

# Newspaper Clips

## September 18, 2013

Tribune ND 18-Sep-13 P-13

# Govt to seek corporate honchos' help in finding IIT directors

ADITI TANDON/TNS

NEW DELHI, SEPTEMBER 17

The government is all set to take corporate help in seeking candidates to head its premiere technical institutions, the Indian Institutes of Technology (IITs).

Faced with a dearth of applicants for the posts of directors of these undergraduate engineering institutions, the Ministry of Human Resource Development has decided to write to top industrialists to suggest future leaders for the 15 IITs.

Speaking to The Tribune exclusively, HRD Minister MM Pallam Raju said, "I will write to corporate heads of industries such as Wipro,

Reliance and others and take their help in finding the right leaders for the IIT system. That would help us broaden our selection base, which is right now a little confined to academics. The idea is to engage top technocrats of the country in selecting the best minds for the IIT system."

Raju said efforts in that direction were necessary because all top technical institutions were now expected to acquire both academic and market edge to find future solutions and raise funds.

"IITs are expected to find solutions to urban problems of our times such as city development and alternative energy resources use. They are also required to generate



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— MM Pallam Raju, HRD Minister

more funds by establishing industry linkages. Technocrats can be of help in achieving these objectives. They can suggest candidates fit for the top IIT jobs apart from the usual academic route we practice," Raju said.

The decision to involve corporates follows the realisation that few quality appli-

cations were coming forth for IIT directors' posts. Most recently, the ministry was found struggling to find quality candidates for the post of IIT-Jodhpur Director.

"We got just 30 applications whereas one would have expected many times more. Of these, we were able to short list just about five. The

selection base is thus very narrow and we wish to widen that," ministry officials said.

Besides Directors, the search for IIT faculty is also becoming tough for the government and individual IIT boards of governors. At present, out of around 5,000 sanctioned posts in the 15 IITs, almost 1,611 are vacant.

Data from the IIT, Madras, shows the institute managed to recruit just 32 faculty members last year. "IIT directors are expected to lead recruitment drives and motivate technical talent to join the IIT system. That explains why we are placing so much emphasis on the right kind of leaders as directors," ministry sources said.

Hindustan ND 18-Sep-13 P-9

पल्लम राजू की पहल पर सात पुराने आईआईटी तैयार शोध, कंसलटेंसी और एलुमनाई से जुटाएंगे फंड

# पांच साल में आत्मनिर्भर होंगे आईआईटी

नई दिल्ली | मदन जैड़ा

भारतीय प्रौद्योगिकी संस्थानों (आईआईटी) को अगले पांच सालों में अपने पैरों पर खड़ा करने की दिशा में पहल हो रही है। आईआईटी काउंसिल की सोमवार को हुई बैठक में इस मुद्दे पर भी चर्चा हुई।

बैठक में इस बात पर सहमति बनी कि सात पुराने आईआईटी अपना राजस्व बढ़ाकर धीरे-धीरे सरकारी आर्थिक निर्भरता छोड़ेंगे। आईआईटी इसके लिए तैयार हैं लेकिन वे चाहते हैं कि पेंशन का भुगतान का खर्च सरकार खुद उठाए। इस पर मोटे तौर पर सरकार में सहमति है।

विदेशी विश्वविद्यालयों की तर्ज पर आईआईटी अपना राजस्व बढ़ाने के लिए कमर कस चुके हैं। अभी एक आईआईटी



कौन बनेंगे आत्मनिर्भर: दिल्ली, मुंबई, खडगपुर, गुवाहाटी, कानपुर, मद्रास और रुड़की

### अभी कितना खर्च

इन आईआईटी का मौजूदा सालाना खर्च 2011 में 1351 करोड़ था। जिसमें वेतन-650 करोड़, प्रशासनिक खर्च 339, पेंशन 223, स्कॉलरशिप 110 तथा छात्रों की सुविधाओं पर खर्च 39 करोड़ रुपये शामिल है।

### कहाँ से जुटा रहे खर्च

- करीब 1150 करोड़ रुपये सरकारी मदद
- 103 करोड़ फीस
- 121 करोड़ रुपये इन आईआईटी की अपनी इनकम है।

