

Newspaper Clips July 28, 2014

Times Of India ND 28/07/2014 p-3

No end to waste on river bed

Dumping Continues; Area Near Smriti Van Getting Choked

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New Delhi: The city seems to be failing to conserve its eco-sensitive river zone. Despite repeated orders by National Green Tribunal (NGT) against dumping of any waste on the river bed, the Yamuna Riverfront Development Project site near Sarai Kale Khan is being used as a dumping ground for construction and demolition waste by several agencies.

The marshy area near Smriti Van is gradually getting choked with waste and mounds of excavated soil, said experts. "The area used to be a good marshland. Since Master Plan 2001, this area has been designated for Rajiv Gandhi Smriti Van and a lotus pond project. Its unique marshy character made the area a filtration zone for the sewage water coming from nearby drains," said Manoj Misra of Yamuna Jiye Abhiyan.

Marshy areas also play an important role in managing flood and are unique ecosystems with rich biodiversity, especially birds.

Misra claimed that about 18 hectares of the river bed land was allotted to Delhi Transco by Delhi Develop-

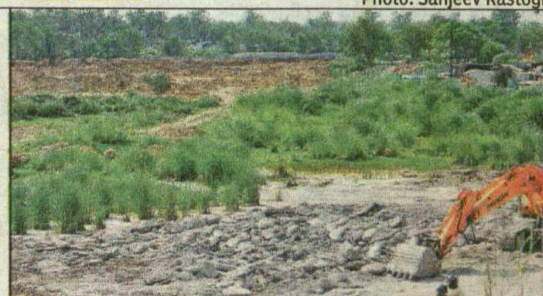
MAKING IT A RUBBLE PLAIN

Photo: Sanjeev Rastogi

July 2014 | Show-cause notice issued to DMRC asking why they shouldn't be fined ₹ 5 lakh for dumping construction waste near CWG Village

July 2013 | NGT bench orders that any person found dumping debris on the Yamuna river bank would have to pay a fine of ₹ 5 lakh on the basis of "polluter pays" principle

Apr 2013 | A committee set up by NGT recommends a May 31, 2013 deadline for various agencies to clean up construction debris



Feb 2012 | Petitions filed by activist Manoj Misra against waste dumping on Yamuna floodplains listed

Delhi generates about 4,000 tonnes of construction waste daily. Most of it ends up in desolate areas like the Ridge and Yamuna floodplains

ment Authority (DDA) "without carrying out any land use change or getting any clearance from the Yamuna standing committee or any environmental impact assessment".

Several government agencies and even private firms have projects in the area. Delhi Metro also has a construction site but its spokespersons claimed that DMRC had not violated any rule.

An expert committee of the environment and forests ministry, which includes IIT Delhi professor A K Gosain and former JNU professor Brij Gopal among others, has been

reiterating the issue before the NGT bench. "No authority is checking this kind of dumping. Dumping and recycling should happen only at designated places identified by the government. Projects will generate waste but a safe, alternative site needs to be provided to dump it. We have recommended that a separate body be constituted to monitor dumping and recycling," said Gosain.

Such large-scale dumping also increases the possibility of flooding as the river will follow its natural course if water flow goes up due to rain or any other reason. It affects ground-

water recharge, too.

The committee, headed by ecologist C R Babu, is also drafting a report that will decide the fate of DDA's controversial riverfront development project. The committee had advised in May that the project be scrapped as it involves construction on the river floodplains. Instead, it suggested, a 52km stretch of Yamuna in Delhi and UP be declared a 'conservation zone' under the environment protection act.

"One can only landscape it without affecting the floodplains," said Gosain.

Pioneer ND 28/07/2014 P-5

'Whistleblower' IIT professor seeks Centre's protection

DEEPAK KUMAR JHA ■
NEW DELHI

A senior IIT professor who was termed as an "unsung hero" by the Supreme Court for his efforts to clean entrance test for IITs has sought protection from the Centre under the newly enacted Whistleblower Protection Act.

Prof Rajeev Kumar has written several letters to President Pranab Mukherjee (who is visitor of IITs), the CBI and Central Vigilance Commission, but is yet to get a response. The computer science professor has now sought protection under the Whistleblower Protection Act, 2011 claiming that he was victimised by the UPA. While Prof Kumar's crusade for reforming IIT-JEEs continues, the Kharagpur -based institute has proposed a Compulsory Retirement Penalty on him, according to the sources. Prof Kumar has now sought a meeting with HRD Minister Smriti Irani to explain how he was victimized by her predecessors from the Congress.

While he is already fighting a protracted battle in various courts, Prof. Kumar has

also requested Law and Justice Minister Ravi Shankar Prasad for protection under the Act.

Kumar started the battle against admission irregularities in IITs by his disclosures in 2006 that a candidate with 279 marks did not qualify for admission in IIT while candidates with 154 marks qualified. The Supreme Court in its judgment termed Rajeev Kumar as "one of the many unsung heroes who helped in improving the system" and asked the institute and HRD Ministry led by Kapil Sibal to thank the professor. Instead Kumar faced suspension in May 2011 only to be reinstated in May 2013.

In his letter to Irani, the professor has also recalled his fight against current IIT Kharagpur Director Prof. PP Chakravarti, who was found guilty by CVC of misrepresenting facts in the ₹40 crore Coalnet project; the then Director Prof D Acharya, who was accused of misleading the visitor by concealing the pending CBI's penalty proceedings in few appointments matter. Acharya himself was indicted by CBI in the AICTE scam.

