is supporting students in research laboratories, in international collaborative research projects and is encouraging projects leading to innovation," says Dr Abhinav Kranti, Dean, Research and Development, IIT Indore.

Students are involved in several inter-disciplinary research projects such as in-house development of an all purpose terrain climbing vehicle, processing of line emission obtained through the first radio telescope installed at the IIT Indore, iris liveness detection with portable devices, unified communication systems for the institute and dynamic modeling and control of three degrees of freedom of planar parallel robotic motion platform.

The outstanding research work of students and faculty members is being recognised through several prestigious awards. Last year, IIT Indore secured 14 externally sponsored research projects with funding of around Rs 40 million. The ongoing research projects have resulted in over 100 publications in international journals. The institute believes that the PRIUS would further enhance research activities.

In line with the vision of fostering longer term research partnerships with research organisations, the IIT Indore also has initiated strategic partnership with INSTITUT Mines-Telecom (France), which has been fruitful in terms of student exchanges and collaborative research work.

IIT Indore has further consolidates its engagement with Military College of Telecommunication Engineering by signing a MOU for providing a tactical radio on local area network using software defined radio under the aegis of Army Technology Board. Keeping the multi-disciplinary spirit of work and integrated approach to problem solving, the Central Workshop at IIT Indore played a key role in facilitating research activity with the institute. The Sophisticated Instrumentation Centre at IIT Indore is serving several academic and industrial organisations with India and abroad.

IIT Indore is also actively involved in major international projects like a Large Ion Collider Experiment (ALICE) at CERN, Geneva, and Anti Proton Annihilation at Darmstadt (PANDA), Germany. Kranti says: "IIT Indore envisages the process of convergence of disciplines as the key to accomplish the previously unimaginable. With this foresight, the institute has been promoting multi-disciplinary research programme, focusing on basic and applied research, technology development and innovation. It is this vision that has enabled us to do well in all spheres of science, engineering and humanities and social sciences."

# IIT के वैज्ञानिकों को पता है चांद पर पानी का राज

**http://www.dehradun.amarujala.com/feature/city-hulchul-dun/water-on-moon-hindi-news/**

आईआईटी रुड़की के वैज्ञानिकों ने इसरो के प्रोजेक्ट पर शोध करते हुए चांद की सतह पर नमी के रूप में पानी के चिह्न होने की पुष्टि कर ली है।

अब वर्षों पूर्व चांद पर उल्कापिंडों के गिरने से बने क्रेटर (गड्ढों) में पानी की तलाश की जा रही है। यह खोज आगामी चंद्रयान मिशन के तहत ऐसी जगहों पर आब्जरवेटरी स्थापित करने में मददगार साबित होगी।

भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) ने चांद पर अक्टूबर, 2008 में मानव रहित चंद्रयान-1 भेजा था जो वहां 30 अगस्त 2009 तक सक्रिय रहा।

चांद पर भेजे गए गए इस यान का मकसद वहां पानी की तलाश करना था और अब आईआईटी रुड़की के वैज्ञानिक पीके गर्ग, आरडी गर्ग एवं दीपक सिंह भी इसरो की ओर से दिए गए चंद्रयान-1 नामक प्रोजेक्ट के तहत इसी खोज में जुटे हैं।

पहले चरण में वैज्ञानिक रूप से यह साबित कर लिया गया है कि चांद पर पानी के चिह्न मौजूद है। अब उन गड्ढों में पानी तलाश की जा रही है जो गड्ढे वर्षों पर चांद की सतह पर उल्कापिंडों के गिरने के कारण बने है।

वैज्ञानिकों की यह खोज इसरो के चंद्रयान से मिली इमेज का विश्लेषण के आधार पर हो रही है। पानी की यह खोज आगामी चंद्रयान मिशन के तहत चांद पर आब्जरवेटरी स्थापित करने में अहम कड़ी साबित होगी।

# Navi Mumbai to house largest solar panel installation on dam

http://economictimes.indiatimes.com/industry/energy/power/navi-mumbai-to-house-largest-solar-panel-installation-on-dam/articleshow/45093411.cms

NEW DELHI: The Morbe dam on Dhavari River in Navi Mumbai is going to house something unique: a solar panel installation big enough to generate 20 megawatt of power.

A three-year-old company that is carrying out the Rs 162 crore project claims the installation to be the largest in the world on a dam barrier, and the first in India. India already has several solar power installations on top of canals, the biggest being an underconstruction 10 MW project on a Narmada canal in Gujarat, but none on a sloping wall. To make matters complicated, the Morbe gravity dam has an earthen slope, said Rahul Gupta, an IIT-Roorkee alumnus and founder of Rays Power Experts, which got the contract from the Navi Mumbai Municipal Corporation.

"The other side of the wall will have a huge amount of water, so the construction has to be done in a way that it doesn't puncture the wall," said the 27-year-old. "It also needs to be made sure that future maintenance is easy and the solar panels are not spoilt by salty water." The project is scheduled to be completed by the end of March next year.

"The safety of the three-kilometer-long dam is our topmost priority, but as a skilled team of 125 young engineers from IITs and NITs, we are looking for newer technical challenges," Gupta said. Solar panels will cover the entire stretch of the dam barrier. Gupta's first assignment was in 2010, the year he graduated. He helped an investor set up a 1 MW facility in his home state of Rajasthan, in his pursuit to make money to set up his own plant one day.

The following years saw Rajasthan becoming the centre of the proliferation of the solar power industry, with increasing focus of the government and private sector on clean energy. Rajasthan now has the second most installed solar capacity in the country — according to Bridge to India, a market intelligence and consultancy firm, the state had 679 MW of solar power capacity at the end of May this year, compared with leader Gujarat's 859 MW.

Gupta was one of those who benefited, and he founded Rays Power Experts in 2011. At the end of this September, the company had an order book of Rs 500 crore, and Gupta expects it to double to Rs 1,000 crore by March.

The company has orders to install 65 megawatt and is also planning to expand its own power generation capacity — it has a 3 MW facility at Gajner in Rajasthan. According to Gupta, bagging big projects in one go is not what he is looking for. "My aim is to make every individual capable to set up his own solar power project and have his own energy to use."