### नया फार्मूला

- केंद्र पेंशन के 223 करोड़ खुद भुगतान करे
- बढी फीस से आईआईटी को 787 करोड़ मिलेंगे
- शुरुआत में 300-350 करोड़ अपनी आय से जुटाएंगे

पर सालाना खर्च करीब दो सौ करोड़ रुपये आता है। इसमें से आईआईटी का अपना योगदान 20 से 40 करोड़ के बीच ही है। जबकि विदेशी पेशेवर संस्थान अपने खर्च की आधी से अधिक रकम खुद जुटाते हैं।

बैठक के दौरान मानव संसाधन विकास मंत्री पल्लम राजू ने आईआईटी

निदेशकों से उनका अनुसरण करने का सुझाव दिया। इसके पीछे एक वजह यह भी है कि आईआईटी खुद को विश्व के शीर्ष स्थानों में खड़ा करें।

आईआईटी अब डीआरडीओ जैसी सरकारी संस्थानों, निजी क्षेत्र के साथ शोध के लिए दरवाजे खोल रहे हैं। दूसरे, वैश्विक रैकिंग सुधारने के लिए भी कदम

उठा रहे हैं। आईआईटी चाहते हैं कि काकोडकर समिति की सिफारिशों के अनुरूप उन्हें संचालन खर्च के आधार पर फीस बढ़ाने की अनुमति होनी चाहिए। इस पर सरकार पहले से सहमत है तथा काकोडकर समिति की सिफारिश के अनुसार एक दौर की फीस बढ़ोतरी इसी साल हो चुकी है। आगे फिर होगी।

आईआईटी में प्रति छात्र खर्च अभी करीब ढाई लाख है जिसे फीस के रूप में वसूला जाएगा। अभी सिर्फ 90 हजार लिए जाते हैं।

आईआईटी ने अपना राजस्व बढ़ाने के लिए शोध, रायल्टी, कंसलटेंसी सेवाओं के विस्तार करने, तकनीकी संस्थानों के लिए शुल्क लेकर प्रशिक्षण कार्यक्रम शुरू करने, अपने पूर्व छात्रों से सहयोग राशि लेने तथा उद्योग जगत के साथ साझेदारी में कार्य करने के लिए कदम उठाने का ऐलान किया है।

पांच सालों के भीतर आईआईटी अपनी आय, छात्रों से ली जाने वाली फीस से ही संस्थानों को चलाएंगे। इसमें शिक्षकों और स्टाफ का वेतन भी शामिल होगा। सरकार सिर्फ पेंशन और विस्तार योजनाओं का खर्च उठाएगा।

# IIT Directors' performance to be evaluated annually

Aarti Dhar

**NEW DELHI:** There will be an annual performance evaluation of the Directors of the Indian Institutes of Technology (IITs) for enhancing accountability. The IITs have also agreed to open themselves to an internal process of accreditation in order to get into the Washington Accord, an agreement among bodies responsible for accrediting engineering programmes.

The Accord has 15 permanent members. India is a provisional member.

Accreditation of other institutes is done by the National Board of Accreditation (NBA), but IITs will hold their own review and it will be left to the NBA to accept or reject the internal review.

This was announced by the Human Resource Development Minister M.M. Pallam Raju after the 47th

meeting of the Council of IITs here on Monday.

The Board of Governors (BoG) of the respective IITs would review the performance of the Directors for more accountability. The Boards would submit their report to the Human Resource Development Ministry. The IITs have agreed to this proposal, the Minister told reporters.

The low global ranking of the IITs was discussed at length at the meeting. It was said that although the undergraduate engineering programmes of the IITs were some of the best ones offered globally, on composite indicator rankings, there was scope for improvement. The focus was now on augmenting research, and a number of measures were approved to encourage students to enrol in Ph.D programmes, Mr. Raju said.

He blamed the IITs for not being able to sell their

brand in the global market as a result of which their global rankings were low. He said it appeared that there was a gap in the information sought by global agencies and information provided to them. "We have a committee of directors, which is now talking to QS World University Rankings to understand their methodology and we are hopeful of improving the ranking next year."