The pursuit of excellence: Wipro to step up hiring at IITs and NITs

PP Thimmaya

Bangalore, July 27: Wipro, India's third-largest IT services exporter, will step up hiring at premier engineering colleges such as IITs and NITs to build a highly skilled workforce providing future leadership in emerging technologies like analytics, cloud, mobility and automation.

Under Star Programme, Wipro hires around 100 engineers from select IITs and NITs every year. This year, it plans to increase this number. Talking to *FE*, Saurabh Govil, senior vice-president – HR, Wipro, said, "This is about building for future leadership."

The engineers hired from these institutes enter Wipro under a different salary structure following training. This enables them to chart a separate career path in the organisation.

Amitabh Das, CEO, Vati, a recruitment process outsourcing (RPO) firm, told *FE*, "The landscape of technology has changed. It is no longer the value of just IT services alone, but it is in the area of high-end technology innovation and organisations have to gear up for that kind of workforce."

Indian IT has traditionally operated under the classical pyramid model, where the bulk of employees have 0-3 years of experience. The chunk of hiring is done at colleges across the country. These companies do not target IITs and NITs since their requirements can easily be met by colleges notches below that level. Also, graduates from premier colleges prefer to work with product companies like Google, Yahoo, Texas Instruments or now Facebook.

Govil said, "It is becoming important to get multiple skills in an organisation be-

FUTURE-READY

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cause technology is changing so fast." He feels organisations that can quickly train and help people learn new skills will be at an advantage. This initiative of creating a highly skilled workforce will run parallel to recruitment at other engineering colleges, he added.

Industry observers say the profiles of Indian IT services companies are unattractive for students of premier institutes, who are inclined to work with product or semiconductor companies and earn high salaries. But the business environment for Indian IT is fast changing, with the realisation that future revenues will come through building of products, solutions and platforms in areas such as social, mobility, analytics, cloud (SMAC), digital and big data. In fact, IT majors like TCS, Infosys and Wipro have increased their focus by creating separate units for digital, products and advanced technologies.

While Infosys has created a separate subsidiary, Edgeverve, for products and platforms, TCS expects multi-billion dollar opportunities in the area of digital technology. This also requires hiring the right kind of technical resources — for which IITs and NITs come in handy.

Millenium Post ND 28/07/2014

P-7

IIT Kharagpur may bring new flexible credit-based system

M POST BUREAU

KHARAGPUR (WB): IIT Kharagpur will soon introduce a new 'credit-based system' which would allow students the flexibility to complete a four-year B Tech course in three-and-a-half years.

'For each course there would be pre-specified credit which allows a student the flexibility to complete his course at his own pace. Fast-paced students can finish off six months earlier while those who want to go for year-long internship can go in between and come back to finish the course later on,' IIT-Kharagpur, director, Partha Pratim Chakrabarti said. The system, which is part of an academic review to modernise the institute's undergraduate and postgraduate courses, would be introduced in phases from 2016, he said.

Rajendra Singh, Dean of undergraduate studies, told PTI that if some B Tech students need more time, they would be given upto eight years, while a five-year dual degree course can be completed in seven years.

आईआईटी खड़गपुर: साढ़े तीन साल में बीटेक संभव

खड़गपुर (एजेसी)। आईआईटी खड़गपुर जल्द ही नई 'क्रेडिट आधारित व्यवस्था' शुरू करेगा जिससे छात्रों को चार वर्षीय बी टेक पाठ्यक्रम साढ़े तीन साल में पूरा करने की आजादी होगी।

आईआईटी खड़गपुर के निदेशक पार्थ प्रतिम चक्रवर्ती ने कहा कि प्रत्येक पाठ्यक्रम के लिए पहले से निर्धारित क्रेडिट होंगे जिससे छात्रों को अपने मुताबिक अपना पाठ्यक्रम पूरा करने की छूट होगी। जो जल्दी पूरा करना चाहते हैं वे छह महीने पहले अपना पाठ्यक्रम पूरा कर सकते हैं तथा जो एक वर्षीय इंटरशिप पर जाना चाहते हैं वे बीच में इसके लिए जा सकते हैं और फिर लौटकर आ कर अपना पाठ्यक्रम पूरा कर सकते हैं। उन्होंने कहा कि संस्थानों के स्नातक और स्नातकोत्तर पाठ्यक्रमों का आधुनिकीकरण करने की अकादमिक समीक्षा के हिस्से के तौर पर नई व्यवस्था चरणबद्ध तरीके से 2016 से शुरू होगी।

अंडरग्रेजुएट पाठ्यक्रम के डीन राजेंद्र सिंह ने बताया कि अगर बीटेक छात्रों को कुछ और समय की जरूरत होगी तो उन्हें आठ साल तक दिए जाएंगे जबकि पांच वर्षीय दोहरी डिग्री का पाठ्यक्रम सात साल में पूरा किया जा सकता है।

प्रोफेसरों ने कहा कि ऐसा देखा गया है कि कई छात्र अपने पाठ्यक्रम के दौरान उद्यमिता को लेकर उलझन में रहते हैं और उन्हें अपना काम शुरू करने में समय की जरूरत होती है।

योजना

- आसान क्रेडिट आधारित व्यवस्था शुरू करने की योजना
- नई व्यवस्था चरणबद्ध तरीके से 2016 से शुरू होगी

