HRD to relieve IIT director, asks names for replacement

Prakash Kumar NEW DELHI: June 6, 2015, DHNS

http://www.deccanherald.com/content/481885/hrd-relieve-iit-director-asks.html

The Human Resource Development Ministry has asked chairman of the Indian Institute Technology-Delhi Vijay Bhatkar to suggest names for appointing acting director of the institute by Monday, in a clear indication that R K Shevgaonkar would soon be relieved of his duties as the director.

The HRD Ministry wrote to Bhatkar on Friday, asking him to suggest names for an acting director as IIT-Delhi’s deputy director has gone abroad for the next couple of months. The senior most dean of the institute is also abroad, IIT sources told Deccan Herald.

The ministry has agreed to relieve Shevgaonkar from his duties almost six months after he resigned from the post midway in his term, amid reports that he was humiliated by the HRD Minister Smriti Irani for not clearing the arrears of Subramanian Swamy, a former faculty member and now a BJP leader.

As the ministry did not take any decision on his resignation, Shevgaonkar sent a reminder to the HRD Ministry in April, requesting that he may be relieved from the date of his reminder letter so that he could join IIT-Bombay as a teacher. He had also urged the ministry to treat his reminder letter as three months’ notice period.

According to sources, the Ministry will send its recommendation to President Pranab Mukherkee for relieving the IIT director once it receives names from the institute's chairman for handing over Shevgaonkar's charge to an acting director.

Sources said Higher Education Secretary Satyanarayan Mohanty has recommended that he should be relieved of his duties, sources said.

Shevgaonkar's resignation sparked a major controversy in political and academic circles. Opposition leaders made an issue out of the episode during the Budget Session of Parliament and used it to accuse the HRD Minister of interfering with the autonomy of premier technical institutes and central universities.

Speaking on Shevgaonkar's resignation episode, nuclear scientist and former chairperson of IIT-Bombay Anil Kakodkar recently told a news channel that IIT-Delhi director was a respected academic whose self-respect was "severely hurt" and that he should be allowed to exit honourably.
IIT-Guwahati convocation Monday
Submitted by AT News on Sat, 06/06/2015 - 13:04

http://www.assamtimes.org/node/13849

Guwahati IIT is gearing up for the 17th convocation ceremony slated for Monday.

IIT-G officials told Assam Times that the event is being organized at the Dr Bhuben Hazarika auditorium where Union Minister of Human Resource Development Smriti Irani will attend as the chief guest.

The Chairman of Board of Governors, IIT Guwahati, Dr Rajendra Pratap Singh, will also be present at the convocation.

Altogether 1117 students – 578 Bachelor of Technology (BTech) and Bachelor of Design (BDes), 24 Master of Arts (MA), 124 Master of Science (MSc), 267 Master of Technology (MTech) and Master of Design (MDes) and 124 Doctor of Philosophy (PhD) – will receive their degrees at the convocation.
RAY KURZWEIL, director of engineering at Google, believes humans will become hybrids who can connect their brain directly to the internet by 2030.

The outspoken futurist made the claims at the Exponential Future conference in New York. He said the brain will connect via nanobots, tiny robots made from DNA strands, and be able to harness cloud computing servers to augment our intelligence.

“Our thinking then will be a hybrid of biological and non-biological thinking,” Kurzweil said, according to CNN.

“We’re going to gradually merge and enhance ourselves. In my view, that’s the nature of being human – we transcend our limitations. We’ll be able to extend (our limitations) and think in the cloud.”

“We’re going to put gateways to the cloud in our brains,” Kurzweil, who now works as director of engineering at Google, most famously predicted that the technological singularity – when artificial intelligence surpasses that of human intelligence – would occur by the year 2045. He thinks we’ll also be able to fully back up our brains.

“We’re going to gradually merge and enhance ourselves,” he said.

“In my view, that’s the nature of being human – we transcend our limitations.”

However, Kurzweil has predicted what the future will look like before – with reasonable success.

In the 90s, he made 147 predictions for 2009. In 2010, he reviewed his predictions, 86 per cent of which were correct. He predicted people would primarily use portable computers in 2009, that cables would disappear and that computer displays would be built into eyeglasses – although he did admit on stage he thought we’d have self-driving cars by 2009.

Recently one expert claims the rise of AI could lead to a social split. The rich are set to become God-like cyborgs in what could be the biggest evolution in biology since life emerged, according to Yuval Noah Harari, a professor at the Hebrew University of Jerusalem, who believes the radical shift will take place in the next 200 years.

Using biotechnology and genetic engineering, Professor Harari claims the wealthy will transform into a new type of divine, immortal human with complete power over life and death. He argues that humans are unable to resist the temptation to ‘upgrade’ themselves, according to a report by Sarah Knaptin in The Telegraph.

“We are programmed to be dissatisfied,” said Professor Harari, during a recent speech at the Hay literary festival in Wales.

“Even when humans gain pleasure and achievements it is not enough. They want more and more.”

“I think it is likely in the next 200 years or so homo sapiens will upgrade themselves into some idea of a divine being, either through biological manipulation or genetic engineering of by the creation of cyborgs, part organic part non-organic.”

“It will be the greatest evolution in biology since the appearance of life.”

“Nothing really has changed in four billion years biologically speaking.”

“But we will be as different from today’s humans as chimps are now from us.”

The technology to do this, however, will be restricted to the very wealthy, claims Professor Harari. Up until now, he says society has been held together by inventing “fictions”, such as religion, money and the idea of fundamental human rights.

As long as humans believed they defined more and more on these gods they were controllable, he said.
Indian Institute of Technology, Madras (IIT-M) on Sunday reinstated recognition of a student group, whose derecognition had triggered a controversy, and appointed a professor as its faculty adviser, bringing an end to the more than a week-long standoff.