Internal review of IITs – every five years – would be much more stringent than the accreditation process itself. A peer review would meet the requirements of the Washington Accord, under which signatories to the accord recognised each other's degrees. India was keen to join this group.

The development would also encourage other institutes, including private ones, to emulate IITs feat and improve the quality of teaching.

# 40% sanctioned teaching posts in IITs lying unfilled

## Teacher-Student Imbalance Will Take 10 Years To Correct

Hemali Chhopia | TNN

**Mumbai:** Facing a severe faculty crunch, the Indian Institutes of Technology have projected that it will take the elite institutes close to a decade to get to the ideal teacher-student ratio. The government stipu-

### ► Faculty quality, P 21

lates IITs must have a teacher-student ratio of 1:10, but at present, the ratio is an area of concern.

Of 6,522 sanctioned faculty positions nationwide, 2,618 are unfilled. Thus, across campuses, there is an approximately 40% shortage of teachers. While student intake has risen by 54% since 2006 in the wake of the 27% OBC quota and the expansion in the number of seats, the teacher-student ratio at campuses is



### FAR FROM IDEAL RATIO OF 1:10

Institute	Sanctioned Faculty Posts	Filled	Vacant (Teacher-Student Ratio)
IIT-Kharagpur	1,000	572	428 (1:17)
IIT-Bombay	832	565	267 (1:15)
IIT-Madras	800	506	294 (1:19)
IIT-Kanpur	570	352	218 (1:17)
IIT-Delhi	748	423	325 (1:18)
IIT-Guwahati	451	334	117 (1:13)
IIT-Roorkee	753	393	360 (1:20)
<b>Total Across India</b>	<b>6,522</b>	<b>3,904</b>	<b>2,618</b>

around 1:15. It is the worst at IIT-Roorkee at 1:20 and the best at the newer institutes of IIT-Ropar and IIT-Mandi, where there is one teacher for every two students.

The all-India faculty strength is 3,904 at the moment. "Generally, the older IITs have been picking up about 35 to 40 new teachers annually," said an IIT director. "But student strength has risen rapidly because of the OBC expansion and also as PhD numbers

went up. It isn't possible to take faculty numbers up so sharply so quickly. We are going to take five to 10 years to reach the ideal teacher-student ratio," he added.

IIT-Bombay director Devang Khakhar said faculty quality had got better with time, with most recruits having an overseas PhD. Almost all those who are joining the old IITs have international teaching or working experience, he said.

# IITs: We can't compromise on faculty quality

**Hemali Chhapia** | TNN

**Mumbai:** The elite IITs acknowledge a faculty crunch, but insist they will not dilute quality standards. "We cannot and do not want to compromise on the quality of teaching faculty just because we are facing staff shortage. We acknowledge that our existing teachers have been taking the extra burden, but we are constantly looking for good people," said IIT-Roorkee director Pradipto Banerjee.

Also, the HRD ministry has agreed to create a new cadre of technical staff to man and maintain laboratories at the tech schools.

For long, the faculty and the staff shouldered the responsibility of running the labs.

*For the full report, log on to [www.timesofindia.com](http://www.timesofindia.com)*

## आईआईटी में 60% ज्यादा छात्रों को प्रवेश

अब आईआईटी में 60 फीसदी ज्यादा छात्र प्रवेश ले सकेंगे। ये फैसला संस्थान की बोर्ड बैठक में सोमवार को लिया गया। अधिकारियों का मानना है कि इस फैसले से सभी 16 आईआईटी में प्रवेश पाने वाले छात्रों की संख्या करीब 12 हजार तक हो जाएगी। यानी ज्यादा छात्र अब आईआईटी में प्रवेश पा सकेंगे। साथ ही आईआईटी की आमदनी भी बढ़ेगी। मानव विकास संसाधन मंत्रालय के अनुसार हाल ही में घोषित की गई टॉप इंस्टीट्यूट्स रैंकिंग में आईआईटी 222वें स्थान पर था। ज्यादा छात्रों को प्रवेश मिलने से हो सकता है रैंकिंग में 50 फीसदी तक का सुधार आ जाए।