सिंह ने कहा कि अपने उद्यम के लिए वे (छात्र) अध्ययन से ब्रेक ले सकते हैं। दूसरे वे हैं जो लंबी उद्यमिता के लिए इंडस्ट्री में मौका चाहते हैं, जिससे कि रोजगार की संभावना बढ़े और उनकी योग्यता में भी इजाफा हो, नई व्यवस्था में हर किसी के लिए मौका होगा। अमेरिका में मैसाचुसेट्स इंस्टीट्यूट ऑफ टैक्नोलॉजी (एमआईटी) सहित दुनिया के आला 20 विश्वविद्यालयों में बेहतरीन चीजों के बारे में प्रोफेसरों की एक टीम ने अध्ययन किया है। फिलहाल, आईआईटी में हरेक पाठ्यक्रम निर्धारित वर्षों तक पढ़ाया जाता है और इसे छह महीने के लंबे सेमेस्टर में बांटा गया है।

नई व्यवस्था के वजूद में आने के बाद से आईआईटी खड़गपुर में निर्धारित अवधि में पाठ्यक्रम पूरा करने की बाध्यता खत्म हो जाएगी। संचालक मंडल के अध्यक्ष श्रीकुमार बनर्जी ने कहा कि मानविकी, प्रबंधन और नीतिशास्त्र के अतिरिक्त विषयों के साथ ही विशेषज्ञता, माइक्रो विशेषज्ञता और कुछ बुनियादी पाठ्यक्रम होंगे।

IIT plans flexible B Tech course

IIT Kharagpur will soon introduce a new 'credit-based system' which would allow students the flexibility to complete a four-year B Tech course in three-and-a-half years.

Deccan Herald ND 28/07/2014 p-7

IIT tides over shortcomings of underwater robots

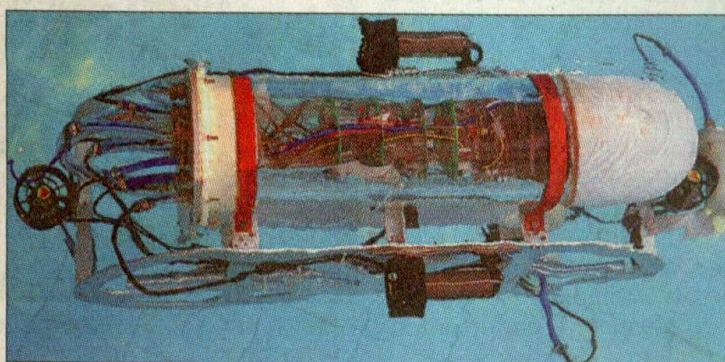
R Sathyanarayana

CHENNAI, DHNS: Oceans have remained a mystery as vast as themselves, but a state-of-the-art robot developed by students of the Indian Institute of Technology could be key to bringing mankind closer to solving underwater enigmas.

Autonomous Underwater Vehicles (AUVs) are intelligent robots that are capable of carrying out various pre-defined tasks autonomously in harsh underwater environments.

Team Amogh, a group of IIT students, has developed such a device by incorporating the feature of customisability.

"Oceans constitute a majority of the earth surface, but still the underwater world remains unexplored. Though the industry of remotely operated vehicles (ROVs) has taken up deep-water missions, it has emerged that communication between the operator and robot remains constrained in areas which are be-



The vehicle can be altered according to requirements with its modifiable battery and equipment.

yond human reach," said team head Sanchit Gupta, a final year student of Naval Architecture and Ocean Engineering at IIT.

Speaking about the project that was started in July 2012, Gupta told *Deccan Herald* that the high-tech vehicle has a five thrust mechanism, powered by a bank of Lithium-polymer batteries, which enables it to be manoeuvred in five different directions. The robot is also fitted with high-tech cameras.

He said though such tech-

nology exists in other parts of the world, the point of the project was to display how it could be used in the Indian scenario.

"There is a requirement for AUVs to achieve exploration in greater depths and presently uncharted areas. Though this relatively new technology is quite popular in some western countries, the main motive is to bring it up in India and make it prevalent with Indian Industries for tasks like inspecting underwater

bridges and ship hulls."

The vehicle can be altered according to requirements with its modifiable battery and equipment. Gupta said that all collected information, including pictures of underwater earthquakes and tides, can be monitored in the land control room.

Amogh has created the device in a manner that allows it to be easily scalable and fully customisable. "Therefore, it can be upgraded to scientific, industrial and commercial versions using application-specific oceanographic sensors," Gupta said. The AUV provides solutions such as an inertial measurement unit for orientation and pressure sensors for depth feedback, with mainly underwater cameras constituting the vision sub-system.

The team members left for the US on Saturday to showcase the country's indigenous version of the device in the International Robosub competition in San Diego.

Global scholars

TIMES NEWS NETWORK

Ten students from India have been selected for the Cargill global scholars programme. They are among nearly 200 undergraduates in five countries, including India, China, Russia, Brazil and the US, who are going to receive financial support and leadership development and enrichment opportunities as part of the programme.

Financial support would be given to students from the Indian Institute of Technology, Delhi; IIT, Bombay; National Institute of Technology, Trichy; Delhi Technological University and Birla Institute of Technology, Mesra.

Shyam Prasad, an IIT Bombay student who won financial aid, said, "It feels great to be called a Cargill global scholar. I am quite excited to meet fellow scholars from all around the globe, interact with mentors and Cargill employees, and learn from all of them."

The first-year scholars will take

part in technical learning and volunteering activities in their countries. Meanwhile, the batch selected last year will build on their knowledge for their second year by travelling to the company's headquarters in Minneapolis at the end of July to participate in a workshop on food safety.

A producer and marketer of food, agricultural, financial and industrial products and services, Cargill has committed about \$6 million to fund the five-year programme, expected to eventually reach more than 200 future leaders training to work in a variety of professions. Participants have been selected, on the basis of a high level of academic performance and leadership potential, by the Institute of International Education (IIE) on behalf of the company.