The reinstatement of recognition to Ambedkar Periyar Study Circle (APSC) and appointment of Professor Milind Brahme as adviser came after a meeting between the Dean of Students and representatives of APSC Institute had banned group for criticising PM held on Sunday, ending the confrontation that had left the campus in turmoil.

“The Dean of Students reinstated the recognition of APSC as an independent student body, and after consultation with the APSC representatives, recommended Professor Milind Brahme as the faculty adviser,” an official release from IIT-M said.

Professor Brahme has consented to advise APSC as required in the guidelines for independent student bodies, it said.

IIT-M found itself at the centre of a controversy after it recently derecognised APSC, many of whose members are Dalits, following a complaint that it was critical of Prime Minister Narendra Modi.

Union HRD Minister Smriti Irani also came under fire from political parties, including the Congress and students’ bodies for the action against the APSC.

The IIT-M had, however, maintained that as per the guidelines in force, student bodies cannot use its name or its official entities in any capacity to publicise their activities or garner support without official permission.

With students staging protests demanding withdrawal of the action, the IIT-M had last week convened a meeting of the Board of Students. Noting that the Board of Students met and discussed the issues raised by APSC, the release said some of the suggestions will be taken up in due course.

PTI
Following furore, IIT-M lifts ban on study circle
No violation committed, says joint public statement

Sruthisagar Yamunan

CHENNAI: The Indian Institute of Technology, Madras, on Sunday reinstated unconditionally the recognition to the Ambedkar Periyar Study Circle, the student body that was suspended on May 22 following an anonymous complaint to the Human Resource Development Ministry.

The de-recognition had led to a controversy, with Opposition parties such as the Congress slamming the Centre for stifling dissent and “silencing” voices critical of it and Prime Minister Narendra Modi.

The decision to restore recognition followed a marathon seven-hour discussion between the student representatives and IIT-Madras Director Bhaskar Ramamurthi. A joint public statement said the guidelines for student groups were publicised on the institute’s website on April 18, but the study circle meeting, which had critical references to the Ministry’s policies and led to the anonymous complaint, was held on April 14.

“By this, the management has recognised we did not commit any violation,” said Abinav Surya, a study circle member. Akhil Bharathan, another student member, said the group had asked for an unconditional apology from the management for de-recognising it. The group was accused of violating guidelines, particularly not seeking the approval of the Dean before going ahead with its activities. “This is a victory for freedom of expression. We thank all the democratic forces who stood by us during this struggle,” he said adding that the struggle against “hegemonic” forces in the IIT would continue. The statement said the Board of Students met on Sunday and discussed some of the changes the study circle had proposed to the guidelines. While some of these would be implemented by the office of the Dean of Students, the suggestions would be eventually taken up by student bodies, including the Student Affairs Council. Professor Milind Brahme would henceforth be the faculty advisor for the study circle.
Wish controversy could have been avoided: IIT-M director

Sruthisagar Yamunan

CHENAI: The Director of the IIT-Madras Bhaskar Ramamurthi has said that the issue over the de-recognition of the Ambedkar-Periyar Study Circle could have been handled in a non-controversial way.

Mr. Ramamurthi was speaking to The Hindu on Sunday after the IIT-Madras management reinstated the recognition to the study circle after a marathon meeting with student representatives.

Asked whether the joint public statement issued after the meeting meant that the study circle did not commit any mistake, he said while the guidelines were published on the website on April 18, they were put together much earlier and were cleared through due process by the Board of Governors. Also, he said there was some misunderstanding on the faculty adviser’s role.

On why the student body was unilaterally de-recognised by the Dean in the first place, he said this was the process followed at the institution for all issues.

“If a student is caught for malpractice in examinations, we first suspend and then ask for explanation. This has been the process. But looking back, I wish this controversy was averted,” he said.

On the accusation that some student groups, especially those tilting to the Right of the political spectrum, were being provided more advantages at the institution, Mr. Ramamurthi said the very idea behind forming the guidelines was to ensure such accusations did not crop up and there was a level playing field.

“Some of the groups mentioned have been in existence for decades. In the last few years, many new groups have come up. As the management, we show absolutely no discrimination as far as our students are concerned,” he reiterated.

The study circle has said on its Twitter page that it would continue to struggle to realise the vision of B.R. Ambedkar to annihilate caste.
RSS mouthpiece backs action against Dalit students’ body

NEW DELHI, JUNE 7

Even as IIT-Madras revoked the ban on the Dalit students’ body, the RSS mouthpiece justified last month’s crackdown on Ambedkar-Periyar Study Circle (APSC), while accusing of propagating “anti-Hindi” and “anti-Bharat” ideology. Alleging that educational campuses in the country are “infected” with Marxist or “red ideology”, an editorial in the latest issue of the Organiser also attacked the Congress vice president Rahul Gandhi for his recent visit to the Ambedkar memorial in Mumbai by Mahatma Phule, calling it an attempt to play vote-bank politics.

Justifying the action against APSC, the editorial claimed there was no institutional space and symbols without permission amounted to “indiscipline” and the institution had every right to question its students. “The educational campuses are infested with the wide range of red ideology that has used forums such as APSC to propagate anti-Hindi and anti-Bharat divisive ideology, which Dr Ambedkar would have never approved of,” it said.

“Pointing out that nobody can and should support a ban on any student outfit for criticising government policies, it said the HRD Ministry had only forwarded a complaint by another section of students.