# Seven IITs in top 800

THINKSTOCK

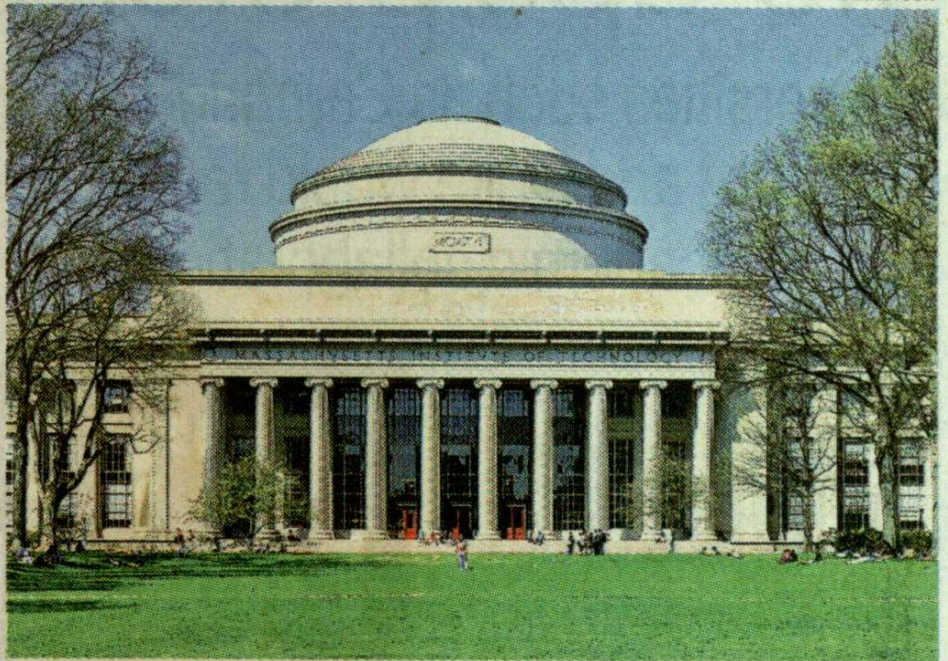
MIT tops the QS World University Rankings yet again; no Indian university in the top 200

HT Education Correspondent

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Harvard University moved up to the second place, with the University of Cambridge falling to the third spot in the QS World University Rankings 2013-14 that were released last week. Massachusetts Institute of Technology continues to be the top-ranked university.

This year also saw a record six UK institutions in the top 20 with Edinburgh and King's College London featuring for the first time. There are three Indian universities in the top 300 and 11 in the top 800, which includes seven Indian Institutes of Technology (IITs). In 2012 too, there were 11 universities in the top 800. The top Indian university in the list — IIT Delhi was ranked 222, IIT Bombay



## Massachusetts Institute of Technology

233 and IIT Kanpur 295. IIT Madras 313 and IIT Kharagpur 346, the few institutions to make it to the top 400.

The indicators for rankings taken into account include academic reputation, employer reputation, faculty-student ratio, and proportions of international students and faculty. First compiled in 2004, the QS World University Rankings currently considers over 2,000 institutions, and ranks over 800. The top 400 are ranked

individually, whereas those placed 401 and over are ranked in groups.

The National University of Singapore, ranked at 24, tops the list of top Asian universities followed by the University of Hong Kong and University of Tokyo at 26 and 32, respectively. The best-performing countries in terms of number of universities ranked were the US (144); UK (69); Germany (42); France (40), followed by Japan (38).



IMAGEZAAR

all had engineering backgrounds;

**7 Job satisfaction** - The creation of so many inanimate objects can be termed to be the result of engineering science and no other job can give you this kind of satisfaction;

**8 Explore the world** - Engineers spend most of their time being out in the field - be it offshore refinery work in the Gulf countries, manufacturing/maintaining/servicing the products in China, developing safe drinking water systems in India or excavating diamonds in South Africa. An engineer can never escape deputations;

**9 Financial security** - While this may not be the main motivation, engineering

**DR. BINA DESAI GIVES YOU TEN UNBEATABLE REASONS WHY YOU SHOULD BE AN ENGINEER.**

## Why should I be an engineer?

**1 Opportunity to invent, design and build things** - Engineers apply creative imagination to convert scientific knowledge into applicable theories. Engineers help create and refine the artifacts of modern life. They seek, through ingenuity and invention, to fashion a more livable world;