After graduating, the scholars will join the programme's global alumni network, with future opportunities for further learning and development.

UGC to allot special grants to 100-year-old institutions

TNN | Jul 28, 2014,

<http://timesofindia.indiatimes.com/city/madurai/UGC-to-allot-special-grants-to-100-year-old-institutions/articleshow/39132712.cms>

MADURAI: To give a facelift to age-old institutions in the country, University Grants Commission (UGC) has decided to provide Rs10 crore to universities and Rs5 crore to colleges which have crossed 100 years. The announcement was made by H Devaraj, vice-chairman of UGC while addressing the students of Sethu Institute of Technology in Kariapatti in Virudhunagar at a graduation day ceremony on Sunday.

"An advertisement would soon be published in this regard. Institutions can apply for it as the fund would be helpful for renovating some age-old buildings as well," he said.

Concerned over the deteriorating quality of education, especially in private colleges, Devaraj said, "The salary of teachers working in private colleges will be regulated soon. Many programmes have been offered to enhance the quality of teachers in universities and government colleges.

Apart from this, a sum of Rs 200 crore has been allotted to encourage teachers to undertake research. Moreover, the recently inaugurated Inter University Centre for Teachers' Education at Kakinada would also help us to improve the teachers' quality." Meantime, he appreciated the enrollment ratio of students in higher education in Tamil Nadu. However, piling up of vacant posts in the higher education institutions is another matter of concern for the UGC.

According to the department of higher education, there are 62 government arts and science colleges, 133 government aided colleges and 13 state government sponsored universities.

Representatives of faculty association estimate that there would be more than 1,500 vacancies at present. When asked about the same, the vice-chairman said UGC has given nod to fill all the vacant posts in the autonomous and affiliated colleges. "It's the state government which should take it forward without any delay," he said.

A total of 875 engineering students including 154 master's students were conferred with degree on Sunday.

Justice S Vimala from Madras high court's Madurai bench and S Mohammed Jaleel, chairman of the college also took part in the ceremony.

IISc duo unlock mystery of failed HCV treatments

By Tapasya Mitra Mazumder, Bangalore Mirror Bureau | Jul 28, 2014, 02.00 AM IST

<http://www.bangaloremirror.com/bangalore/others/IISc-duo-unlock-mystery-of-failed-HCV-treatments/articleshow/39122533.cms>

Interferon and the hepatitis C virus. Interferon stimulates several hundred genes which together control viral replication inside an infected liver cell. The virus, on the other hand, lowers the antiviral activity of interferon. This double-negative feedback loop gives rise to two possible outcomes, one where the virus establishes persistent infection within the cell and the other where it is cleared by interferon

Paper published in prestigious journal bats for a combination of direct-action antivirals and interferon to combat viral manipulation

It was an eye-opener when researchers at the American Association for the Study of Liver Diseases (AASLD) pointed out in 2011 that only about 50 per cent patients showed sustained response to the treatment of hepatitis C virus (HCV) infection which affects up to 150 million people worldwide. Two researchers at the Indian Institute of Science (IISc), along with their US collaborator, have now advanced a hypothesis that manipulations by the virus is responsible for this. They have also suggested a more effective line of treatment.

According to the World Health Organisation (WHO), around 130-150 million around the world suffer from chronic hepatitis C — a liver disease transmitted through blood — with East Asia and North Africa among the most affected. After research stretching over three and a half years, Prof. Narendra M Dixit and his student Pranesh Padmanabhan at the Department of Chemical Engineering, IISc, think they know why the response rate to treatment is so low. Their research was published in the May 16, 2014, edition of Nature Communications, an online bi-monthly journal published by Macmillan-owned NPG, which brings out the prestigious Nature journal.

Prof. Dixit said, "When infected with HCV, our body produces interferon, to counter infections. It causes the activation of several molecules downstream that together combat the virus and create an antiviral state — a state in which the virus can't thrive. This is one way of combating the virus. HCV can be cleared spontaneously in a few cases by the success of the interferon response, while in others it doesn't work."

Prof. Dixit said there is another way to treat the infection by introducing supplemental interferon into the body. He explained, "In several studies, it has been found that spontaneous supply of interferon by the body is not enough. In 50 per cent of those infected, the system of supplying extra interferon works. But for the other half, it does not. What we found by analysing the interferon network using computational modelling is that it can be manipulated by the virus to create a state in which it can thrive."

There are two states in which this signalling network can exist (known as bistability). Cells that admit the new steady state turn refractory or unmanageable by interferon. The scientists found that when the fraction of unmanageable cells in a patient exceeds a critical value, treatment fails. "This wasn't evident until now and it is our main finding. By convention, people would try to find out if there were any individual interactions responsible for the treatment going one way or the other," he stated.

But Prof. Dixit and Pranesh found that the treatment affects not just individual molecules but the entire network. Pranesh said, "Since we now know that there is this other state in which the virus thrives, and we know what causes it, we can tweak the system to eliminate that state."

THE MANIPULATIVE HCV VIRUS

It appears that the HCV virus manipulates interferon network by blocking the creation of proteins responsible for the antiviral action. Pranesh explained, "The virus predominantly manipulates the signalling network through a translation (conversion to proteins) block. There is an enzyme called PKR (protein kinase R), which the virus is able to phosphorylate (introduce a phosphate group into a molecule or compound, which can switch protein enzymes on or off). When PKR is phosphorylated, its protein enzymes are switched off and its conversion to protein is aborted. This adversely affects the interferon system."