“The pet projects of Aryan invasion, inciting hatred, breaking democratic norms of discourse for political gain and then misrepresenting facts through media is the ultra-communist strategy, which is perfectly used in this case. Mentors like Ambedkar, Roy can happily use these forums to propagate anti-Bharat ideology,” the Organiser said, while adding Ambedkar’s “confirmed enemy of Communists”.

However, the RSS weekly Backwardness, backed up by the RSS, has focussed a dialogue to create an atmosphere of social harmony instead of following the path of divisive ideologies.

The mouthpiece also accused the Congress of “always misrepresenting realities and propagating anti-Brahminism” as a part of its strategy.

In a sharp attack on Rahul Gandhi, it said: “In India we believe that a person who took 10 years to understand his party will rightly address the complex issue of caste-based discrimination and immorality.”

The weekly’s cover story titled ‘Poisoning Student Politics’ alleged that both APSC and Congress’s student wing, NSUI, were trying to spread messages of hatred and disorder. While it accused the APSC of misrepresenting realities and spreading hatred in student politics, it said the NSUI’s top leader, Rahul Gandhi, was preaching disorder and misrepresenting the facts about RSS.

Alleging that it was politics of attacking Hindu nationalism at play, the article warned: “This strategy of injecting divisive thinking can prove dangerous for the respective organisations and poisonous for student politics.”

Govt may open IIT, IIM campuses abroad

NEW DELHI: Revisiting its earlier policy of not setting up higher educational institutions in foreign countries, the Centre is now considering opening Indian Institute of Technology (IIT) and Indian Institute of Management (IIM) campuses in countries like Sri Lanka, Mauritius, Dubai etc.

As part of its foreign policy initiative, the government will soon work on a framework to set up such institutions. “We need to take a call on the issue in light of the new foreign policy initiative. Internationalisation (of education) has political spin-offs as well,” a policy document on the subject said.

“Requests from South Asian countries (Sri Lanka, Myanmar etc.), requests from countries with significant Indian population (Mauritius) and requests from some international city states (Dubai, Kuwait, Qatar) for high quality Indian institutions to set up campuses or facilitate the setting up of an international campus has to be seen in the overall context of India’s global diplomacy and development priority.”

Sources said many developing countries have been making requests for setting up premier technical and management institutions on the lines of IITs and IIMs. But so far, the government had only agreed to academic collaborations, faculty exchange, research etc.

An argument against setting up a campus abroad or sending Indian faculty in large numbers to facilitate the setting of a similar campus abroad was that the country was short of good faculty and that quality of education was an unfinished agenda.

“But with an expansion in the pool of faculty, in case of very pressing need for international engagement for strategic reasons of as goodwill gesture, a view may be taken in such matters,” the policy paper argued.

Earlier a proposal by IIM-Mumbai to set up a campus in Singapore in 2006 was shot down by the government. More recently, IIT-Delhi’s MoU with Mauritius for setting up a research centre had also come under cloud.
**IIT-P to raise Bihta campus as solar energy hub**

*Hindustan Times (Patna)*

**New institute director Pushpak Bhattacharyya promises free power to villages near its new Bihta campus under CSR programme**

The Indian Institute of Technology, Patna (IIT-P) has come up with an idea that promises the likelihood of the premier institution’s ‘seamless merger’ with its surroundings.

Under its corporate social responsibility (CSR) programme, the institute proposes to develop its upcoming campus at Bihta, 25 km west of Patna, as a hub for tapping solar energy and distributing it to villages adjacent to its campus.

The premier engineering institute, which will shift to its much-awaited Bihta campus by July 15, also promises to give impetus to research in food processing and agricultural science.

The idea behind this exercise is to generate high quality, nonobtrusive fertilisers and boost productivity by taking advantage of its strategic location in the Gangetic plains.

All this came out during an exclusive interview given to HT by Prof Pushpak Bhattacharyya, who joined as IIT-P director on June 3.

Bhattacharyya said, “We will assess how much solar energy we can tap through our solar panels and our internal demand for street lighting, water heating, etc. Whatever energy remains will be used to light up the surrounding areas outside our campus.”

He further said, “We also have an educational outreach programme in which our students and faculty members will reach out to the adjoining villages and preach computer literacy to children”.

The idea behind this exercise would be to create among the kids awareness about using social media sites like Facebook, Linkedin and Google for increasing one’s knowledge.

“Besides, we will also interact with neighbouring states like Uttar Pradesh and West Bengal and try to address some of their issues. Our idea is to give back to the society what we earn from it”, Bhattacharyya told HT.

Bhattacharyya is an alumnus of IIT-Kharagpur (B Tech degree), IIT-Kanpur (M Tech) and IIT Bombay (Ph.D). He was professor of computer science and engineering at IIT-Bombay before coming here.

The IIT-P director also has ideas on how to rid Patna of its traffic woes.

“Like the IIT-Bombay, which the Maharashtra government consults for constructing bridges and flyovers, we are open to doing traffic modelling and applying our scientific and mathematical techniques to rid the state capital of its traffic snarl-ups,” he added.
आइआईटी-मद्रास ने खोजी कैंसर इलाज की नई तकनीक