**2 Innovation is fun** - From earthquake resistant homes, to lasers, microchips and computers to dimpled golf balls - engineers touch every single aspect of human life today. In a time of rapid social and technological changes, the creative thinking of engineers has helped shape today's world. The need for innovation in every field is most critical today than in any other era;

**3 Learning is global** - Engineering is one of the rare



professions of modern science where learning can be applied across the globe, irrespective of regional, geographical and demographic differences. Engineers are trained to 'exercise' their brain, develop the ability to think logically and solve problems;

**4 Make a difference to the society** - Engineers play a primary role in sustaining our nation's international competitiveness, maintaining our standard of living, ensuring a strong national security, and protecting public safety. Engineers work on projects that clearly benefit the society, such as cleaning up the environment, developing prosthetic aids for disabled persons, developing clean and efficient transportation systems, and increasing the standard of living in underdeveloped countries;

**5 Challenging work** - There is no shortage of challenging problems. There is no sin-

gle answer in your books that can prepare you for real-life situations. You are required to devise a solution and persuade others that your solution is the best one;

**6 Professional freedom** - Engineers are treated with respect and have a certain freedom in their work. They can influence what happens in an organisation and in doing so, get many opportunities to learn and grow through work. There are ample career choices post an engineering degree. You can be an astronaut, professor, designer or film maker - engineering teaches you to be methodical in approach and to apply your knowledge in the most effective manner. Leonardo Da Vinci, Neil Armstrong, Jimmy Carter, Alfred Hitchcock, Henry Ford and Yasser Arafat

graduates do receive excellent entry-level starting salaries;

**10 Greater understanding of how things work** - An engineer gains a great insight into how things work, whether it is how planes manage to stay in the air or how energy is derived from tidal power. An engineering education helps to have a good understanding of technology and understand the many challenges facing our society. For example, why don't we have electric vehicles rather than highly polluting cars? And what will we use for energy when oil runs out?

- The author is works manager at Siemens Healthcare factory at Vadodara



IMAGEBAZAAR

## THE STORY BEYOND TECHNOLOGY

**PALAK BHATIA** EXPLORES THE MULTITUDE OF SKILLS POSSESSED BY ENGINEERS, OTHER THAN THEIR TECHNICAL KNOW-HOW

An engineer is usually associated with the image of an intellectual sprouting technical jargon all the time. However, this image throws little light on the real picture. Though engineers are indeed a lot about technology, they have other skills that are often forgotten. This limits the job roles that engineers are assigned and their full potential is not actually tapped.

Technical knowledge is undoubtedly engineers' biggest strength in their jobs. Ashish Bhatnagar, CTO and co-founder, mydala.com, elaborates, "Techies have an inherent trait of working on reasoning and data. Good engineers are pretty strong

with their database skills and



**6** One man's 'magic' is another man's engineering. 'Supernatural' is a null word.

• ROBERT A. HEINLEIN

as a result, have the ability to mine huge piles of data and figure out what is happening behind the scenes."

However, they bear the mindset of being problem-solvers that give them leadership and managerial abilities too. Darashbir Singh, general manager - engineering services, Accor explains, "The core strength and job discipline of an engineer comes with experience and exposure. They are constantly adapting to emerging issues and problems. People working with them come to constantly look forward to their foresight and problem-solving attitude. These attributes add up to the strength of an engineer. Moreover, engineers who offer better solutions are recognised as leaders by their team members and subordinates. There is no requirement of undergoing any training programmes to become effective leaders. Engineers who come with a talent of resolving challenges are unique and rise as the leaders of the engineering fraternity."

Karunakar Panda, vice president, HR Vascon Engineering Ltd tells us how engineers are trained to be able to function in diverse teams, "Whenever a skilled engineer tries to accomplish the organisational objectives, he/she needs to work in a team with members of varied specialities. All are responsible for completion of a quality product. Including all team members in the process, capitalising on the strength of all individuals and promoting an environment where all team members acquire new skills and knowledge - these are the abilities that engineers cash on."