Prof. Dixit chipped in, "The virus continues to replicate even as it blocks production of proteins required to create an antiviral state. But now the question arises, how do we tweak this? We know that there are drugs that can block viral replication to some extent directly by striking viral proteins. Used alone, these drugs are ineffective. But used in conjunction with interferon, a sudden increase in response rates from 50 per cent to 70-80 per cent has been observed."

The researchers found that direct-acting antivirals suppress HCV replication. "Thus they do not allow the cell to be manipulated much. As a result, interferon is then able to convert its proteins and get rid of the virus. Our US collaborator UrtziGaraigorta at The Scripps Research Institute, California, was able to test this on live cells. This gave us reasons to believe this is the predominant mechanism," Prof. Dixit said.

'Indian campuses should be made more global'

Vanita Srivastava

■ vanita.shrivastava@hindustantimes.com

NEW DELHI: Indian campuses have to become more globalised and an active effort must be made to get faculty from all over the world, feels the dean of Cornell University.

In an exclusive interview with HT, Dr Soumitra Dutta, dean of the management school at Cornell University said: "Globalisation is the need of the hour. Making the campuses more global is a big challenge for Indian universities. Schools need to be branded to attract foreign students."

The regulatory reforms, he said should support more foreign universities to come to India.

"The focus should be on transfer of technology and faculty collaboration. India must invest more on faculty research. One can make it a requisite for foreign faculty to work with the local faculty," he said.

On his plans for India Dr Dutta said: 'We will try to build the right coalition by extending support to faculty and research in Indian schools. There is a lot more that Cornell can do in India, and I will focus on bring-



**MAKING THE
CAMPUSES MORE
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FOREIGN STUDENTS.**

DR SOUMITRA DUTTA, dean,
Cornell University

ing Cornell's excellence in faculty and educational programmes to India."

Although opening a campus in India does not figure in his immediate plans, Dutta wants to build stronger links with researchers and thinkers in India as part of a grand strategy to take Cornell to the world, and bring the world to Cornell.

STINKER IN SCIENTIFIC RESEARCH

POCKET CHANGE

Citing inflation, research scholars have been demanding a hike in their stipends

Vanita Srivastava

Research scholars from premier institutions have started a nationwide movement demanding a hike in their monthly stipend.

As part of the movement, more than 600 scholars from several research institutes of Delhi staged a day long demonstration outside the Department of Science and Technology on Friday.

Similar demonstrations were staged on Friday in Chandigarh. Two days ago protests were held by researchers in Bangalore.

Former director general of Council of Scientific & Industrial Research (CSIR) Dr R Mashelkar told HT, "The country needs to enhance the number of PhD scholars and we must make research an attractive career for students. The justified demands should be looked at by the leaders of the scientific community in a positive way."

"Fellowships or stipends that are provided by the Indian Government to research scholars in the country have, historically, been abysmally low. It is definitely not anywhere close to the wage one needs to support a family," says Pawan Kumar, a PhD scholar at the

THE NUMBER GAME



■ **STUDENTS AT Acharya Narendra Dev College tinker with electrical equipment as a part of their research. Student-driven research is one of the most important aspects in the field of science that hasn't attracted as many young minds**
Dijeshwar Singh/HT

What the current number are like

- The present day stipend for a junior research fellow is ₹16,000, up from ₹12,000 in 2010.
- SRF fellows get around ₹18,000 per month. Research associates (PhD graduates) get consolidated fellowships of around ₹22,000 per month.
- Around 44% of eligible fellows don't join Indian institutions for PhD degree mainly due to abysmal pay levels in India.
- Research Associates get consolidated emoluments of ₹22,000 – ₹24,000.

National Institute of Plant Genome Research in the city.

Agrees Shubham Badjate, an M.Tech student at IIT Bombay. "We are waiting for a response from the Ministry of Human

Resource Development. If we do not get a response, we will start a signature campaign and then take the protest to a greater level."

A memorandum that was submitted to the Department of Science and Technology

↑ RISING EXPENSES AND MORE LUCRATIVE DEALS IN OTHER SECTORS HAS ALWAYS BEEN THE CAUSE OF BRAIN DRAIN. SCHOLARS HAVE NOW REACHED A HIGH POINT AND DEMAND HIKE

(DST) on Friday says, "The attraction that the country's youth could have towards science would be amplified manifold if the remuneration for pursuing a career in the sciences were at par with their peers working in other sectors. The high costs of living in an era of skyrocketing inflation coupled with a fellowship barely enough to scratch by is enough to dissuade the best minds among India's youth from choosing research as a career option."

The demands made by the research scholars are a hike in fellowship considering current inflation rate, system for annual increment linked to inflation, fellowships to be revised w.e.f from April 1, 2014 and fellowships to be streamlined and disbursed monthly to the scholars.

Secretary for Science and Technology, Dr Vijay Raghvan told HT, "We had a meeting of the Committee much before the protests started. A decision has been taken and it is being processed through several steps. We will announce the decision at the earliest."

At present, the average stipend amount a junior research fellow can expect to earn is ₹16,000. The amount was revised from ₹12,000 in the year 2010. Senior research fellows earn about ₹18,000 while research associated rake in about ₹22,000 per month.

One in every 3 Apple engineers is Indian

Shilpa Phadnis & Sujit John | TNN

India has become a major ingredient in Apple's secret sauce, and the scale may surprise many. It is estimated that a third of the \$171-billion company's engineering staff is Indian, and that a large and increasing proportion of its enterprise software, service and support work is done by Indian IT vendors.

Apple filed 1,750 H-1B applications between 2001 and 2010, but the number rose sharply to 2,800 in 2011-13. US-based HfS Research, which compiled the data, says the majority of the H-1Bs would be Indians, indicating that

the iPhone and iPad maker's dependence on Indian engineers has risen significantly in recent years.