आइआईटी-मद्रास के वैज्ञानिकों की टीम ने कैंसर के इलाज के लिए नई तकनीक ईजाद करने का दावा किया है। इसमें इम्युनोटॉक्सिन नामक नए मॉलेक्युल्स का इस्तेमाल किया जाता है जो शरीर के कैंसर सेल्स को निशाना बनाता है। इसके अलावा ल्यूकेमिया पीड़ितों पर दवाओं या किसी थर्येपी के साइड एफेक्ट को कम करने में भी यह तकनीक सहायक है। आइआईटी-मद्रास के बायोटेक्नोलॉजी विभाग में स्टेम सेल्स और मॉलेक्युलर बायोटेक्नोलॉजी के प्रोफेसर राम एस. वर्मा ने बताया कि इम्युनोटॉक्सिन मॉलेक्युल्स का समूह होता है जो विशेष कैंसर सेल्स को खत्म करता है। ल्यूकेमिया से रोग की हद तक प्रभावित होती है। इसके कारण नये रक्त कोशिकाओं का उत्पादन काफी बढ़ जाता है। ऐसे में पीड़ितों को कीमोथरेपी या रेडियोथरेपी की मदद की जा सकती है। इसकी विपरीत प्रभाव पड़ता है। प्रो. वर्मा का कहना है कि नई तकनीक से इसके सैड एफेक्ट को भी कम करने में मदद मिलेगी।

पचास वर्षों में डायबिटीज मुक्त हो जाएगी पूरी दुनिया

अमेरिका के वैज्ञानिकों ने दावा किया है कि पूरा विश्व अगले 50 वर्षों में डायबिटीज से मुक्त हो जाएगा। विशेषज्ञों ने बताया कि पहले पेशाब में मुगर की मात्रा के आधार पर डायबिटीज का पता लगाया जाता था, लेकिन अब खून में ग्लुकोज की मात्रा का पता लगाने के लिए कई नए तरीके सामने आ चुके हैं। एक सी विधि से तीन महीनों की अवधि में डायबिटीज की आशंका का पता लगाया जा सकता है। डेट्राइट रिसेंट हेनरी फोर्ड हेल्थ सिस्टम के प्रमुख प्रौढ़ व्हाइटहाउस ने बताया कि आधुनिक तकनीक से इस बीमारी का पता लगाकर उचित इलाज किया जा सकता है। आने वाले पांच दशकों में इसमें और प्रगति होगी। हालांकि, अमेरिकी डायबिटीज संघ के मुख्य वैज्ञानिक व विकित्ता अधिकारी का कहना है कि हमलोग फिलहाल रोग का पता लगाने और उसे सीमित करने में ही सक्षम हैं, खत्म करने का तरीका अभी तक नहीं दूर जा सका है।

—आइआईटी-मद्रास
IIT-Madras team aims to reduce leukemia treatment's side effects


New Delhi: A team of researchers at the Indian Institute of Technology-Madras (IIT-M) have devised a technique that uses a new class of molecules called immunotoxins that specifically target cancer cells and help reduce the side effects leukemia patients have to endure during their treatment.

Rama S. Verma, professor of stem cell and molecular biology at IIT-M's department of biotechnology, said that immunotoxins are a group of molecules which target the specific cancer depending upon the receptors present on or over-expressed on the cancer cell.

"We know the ligands (ions or neutral molecules bonding to a central metal atom or ion) for that particular receptor and the ligands of that particular receptor are tied with the toxin molecule (which could be of plant or bacterial origin)...We also made several molecules to understand the biology and how they target the cancer...and they work very nicely," Varma told IANS.

Leukemia affects the bone marrow, which, being a site of blood cell production, results in a large number of abnormal white blood cells entering the bloodstream.

Most cancer patients have to undergo either chemotherapy or radiation therapy, both of which lead to side effects like hair loss, tiredness, bruising and skin-related problems.

However, Varma, who became an independent researcher at IIT-M nearly 11 years ago, felt that when these plant and bacterial origins are injected in humans they are capable of producing some immune response leading to side effects.

"So, why not search about something which cannot elicit any immunogenicity (the property enabling a substance to provoke an immune response)...We found out there is a process known as apoptosis - which is a programmed cell death. There were a few death fragmentation factors involved which are of immune origin, so why not we tag these death fragmentation factors into those ligands and try to see (what happens). That's how we ended up developing this molecule which will not be able to elicit any immunogenicity when we inject it in humans."

The team, whose research is basically targeted at basic pediatric and adult leukemia, said that owing to its side-effects not a single immunotoxin was present in the market.

"...But they are in the last stage of clinical studies. So, probably in a couple of years a few molecules will come as therapeutic molecules in treating cancer patients," Varma said.

"They were not around for a long time because there was a lot of drawbacks. There was a lot of pain and side-effects. But what we are trying to construct will probably not have any side effects. So I am doing clinical studies in terms of patient samples and then we have to do stability tests on mice and after that I am looking for somebody who can sponsor my work so that i can go ahead and do some clinical studies."

Despite worries about funding, Varma hopes to undertake clinical trials within two to three years.
"I have got most of the funding from the department of science and technology because the clinical trials are very expensive. I would look forward to some investor or some company who can sponsor my research or we can work together," Varma said.

972 students get degrees in IIT-K convocation

TNN | Jun 8, 2015, 02.12 AM IST


KANPUR: The eagerly awaited moment for IIT-K students arrived on Sunday when their names were called for receiving degrees on the dais. The occasion was the 48th convocation ceremony of the institute, which was held in two parts.

The postgraduate students were given degrees in the morning session. The graduating students had a joyous time in the afternoon session when they received degrees.

National University of Singapore president Tan Chorh Chuan was the chief guest in the morning session. In the afternoon session, chairman and MD, Bharat Heavy Electricals Limited (BHEL), B Prasada Rao was the chief guest.

The degrees were given by IIT-K director Indranil Manna and chairman of Board of Governors of the institute M Anandkrishnan. The first and the last to receive the degrees were PhD and BTech students respectively.

The students were praised and motivated by the IIT-K authorities and the chief guests. For the students, it was like a dream come true of having graduated and post-graduated from a prestigious engineering institute in the country.