Ramesh Subramanian, global delivery head, Blue Star Infotech elaborates, "Recruiters usually look for specific technical skills while hiring engineers. While this is not a mistake, the prejudice is that engineers do not need to have much by the way of managerial or leadership skills - these are sometimes even considered a 'distraction'. With maturity at work-

place and experience, most engineers evolve into leaders who not only solve problems, but also foresee them in advance and take necessary precautions to avoid them. They develop good interpersonal skills, start managing their own teams and learn the art of delegation. However, if recruiters were to understand the skills that go towards making a 'good' engineering candidate, they would be well-advised to look for more than pure technical skills. The entire process of 'socialising' technical problem-solvers into managerial or leadership candidates can be considerably shortened as a result."

# The 10 LEVERS OF 'smart engineering'



IMAGES/BAZANI

'Smart engineering' is all about using insights to conceive, model and scale an appropriate solution to a problem or an objective. Scientific, economic, social, and practical knowledge is applied in the process. This knowledge serves as an engine behind designing, building and maintaining structures, machines, systems, materials and even processes.



**DR ALOKNATH DE PRESENTS TEN REVOLUTIONARY APPROACHES TO TRADITIONAL ENGINEERING**

## 1 NEED-OF-THE-HOUR ENGINEERING:

**IN THE BEFORE CHRIST PERIOD,** people focused on primitive technology for agriculture - studying soil characterisation, improving irrigation system, and finding means of ploughing land for harvesting. As civilisation moved from the Stone Age to the Metal Age, the society learnt to cook and prepare food. Agriculture to heavy engineering to electronics engineering - various themes have got emphasis during India's series of five-year plans. Today's 'need-of-the-hour engineering' is towards a wide deployment of broadband and connectivity, and an optimisation of required infrastructure.

## 2 IMPROVED ENGINEERING:

**I CALL** the second lever of smart engineering as 'improved engineering'. This deals with how the same or similar purpose is achieved by more sophisticated technology. For example, in the early days, the shadow from an anchored stick used to give relative time-of-the-day. Currently, we have watches of all types including high-precision instruments that capture the split-second difference between winner and runner-ups in the Olympics 100-meter race. Smartphones have not only enriched voice communication, but also eased file-sharing and multimedia data transfer.

## 4 PERFORMANCE-BOOSTING ENGINEERING:

**THE SUCCESS** of a product or service lies in its performance by relative as well as absolute measures. 'Performance-boosting engineering' seeks to enhance performance by keeping constraints in mind. Let us take the example of the mobile phone where we currently leverage the octa-core processor. The evolution from single-core to octa-core has enabled us to incorporate parallelisation and increase processing power. In a het-



**6** *Engineering undergraduates should not be charged fees. They should receive grants not student loans, and the government will get the money back long-term from increased exports.*

• JAMES DYSON

erogeneous processing environment, appropriate partitioning of code across ASIC, DSP, CPU, GPU, and MCU chips significantly drive up system performance. This category of smart engineering also encompasses devel-

oping gives birth to new fields like fiber optic communication that combines optical physics with telecommunication. The field of music, coupled with acoustics engineering, opens a chapter of musicology by cross-pollination of subtleties in both fields.

## 7 SMART-AUXILIARY ENGINEERING:

**AT TIMES,** engineering plays second fiddle to scientific projects - it helps in next-level of scientific discoveries through infrastructural support. Let us consider the Large hadron collider mega project recently conducted in CERN, Geneva. The very simulation of the Big Bang has been an engineering feat - this has been a pre-requisite to determine what happens after the big bang event. The support role of engineering should not be misconstrued as engineering trivia. One mouse can bother an elephant! One bird can hit a plane and knock it down.