"About one-third of Apple's engineering headcount consists of Indians who are either on H-1B visas or on green cards," said Pareekh Jain, principal analyst at HfS Research.

HfS arrives at that conclusion by looking at figures Apple disclosed in 2012, when it said it had 47,000 people working directly for it in the US, of which 7,700 were customer support operators and 27,350 worked retail in Apple Stores. That left about 12,000 as engineers, designers, marketers

CORE COMPETENCE

► In 2012, Apple said it had 47,000 people working directly for it in US – 7,700 of them customer support operators and 27,350 in retail. That leaves around 12,000

staff working as engineers, designers, marketers and tech product workers



► Apple filed 1,750 H-1B visa applications in 2001-10; the number rose to 2,800 in 2011-13

► Majority of H1-Bs would be Indians, says HfS Research,

indicating Apple's growing dependence on Indian engineers in recent years

and other white-collar tech product workers.

HfS Research also finds that Apple works with at least five India-based IT vendors — including four large firms —

and the scope of the work they do has been rising.

"Apple's outsourcing strategy can be described in three words as 'outsourcing for growth'. The scope of out-

sourcing work has been enlarged in the last two or three years. From 2013, Apple has dedicated IT outsourcing vendor managers based out of Bangalore who are acting as the bridge between Apple's IT managers and India-based IT vendors," said Jain.

HfS Research declined to name the IT vendors. TCS, Infosys and Wipro are known to do work for Apple. Apple is seen to be among Infosys's top 10 clients. Two years ago, Infosys rented a 1.4-lakh sqft office space near its headquarters in Bangalore to house employees working exclusively for Apple.

► Indian vendors, P 15

Indian vendors provide support to Apple stores

► Continued from P 1

The building had a capacity to initially house 1,400 people.

Apple engages with Indian IT players for application development & maintenance, business intelligence & data-warehousing, data analytics applications, enterprise application integration and ERP implementation. Indian vendors also provide software support for development and maintenance of Apple retail stores, specific work for iTunes, iCloud, internal applications of release management, job search portals, and porting of web applications to iOS mobile.

"The other aspect of Apple's outsourcing strategy is multi-sourcing, with each IT vendor having some strong focus in areas like channels, CRM, supply chain, marketing and finance, and some overlap," Jain said.

Apple did not respond to a mail TOI sent on Friday seeking confirmation of the data.

That was perhaps to be expected from a company regarded as among the most secretive in the world.

In 2006, Apple had leased space in Bangalore to establish a technical support centre with 3,000 people. But



Apple engages with Indian IT players for development & maintenance of application, business intelligence & data-warehousing, analytics applications and ERP implementation

within months the company abandoned the plan following an outcry from customers casting doubts on India's ability to service and support Apple's high-quality products. But in the following years, Apple was clearly convinced it could not do without India and found other ways to use the country's talent.

Incremental work coming from Apple has increased substantially as the volumes and complexity of Apple's

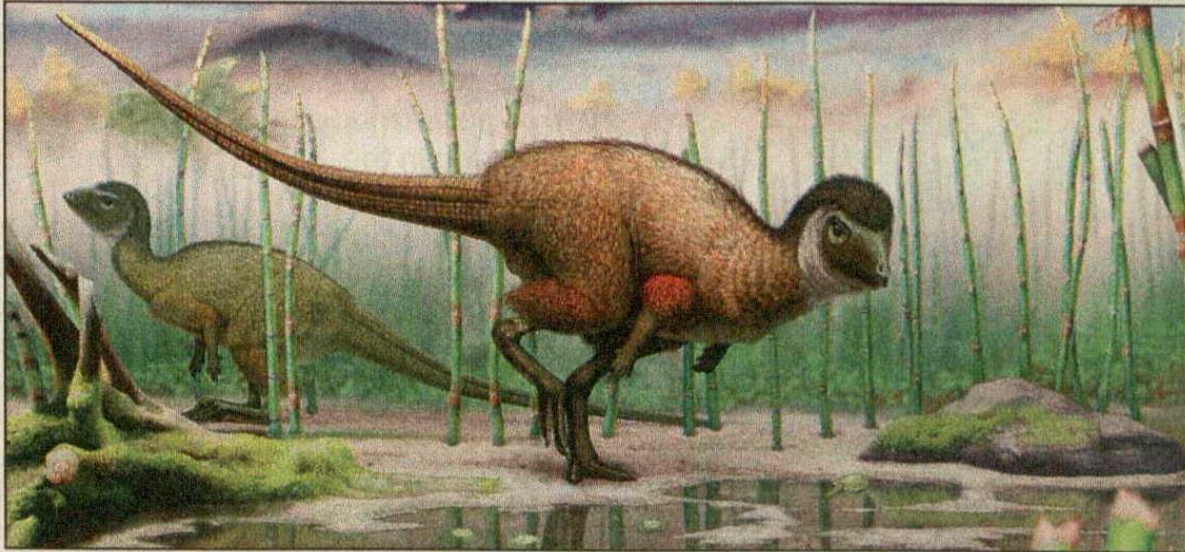
supply chain has increased. Apple, whose market valuation is at \$585 billion, sold 35.2 million iPhones in the June quarter, a growth of 12.7% compared to the same period last year. Apple said demand from BRIC economies — Bra-

zil, Russia, India and China — spurred iPhone sales.

"Its data warehousing applications have petabytes of data. Its product lines, volumes and need for analytics have increased. Also, Apple has acquired more than 30 firms in the last three years whose systems and applications need migration and integration to Apple's applications. All this is translating into additional work for IT vendors," Jain said.