Karan Singh of computer science and engineering student and Sarthak Chandra, a physics student received President's Gold Medal and Director's Gold Medal respectively. As soon as the two were given the medals, the entire hall burst into applause and cheers. It was also a proud moment for these two students.

Pratik Pradyot Rath, a graduating student of physics was awarded Ratan Swarup Memorial Prize. In the morning session, Abdul Sayeed Khan received Cadence Gold Medal for the best MTech thesis. He also received three other medals.

In all, 972 students were awarded degrees, including those in absentia. More than 10% recipient of degrees were absent. The parents and close relatives of the students were present on the occasion to make it a more joyous show. Soon after the conclusion of the convocation programme, the students threw head gear in the air and celebrated their success.

IIT-K administration also gave honorary degree (Honoris Causa) to chairman, Board of Governors, IIT-Madras, Pawan Kumar Goenka, an alumnus of IIT-Kanpur, who is at present executive director, Mahindra and Mahindra Limited. IIT-K administration also felicitated Tan Chorh Chuan and B Prasada Rao.

In his convocation address, Rao said that deer does not enter the mouth of the lion that is merely sitting and waiting for it to come. Dreams that seem impossible can be realised with determination and persistent efforts, notwithstanding odds.

Rao shed light on 'Make In India' initiative of Modi government. He told students that Make In India campaign has the
capability to make country one of the world's manufacturing hubs for many global companies.

He said, today manufacturing sector employs 30% of the non-agricultural workforce in India. Even though agriculture supports 58% of the working population, it contributes only 18% to the country's GDP.

The chief guest of the morning session, Tan Chorh Chuan told students three useful thoughts for going ahead in life. The first was constructive dissatisfaction through which negative energies can be converted into positive ones, second was doing good and the third was being rooted.

Before the conclusion of the ceremony, Manna read the progress report and mentioned about various technological projects taken up by the institute. He highlighted the new projects that have been taken up by IIT and also those in the pipeline. He mentioned that 136 students have completed PhD in the ongoing academic session which is a record in the institute.
Engineering education is slat-ed for a paradigm shift. There has been a good bit of talk on switching from analysis to synthesis. Convergence seems to be the keyword rather than learning in silos. While the content is still important, the teaching techniques, too, are critical. Today, institutes deploy various strategies to enhance the learning experience. The curricula should emphasise the importance of experiential learning and design. Systems concepts have to be learnt and absorbed with a focus on innovation, creation and development of products. In keeping with this, here are a few upcoming areas of specialisation available at the postgraduate (PG) level that seem promising.

APPLIED PETROLEUM ENGINEERING
The MTech degree in applied petroleum engineering is largely a trans-disciplinary programme combining inputs from geology and geophysics, mining engineering, chemical engineering and mechanical engineering. The degree is offered with various specialisations at institutes such as the IITs: Indian School of Mines, Dhanbad; University of Petroleum and Energy Studies, Dehradun (UPES); among others. The general entry criteria is a BTech in an allied field of study such as chemical, mechanical, production, polymer or petrochemical engineering. GATE-qualified students have an edge over others. One can opt for a five-year integrated programme comprising an MTech in petroleum engineering with specialisation in petroleum production. Students can also enrol for a six-year integrated MSc and MTech programme comprising an MSc in applied geology or exploration geophysics and an MTech in petroleum engineering with specialisation in petroleum exploration.

FINANCIAL ENGINEERING
A PG degree in financial engineering is being welcomed by industry and financial institutions with attractive placement opportunities. Students with a strong mathematical background can work with investment banks or other financial institutions to pursue a rewarding career in this field. There has been a convergence of related disciplines in the curriculum design of this programme bringing together aspects of financial concepts and theories, maths, statistics, economics, econometrics, and computational and information systems. Students can read any core subject of engineering in the undergraduate level and go on to specialise in financial engineering at the PG level.

ENGINEERING ENTREPRENEURSHIP
Yet another upcoming field of study is engineering entrepreneurship. Students with a BTech in any field can opt for this specialisation at the MTech level. The programme provides students the opportunity to develop their creative skills while applying principles of management, marketing and finance to the challenges of starting, growing or managing a business.

QUALITY ENGINEERING DESIGN AND MANUFACTURING
PG programmes in quality engineering design and manufacturing, too, are gaining popularity among students from an industrial electronics or mechanical engineering background. The academic content of such programmes exposes students to major engineering aspects related to goods including product modelling and development, design for quality, manufacturability and assembly, etc.

DATA SCIENCE AND ENGINEERING
Data science and engineering, which trains engineers to analyse huge amounts of structured and unstructured data and take decisions based on such analytics, is becoming a popular option among learners. It is taught at some IITs and private institutes. A PG diploma in business analytics is jointly offered by ISI Calcutta, IIM Calcutta and IIT Kharagpur, providing inter-disciplinary exposure. Enrollees are required to complete a semester of coursework at each of these institutions. In the final semester, students have to write a thesis at either one of these institutions depending on their area of study. Students with an MSc in science, statistics or maths or a BTech in any discipline are eligible to apply. Graduates can find employment opportunities in business houses, hospitals, industries, financial institutions and manufacturing industries. Students can also explore the option of pursuing a PhD upon graduation.

TRANSPORTATION ENGINEERING
A number of institutes offer courses in transportation engineering. Graduate engineers with a BTech, BE or an equivalent degree in civil, electrical or mechanical engineering and a qualifying GATE score are eligible to apply for these programmes. Elements of entrepreneurship and engagement with the humanities can help engineers do greater societal good. The coursework at engineering institutes should include training in writing and communication skills, help students imbibe professional ethics and a sense of social responsibility while initiating students into the world of business and industry.