## 8 SUSTAINABLE ENGINEERING:

**'SUSTAINABLE** engineering' encourages us to build products that consume less energy and cause least damage to the environment. Let us take the example of electronic circuitry. Researchers have progressed to operate digital chipsets in 1.8V instead of 3V or 5V. Energy-aware protocols have also been designed. These techniques substantially help in overall power reduction for electronics equipments. Sustainable engineering addresses



with 80 per cent cost reduction. Reverse engineering, we have tried to un-structure formula? We frugal engineering, which drives down the cost factor but at times fails to maintain the durability of the product. 'Strip-down engineering' combines the strengths of reverse engineering and frugal engineering. The engineering smartness here is built around applying Pareto's 80:20 principle and analysing how to keep essential functionalities. The goal is to select the top 80 per cent features from a user perspective and implement them

need geol/bine/ prob/ olog/ bacteria and viruses come to our food through soil contamination and what possible remedies could be taken up. Geography knowledge in conjunction with information system expertise paves the way for Geo-Information System (GIS). Cross-pollination engi-

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number theory and coding theory have all been playing roles in telecommunication, cryptography and other associated areas. Technology is moving from virtual reality to augmented reality. User interactions are changing from touch-base to gesture-controlled. Integration of audio, visual and haptic feedback is becoming a part of next user interaction. Quantum computing uses qubits with superposition and entanglement. Using these basic principles, quantum teleportation allows the same entity to be in two places simultaneously, but observation decoheres. Forward-looking engineering aims to manifest scientific ideas or even science fiction concepts to reality.

**- THE WRITER IS SENIOR VP AND  
 CTO, SAMSUNG INDIA -  
 BANGALORE**

IMAGE: EBAZAR



A day

## in the life of an engineer

ENGINEERS AND THEIR CREATIONS MAKE A DIFFERENCE IN EVERY ASPECT OF OUR WORLD. ON THE OCCASION OF ENGINEER'S DAY, YASMIN TAJ MEETS A FEW ENGINEERS TO FIND OUT WHAT A TYPICAL DAY IN THE LIFE OF AN ENGINEER IS LIKE

**SOUMITRA SANA**, head of Technology Centre, Bangalore, Nokia Solutions and Networks:

**The engineering dream:** I completed my engineering degree from IIT Kharagpur and then worked in Canada for 15 years before returning to India. I have worked as a hardware engineer, software engineer and now manage large engineering, research and development operations primarily in the areas of data and wireless communication. Tinkering with things, building things with my own hands and simplifying complex problems in the areas of technology have been my passion since my school days.

**A typical day:** A typical day in an engineer's life is a combination of activities like designing, testing, troubleshooting and documenting interspersed with a number of meetings for reviews, planning and brainstorming. The key to deliver-

ing successful projects apart from the technical skills is a sound knowledge of the big picture, ability to multi-task and work in diverse teams and a great amount of self-discipline. For example, for an engineer like me working with NSN, I need to be thoroughly aware of the immense opportunities and challenges that the mobile telecommunication industry goes through, but at the same time, be cognizant of the huge dependencies and expectations of individual subscribers on this technology in today's life.

**The usual glitches:** The environment in which an engineer works today has undergone a sea change. Products are more complex and specialised; development is made by global distributed teams; life cycles have shrunk considerably and disruptive

technologies are the order of the day. Agility in execution, accepting and adapting to frequent changes, influencing a multitude of colleagues and teams and balancing personal life are challenges that today's engineers are facing every day.

**Janardhanan Pathangi**, director - technologies, CTO, Networking, Dell R&D:

**The engineering dream:** I completed my under graduation (84-88) and Masters (88-90) from The Indian Institute of Technology (IIT), Madras and have since then worked in various roles in the operating systems and networking space. I was also an independent consultant for a period of four years. I was mainly motivated by the satisfaction of solving problems, especially the ones which take time and are difficult.

**A typical day:** I usually try to start the day with a review of what was done and needs to be done for the day. Most of the time, the challenge is to ensure that you get the planned items completed without activities slipping to the next day.

**The usual glitches:** Given the volume of demand and pressure at the work environment, it is easy to become focused on just finding solutions, but lose focus on innovation. The ability to stay fo-

cused on important things to be solved and innovate is a key challenge.

**Ganesh Bhadri**, AVP (operations) & mill manager - Kadiam, The Andhra Pradesh Paper Mills:

**The engineering dream:** I graduated in Pulp and Paper Technology from Karnataka University in Dharwad in the year 1982, securing second rank in the University. I have also received the national merit scholarship for intermediate and degree courses. My academic record remained very good throughout my student career. Technology has always fascinated me and it further created a lot of curiosity about stunning technical achievements around me.