Fossil suggests most dinos sported feathers

NYT



MATING GAMES: An artist's impression of *Kulindadromeus zabaikalicus*, a dinosaur from the Jurassic period that had feathers for insulation and attracting mates

New York: Most dinosaurs may have had feathers, which they used for insulation and attracting mates, suggests the fossil discovery of a new species of a plant-eating dinosaur in Siberia.

Researchers have unearthed hundreds of fossils of a new genus and species of plant-eating dinosaurs called *Kulindadromeus zabaikalicus* in Siberia that sported both feathers and scales.

"Here, for the first time, we have found feather-like structures in a dinosaur (that) is far from the lineage leading to birds," said study co-author Pascal Godefroit, a paleontologist at the Royal Belgian Institute of Natural Sciences in Belgium.

Since the mid-1990s, paleontolo-

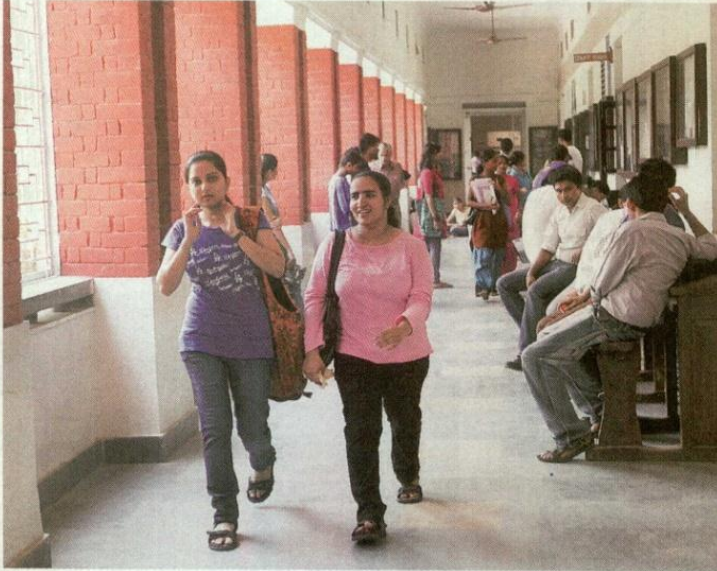
gists in China have been finding feathered dinosaur skeletons from about 20 groups, but they all belonged to a single lineage, theropods.

Researchers found the fossils buried in the bottom of what appears to have been a large lake. "It was about 4.9 feet long; walked on two long, slender legs; and sported very short arms," Godefroit said.

The skeleton was equipped with preserved long filaments resembling downy feathers around its arms and legs. Because the animal couldn't fly, the scientists think these filaments may have served as insulation. The specimen also had more-complex feathers that it may have used to entice mates, Godefroit said. PTI

Mail Today ND 28/07/2014 P-5

DU rejects UGC order to reinstate ad hoc teachers



Many colleges have hired new teachers instead of reinstating the ad hoc staff.

By **Mail Today Bureau** in New Delhi

SEVERAL ad hoc teachers find themselves at sea with the varsity administration refusing to abide by a recent University Grants Commission (UGC) order calling for the tutors to be reinstated. This, even as DU continues to grapple with a severe staff crunch.

After teaching at the premier university for years, many ad hoc teachers found themselves without a job after the DU administration, three days before the 2014-15 session was to begin, ordered colleges to conduct interviews for ad hoc teachers. Many colleges hired new teachers in the process and cited the fresh appointments to deny an extension to several ad hoc teaching staff who were on their rolls till the last session.

Many other teachers were sent back with the justification that with the roll-back of the Four-Year Undergraduate

Programme (FYUP), the workload stood far reduced, and that the college in question thus didn't need more staff.

"Many colleges, including Gargi, Shyama Prasad Mukherjee, Miranda House and Acharya Narendra Dev College have hired new ad hoc teachers. Many of us are now jobless due to the discord between the university and UGC," said one of the teachers now left in the lurch.

The Delhi University Teachers' Association (DUTA) says they have been receiving complaints from many teachers over the issue, adding that their efforts to intervene on the tutors' behalf failed to move the administration at any of the colleges.

"DU is clearly defying the order of the UGC," DUTA president Nandita Narain said.

After teaching at DU for years, many ad hoc teachers found themselves without a job

The UGC letter was sent on July 21, the day DU colleges reopened, and directed DU to "re-engage those ad hoc teachers on the opening day of the academic session who fulfil the conditions laid down by the UGC and who were in place till the last working day of the previous academic session".

नाले पर बनेगा दिल्ली का मरीन ड्राइव

ग्रीन प्रोजेक्ट...

- महरौली और बारापूला के बीच 12 किलोमीटर लंबे नाले को जैविक तकनीक से साफ किया जाएगा
- नाले के किनारों पर साइकिल और जॉगिंग ट्रैक, व्यायाम सुविधा और प्ले एरिया भी बनाए जाएंगे