—as told to Aparajita Sen
Making higher education globally-relevant

Strategies similar to those adopted for bilateral negotiations for attracting FDI and easing of trade barriers for businesses need to be applied to Indian education and research to make it globally-relevant and competitive.

Unfortunately, for more than six and-a-half decades, we have been guided by an inward and protectionist, control-oriented approach towards education with best of the intentions. The outcome is the largest education system in terms of institutions and the second-largest in student enrolment, but of poor quality, largely unknown to the world, barring the ISL, IITs and IIMs. Paradoxically, our top talent goes developed countries for studying, research and contributing intellectual capital as well as economic value to other countries. An estimated 500,000 Indian students are studying abroad, spending about $10 billion, while our institutions are not good enough.

Ironically, we have been av energetic to foreign students coming to India. We not only need a strategy for some of overseas students study here but also to expand our education institutions to goodness in numbers. By 2020, India is expected to be a tripping country with about 1 million working population. To reap results from this demographic windfall, we need to transform national and innovative interventions across all levels of education. Growth in manufacturing and services sector will create a demand for skilled workers needed for the global economy. Countries such as China, Korea and Singapore have already transformed in the short span of a decade through strategic planning and forward-looking vision by correlating economic development to reform and education sector as well. While we acknowledge that the government has proposed and is also taking several measures to improve the system, there are several factors that could help us attract the right mix of inward and outward mobility.

The FICCI Vision 2020 envisages the higher education sector into forces—towards institutions imitating a wide range of courses and skills, relevant to local industry community; career-focused institutions offering industry-relevant professional/technology courses; and research-focused institutions producing cutting-edge research and knowledge.

The key to success here is to have a flexible regulatory framework to enable each type of institution to excel in its area of expertise, allowing them to innovate while transforming themselves into international brands as they follow the norms. In fact, top positions in international rankings are among the institutions that follow this path.

Internationalisation of education also needs to be strengthened through global accreditation systems, accepting international test scores such as SAT, ACT and IELTS. Robust marketing initiatives would also help Indian higher education institutions to reach the leaders by participating in international fairs.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should not be a one-time event and must be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.

National Framework of Ranking of Universities and Colleges aimed to be voluntary, revalidation and development of comprehensive academic and research institutions that drive innovation and excellence. The aim is to place India among the top 5 countries in terms of rankings, with a significant improvement in global rankings.

The plan is to have 15% international students in Indian universities, which is welcome but needs to be supported by opening representative offshore offices, equivalent to British Council, Education New Zealand, Education USA, etc., by 2020. Indian higher education and research initiatives also need to align themselves with global accreditation systems, accepting international test scores such as SAT, ACT and IELTS. Robust marketing initiatives would also help Indian higher education institutions to reach the leaders by participating in international fairs.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.

The government’s plan to rope in 1,000 American academics to teach in Indian universities is a welcome move. However, such treaties should be accompanied by a long-term strategy to develop a sustainable model.

To address the slow pace of job creation, there is a need to convert our universities into incubation and experimentation fields for start-ups. Industry should be encouraged and incentivised for setting up entrepreneurship incubation centres in universities. Institutions should offer them flexibility to opt for jobs after two years of graduation, giving time for experimentation.
NEW DELHI: Deputy chief minister and the education minister of Delhi Manish Sisodia on Sunday said that the ministry of human resources development (HRD) should be scrapped and instead a ministry of education be formed.

Speaking during an interview to a television channel, Sisodia also promised to bring in 100 per cent literacy in Delhi and make education interesting for children.

“We want to transform the government schools in such a way that parents do not hesitate or think twice before sending their children there. The day I send my child to a government school without a second thought, that would be the day I will know that I have become successful as the state’s education minister,” he said.

He also promised to replicate the education system of Finland in 50-60 city schools. This project, he said, will be started from this year itself.

Sisodia also said that he would reduce the burden of the school bags and the syllabus by almost 25 per cent.

The minister also assured that teachers would be given the utmost respect and provided complete freedom to innovate and discuss their ideas.

“Our government plans to bring changes in the teachers training syllabus and induct 20,000 more teachers in government schools,” he said.

Reiterating their earlier stand, he said that the government was soon going to bring in an amendment in the existing law to ensure uniform fee structure for all schools and curb rackets that operate in schools.

After the interview, the minister also met former President of India APJ Abdul Kalam.

Sisodia sought Kalam’s views on improving education in Delhi during the meeting, which was attended by education secretary Punya Salila Srivastava.

Later, a picture of Sisodia and Srivastava with Kalam was posted on twitter. The photo was captioned as: “Met APJ Abdul Kalam and got his inputs on improving the education system in Delhi.”
Education plans

FORMER president Dr APJ Abdul Kalam is in great demand as an educationist in the country. Delhi Deputy Chief Minister Manish Sisodia met Kalam and discussed plans to revamp the education system in the Capital. Sisodia sought Kalam’s views on improving education in Delhi during the meeting. The deputy CM, who also holds the education portfolio, had earlier announced his government’s decision to set up a separate education board and course and curriculum for Delhi. The ambitious plans of the AAP government to overhaul the education system were shared by Sisodia in a programme, where he said the AAP government would work for 100 per cent literacy in Delhi and emphasised on revamping government schools.
Now, aircraft wings that can ‘self heal’ on the fly

Technology Developed By British Researchers Can Also Offer Cure For Cracked Cellphone Screens

Chris Green

Even the researchers involved in the project describe it as “verging on science fiction”. A team of British scientists has produced aircraft wings that can fix themselves after being damaged, hinting at the possible dominance of self-healing technology in the near future.

Their research, due to be presented at a Royal Society meeting in London this week, is being billed as an important step in an emerging field which could soon produce self-healing nail polish and a cure for cracked mobile phone screens.