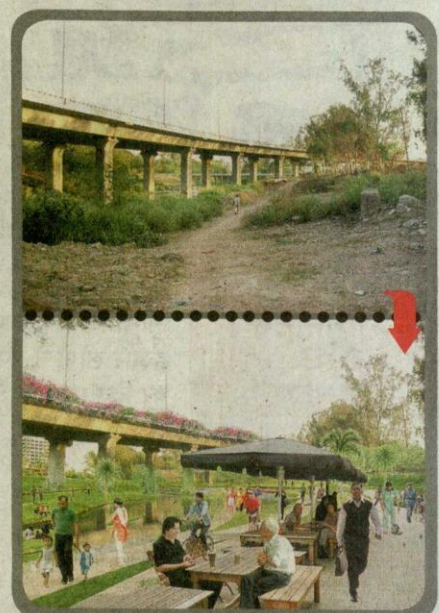
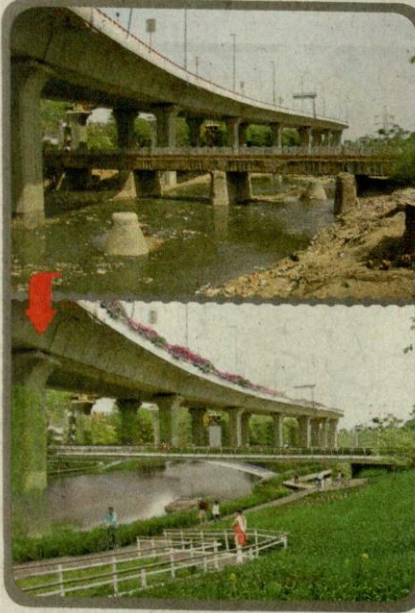
■ मनीष अग्रवाल, नई दिल्ली

महरौली से बारापूला के बीच बने 12.2 किलोमीटर लंबे नाले के पानी को साफ कर इसके दोनों किनारों को चीन के शंघाई के हौटेन पार्क जैसा बनाया जाएगा। नाले के दोनों किनारों पर साइकिल ट्रैक, जॉगिंग ट्रैक, एक्सरसाइज फैसिलिटी और बच्चों के खेलने के लिए प्ले एरिया बनाया जाएगा। आसपास के पार्कों, मेट्रो और रेलवे स्टेशनों सहित बीआरटी को भी इससे कनेक्ट किया जाएगा।

78 करोड़ रुपये के इस ग्रीन प्रोजेक्ट को डीडीए द्वारा करीब पांच साल में पूरा किया जाएगा। हाल ही में इस प्रोजेक्ट की एक प्रेजेंटेशन उपराज्यपाल नजीब जंग के समक्ष दी गई। वहां से इसे ग्रीन सिग्नल मिल गया है। अब इसकी स्टडी कर डीपीआर बनाई जाएगी। उम्मीद है, करीब चार महीने बाद इस पर काम शुरू हो जाएगा।

डीडीए के वाइस चेयरमैन बलविंदर कुमार ने बताया कि इसमें हमारी मदद आईआईटी मुंबई, नीरी और यूटिपैक कर रहे हैं। नाले के गंदे पानी को साफ करने के लिए खास बायोलॉजिकल ट्रीटमेंट तकनीक अपनाई जाएगी। इसके तहत नाले के अंदर और किनारों पर टायफा और कैना के प्लांट लगाए जाएंगे। ये पौधे न केवल गंदे पानी की बदबू खत्म करते हैं, बल्कि उसे साफ भी करते हैं। इनकी जड़ें भी पानी को साफ करने में मदद करती हैं। इसी तरह की तकनीक से शंघाई में भी हौटेन पार्क के नाले को साफ किया गया है।

डीडीए का कहना है कि शुरुआत में डिफेंस कॉलोनी से बारापूला के बीच वाले चार किलोमीटर लंबे स्ट्रेच को साफ किया जाएगा। फिर चार किलोमीटर लंबे स्ट्रेच को सुंदर बनाया जाएगा। ड्रेन में पड़ने वाले 15-20 छोटे नालों के एग्जिट पाइंट पर भी इसी तकनीक से पानी साफ किया जाएगा। फिर वह पानी बारापूला ड्रेन में डाला जाएगा। इस तरह से 90 फीसदी तक पानी को साफ कर दिया जाएगा। इसके बाद लोग नाले के आसपास सैर भी कर सकेंगे।



German scientists develop a camera that can see around corners, without using mirrors

<http://tech.firstpost.com/news-analysis/german-scientists-develop-camera-can-see-around-corners-without-using-mirrors-228045.html>

Scientists have developed a novel camera system which can see around the corner without using a mirror.

Using diffusely reflected light, it reconstructs the shape of objects outside of the field of view.

A laser shines on the wall; a camera watches the scene. Nothing more than white ingrain wallpaper with a bright spot of light can be seen through the lens.

A computer records these initially unremarkable images and as the data is processed further, little by little, the outlines of an object appear on a screen.

“Yet, this object is behind a partition and the camera cannot possibly have seen it – we have apparently looked around the corner,” researchers said.

“This is an actual reconstruction from diffusely scattered light. Our camera, combined with a mathematical procedure, enables us to virtually transform this wall into a mirror,” said Professor Matthias B Hullin from the Institute of Computer Science II at the University of Bonn in Germany.

The laser dot on the wall is by itself a source of scattered light, which serves as the crucial source of information. Some of this light, in a roundabout way, falls back onto the wall and finally into the camera.

“We are recording a kind of light echo, that is, time-resolved data, from which we can reconstruct the object. Part of the light has also come into contact with the unknown object and it thus brings valuable information with it about its shape and appearance,” said Hullin.

To be able to measure such echoes, a special camera system is required which Hullin has developed together with his colleagues at the University of British Columbia in Vancouver, Canada.

In contrast to conventional cameras, it records not just the direction from which the light is coming but also how long it took the light to get from the source to the camera.

The technical complexity for this is comparatively low – suitable image sensors came onto the mass market long ago.

They are mainly found in depth image cameras as they are used, for instance, as video game controllers or for range measurements in the automotive field. The actual challenge is to elicit the desired information from such time-of-flight measurements.