The leader of the research, Professor Duncan Wass, who has been working on the technology for the past three years, said he expected self-healing products to reach consumers in the “very near future”. His team specializes in modifying carbon fibre composite materials, the strong but lightweight substances used widely in the manufacture of commercial aircraft wings, sports racquets and high-performance bicycles.

Wass and his team have been working with aerospace engineers at the University of Bristol, who wanted to know if there was a way of preventing the tiny, almost undetectable cracks that form in an aircraft’s wings and fuselage. The team’s ingenious solution started “on the back of an envelope” but has since developed into useable technology. It involves adding tiny hollow “microspheres” to the carbon material – so small that they look like a powder to the human eye – which breaks in impact, releasing a liquid healing agent.

The agent seeps into the cracks left by the damage before coming into contact with a catalyst, triggering a rapid chemical reaction which causes it to harden. Wass said he took inspiration from the human body: “We’re not evolved to withstand any damage, but if we do get damaged, we bleed, and it scabs and heals. We just put that same sort of function into a synthetic material,” he said.

Tests have established that the material is as strong after it has been “healed”, raising the possibility of aircraft wings that can repair themselves “literally on the fly” if a bird strike takes place in mid-flight. Wass said the technology could also make airline safety checks far cheaper as a dye could be added to the healing agent causing any damage to an aircraft to stand out like a bruise. This would allow engineers to identify damaged areas quickly and ensure that they do not miss anything as they examine the plane.


Rashtriya Sahara ND 08/06/2015  p-16

नासा का मंगल पर मानव अभियान उड़नत्वतरी का प्रयोग होगा!

पासिडेना। पर्यावरण के उद्योगी कार्यों के अधिकांश पर आते आते की रहस्यमय कहानियों की बात बदल गयी है लेकिन अमेरिकी अंतरिक्ष एजेंसी नासा आज काफी खुद ऐसी उड़नस्थलीय बनाने और उन्हें इंसान के साथ पहुंचाने के लिए रूपांतरण की आज्ञाएं है। मंगल पर चेन्नाइ के लिए भेजे जाने के लिए नासा ने मंगल से गुदा जाने की धारा को अंतरिक्ष से चलाने का निर्णय लिया है।

मंगल में अंतरिक्ष में रखी हुई मेल ड्रू की आपसी दूरी की बात करते हुए मानवों के मंगल पर उतरना है ताकि उन्हें उपयोगी अंतरिक्ष यान का माना में नहीं हो जाए। इसके लिए, उड़नत्वतरी जैसे मांजबुद यान बनाने होंगे। नासा ने निश्चित प्रोपागेन्ट प्रस्तावित के वैज्ञानिक इंजीनियर कार्य के अनुसार मंगल पर आगेपल्ली अभियान का स्वरूप देखा है।

कार्यक्रम का निर्देशन करेंगे, जिसमें मंगल के चार काल यानों की दूरी तीन महीने में तिरूर होगी। इन्हें 1971 में जब सूर्य का नाश्ता रन मंगल पर उतरा था तो इस गुरुदेवताकाल या यात्रा थी। यह यान रोबोट के अभियान के लिए यह संख्या छोड़ दी गई थी जो लगातार पर उतरकर इनक क्रुद्धि नहीं है। ऐसे में मंगल का पश्चिम में रोज देवी का गुंडा नहीं होगा। इसके लिए, उड़नत्वतरी जैसे मांजबुद यान बनाने होंगे। नासा को जेट प्रोपागेन्ट प्रस्तावित के वैज्ञानिक इंजीनियर कार्य के अनुसार मंगल पर मानवस्तु अभियान का स्वरूप देखा है।

कार्यक्रम के निर्देशन करेंगे, जिसमें मंगल के चार काल यानों की दूरी तीन महीने में तिरूर होगी। इन्हें 1971 में जब सूर्य का नाश्ता रन मंगल पर उतरा था तो इस गुरुदेवताकाल या यात्रा थी। यह यान रोबोट के अभियान के लिए यह संख्या छोड़ दी गई थी जो लगातार पर उतरकर इनक क्रुद्धि नहीं है। ऐसे में मंगल का पश्चिम में रोज देवी का गुंडा नहीं होगा। इसके लिए, उड़नत्वतरी जैसे मांजबुद यान बनाने होंगे। नासा को जेट प्रोपागेन्ट प्रस्तावित के वैज्ञानिक इंजीनियर कार्य के अनुसार मंगल पर मानवस्तु अभियान का स्वरूप देखा है।

कार्यक्रम का निर्देशन करेंगे, जिसमें मंगल के चार काल यानों की दूरी तीन महीने में तिरूर होगी। इन्हें 1971 में जब सूर्य का नाश्ता रन मंगल पर उतरा था तो इस गुरुदेवताकाल या यात्रा थी। यह यान रोबोट के अभियान के लिए यह संख्या छोड़ दी गई थी जो लगातार पर उतरकर इनक क्रुद्धि नहीं है। ऐसे में मंगल का पश्चिम में रोज देवी का गुंडा नहीं होगा।
The Highest-Paid Public University Presidents


According to a report just released by The Chronicle of Higher Education, the nation’s three highest-earning public college presidents are no longer in their posts. Often university presidents reap the greatest rewards when they leave their jobs because they receive severance, deferred compensation or other rewards. The top earner: Rodney A. Erickson, president of Pennsylvania State University from November 2011 to May 2014. His total compensation of $1,494,603 included the $586,000 balance of a university-sponsored life-insurance plan that the school had terminated.

The second-highest-earner, R. Bowen Loftin, who had the top job at Texas A&M University at College Station from February 2010 to January 2014, raked in a severance package of $850,000, which went a long way toward boosting his total compensation to $1,128,957. Some schools opt to pay big exit packages in exchange for agreements by departing presidents that they will not bring any future legal claims.

In third place, Joseph A. Alutto was interim president of Ohio State University for just under a year, from July 2013 to June 2014. His compensation: $996,169. That included a generous bonus of $361,507. He stepped in after the sudden departure of 2013’s highest-paid public university president, E. Gordon Gee, who took home more than $5 million when he left OSU, including a large severance award. Gee, widely regarded as a masterful fundraiser, departed suddenly after a series of malapropisms, including one criticizing Catholic leaders at Notre Dame. He is now president of West Virginia University.

Penn State’s Erickson garnered both major kudos and heated controversy along with his big payday. A 37-year veteran of the university, he delayed his own retirement and took charge when Penn State was reeling from the explosive Jerry Sandusky sex abuse scandal. Erickson’s predecessor, Graham Spanier, still faces a criminal indictment for charges ranging from child endangerment to perjury and conspiring to cover up Sandusky’s crimes. (Spanier has denied the charges and filed a defamation suit against former FBI director Louis Freeh, who issued a damning report on the scandal.) Erickson steered Penn State through very rocky terrain, including the Freeh report and stiff, controversial sanctions on the school’s football program. Erickson’s replacement is former Florida state president Eric Barron.

The Chronicle also notes that Spanier, along with 42 other former college presidents, is still receiving compensation from his former employer. According to the Chronicle, he earned more than any public university president—nearly $2.3 million—last year. A Penn State spokeswoman says he has been on administrative leave since November 2012 and that his employment agreement entitled him to one year’s sabbatical and five years at a $600,000 salary as a tenured faculty member. He is also receiving a payout from the life insurance program divestiture.

According to the Chronicle, the typical college president earned $428,000 last year, nearly 3.8 times more than the average full-time professor and 7% more than the median for college presidents in fiscal 2013. Adjuncts, who make up an increasingly large share of university teaching staff (47% in 2013 according to the American Association of University Professors, while grad students comprise 12% of the teaching staff) make a fraction of what full-time professors earn and peanuts compared to university presidents. Adjuncts bring home as little as $900-$5,000 per course, according to John Barshaw, a senior researcher at the American Association of University Professors.

A year ago a report by the Institute for Policy Studies, a left-leaning Washington, DC think tank, showed that the 25 public universities with the highest-paid presidents had the fastest-growing levels of student debt and the most rapidly expanding adjunct faculties. The report looked at the period between 2005 and 2012. Says the
report: “Administrative spending outstripped scholarship spending by more than two to one at state schools with the highest-paid presidents.”

While universities maintain that presidents’ compensation is a minimal share of overall university budgets, there is increasing protest in some quarters about bloated presidential pay. The Illinois State Democratic Caucus issues a report in May that criticized the cash bonuses, country club memberships and housing and vehicles that many college presidents receive on top of generous base salaries. The Chronicle report documents some of these perks, like the university-owned house University of Illinois at Chicago president Paula Allen-Meares enjoyed and the $450,000 in deferred compensation she got when she left her post in January 2015.

**Of 200 contenders for post of Mumbai University V-C, search panel shortlists 21**

**Maharashtra Governor C Vidyasagar Rao on March 27 appointed a three-member committee for selecting the VC of Mumbai University.**


The search panel tasked with finding the next vice-chancellor of Mumbai University has shortlisted 21 candidates from the over 200 applications received for the post. The panel will interview the shortlisted candidates on June 19.

According to sources, about 10 candidates are associated with Mumbai University in various capacities.

A senior official said the name of the new vice-chancellor is likely to be announced by the end of June, just before the end of the tenure of current V-C Rajan Welukar.

The shortlisted candidates have all been informed and the interview will be conducted at the National Environmental and Engineering Research Institute (NEERI) office in Worli.

Welukar’s five-year term ends on July 6. His tenure has been marked by a series of controversies and litigations. Former pro-vice chancellor A D Sawant and social activist Nitin Deshpande had filed a PIL against Welukar’s appointment on the grounds that he was not eligible for the post.

Taking a lesson from the controversy over Welukar’s appointment, the state government had then assured to have a transparent process of selection.

**Maharashtra Governor C Vidyasagar Rao on March 27 appointed a three-member committee for selecting the VC of Mumbai University.**

The committee includes former Supreme Court judge Justice B N Srikrishna as chairman of the search committee, Additional Chief Secretary (Home) KP Bakshi as the state government’s nominee, Satish Wate, director, National Environmental and Engineering Research Institute, Nagpur as the representative of management and academic council of the university.

In 2010, the then search committee responsible for the appointment of the vice-chancellor received around 98 applications. Of these, 20 were shortlisted for interviews after screening. After the interviews, five names were recommended to the Chancellor and Welukar was selected as Vice-Chancellor.
This year, sources claim the total aspirants have gone beyond 200, with several college principals and professors from the city in the fray.

“Of the total 21 candidates shortlisted for interview, total 5-6 names will be shortlisted for the final round. These candidates will be giving presentations to the search panel, following which name of one final candidate will be announced,” said an official refusing to divulge more information and names of the shortlisted candidates.

According to sources the list of names of the shortlisted candidate includes Dr. Devanand Shinde from Aurangabad university, Nitin Karmalkar from University of Pune, Dr Suhas Pednekar, Principal of Ruia College, Dr Sanjay Deshmukh from Mumbai University, Dr Abhay Pethe of the university’s Department of Economics, and Dr K V Kale from Aurangabad University.

The nodal officer of the search committee, Madhu Madan, however, remained unavailable for comment.