**A typical day:** My day starts with the planning of all the problems that are waiting to be solved. I think and plan about how things could work better and explore the different options that can be implemented. Organising and delegating the right job to the right person is also an important task. I also plan to ensure that the resources are aptly available and safety and environmental issues are taken care of. I always ensure that responsibilities are very well-defined at every layer. For making the projects successful, I firmly believe in providing moral support and encouragement to boost the progress of the people. Also celebrat-



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ing success gives confidence and builds trust in people to face new challenges and make new projects successful.

**The usual glitches:** According to me, the real challenge for any engineer is the speed and accuracy of the task. Even a very small mistake can lead to the failure of not only the project, but at times disasters too.



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# Former IIT-Kanpur director duped of ₹19 lakh online

**Yogesh Joshi**

■ [Yogesh.joshi@hindustantimes.com](mailto:Yogesh.joshi@hindustantimes.com)

**PUNE:** Sanjay Govind Dhande, former director of IIT, Kanpur and a member of National Security Advisory Board, was duped of ₹19 lakh in an online fraud after his bank account, email and SIM card were tampered with.

Dhande, 65, who lodged a complaint at Chaturshrungi police station, stated in the first information report that some unidentified fraudsters made 22 transactions from his ICICI Bank account in three days – September 7, 8 and 9 – and siphoned off ₹19 lakh.

Appointed by PM Manmohan Singh as a member of the National Security Advisory Board, Dhande was awarded Padmashree in 2013 for his contributions in the field of science and technology.

According to Dhande, who resides at Aundh in Pune, he did not even get text alerts either on his email or mobile phones, which he usually gets when a transaction is made. “Both my SIM and email account have been hacked. As a result I did not get any alerts while my incoming calls had also got blocked,” Dhande told Hindustan Times over phone.

The fraud came to the ex-IIT-K director’s notice when bank executives called and asked him

**DHANDE DIDN'T EVEN GET TEXT ALERTS EITHER ON HIS EMAIL OR MOBILE PHONES, WHICH HE USUALLY GETS WHEN A TRANSACTION IS MADE.**

to deposit necessary amount after his account balance had reached below the necessary level of ₹10,000. “All the three days when the fraud took place were holidays and, therefore, I did not bother to either go to ATM and withdraw money. I got to know about the fraud only when bank called me to deposit money.”

Police officials from the cyber cell, which is probing the case, said that Dhande’s bank account mini-statement reflects total 22 transactions between September 7 and 9. Those transactions include 12 online money transfers and 10 online shopping operations.

“We have got some leads, based on which we are investigating. We are sure that the case will be cracked soon,” said assistant police inspector (cyber crime cell) Sanjay Tungar. According to Tungar, online money transfers have been made from Dhande’s account to other accounts within India.

# FOREIGN INVASION

## Will the HRD ministry's proposal to allow foreign universities to set up campuses and offer degrees in India find any takers among the top international academic institutes?

Gauri Kohli

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The Foreign Educational Institutions (Regulation of Entry and Operations) Bill, if passed by Parliament, would have paved the way for foreign universities to enter India. The human resource development (HRD) ministry has, however, found a short-cut. It has sent proposals to the Department of Industrial Policy and Promotion and the Department of Economic Affairs to permit foreign universities to open their campuses in the country.

Foreign Educational Institutions (FEIs) can set up campuses in India once they have been notified as Foreign Education Providers by the University Grants Commission. The FEIs should be ranked among the world's top 400 universities as per the ranking published by Times Higher Education, Quacquarelli Symonds (QS) or the Academic Ranking of World Universities by Shanghai Jiao Tong University. So now will the FEIs actually turn up?

According to Philip G

Altbach, research professor and director, Centre for International Higher Education, Boston College, "I don't think there will be a major move by foreign universities to come to India. The preferred mode of operation now seems to be partnering with Indian institutions on various kinds of collaborations, including joint degrees, research, and the like. This is actually a better idea than branch campuses. There is less investment needed by the foreign institution and the Indian partners have more control over what happens."

As per the HRD ministry's proposal, these universities should be not-for-profit legal entities and should have been in existence for at least 20 years. Accreditation is also a must. Moreover, they can only set up campuses as non-profit companies governed by the Companies Act.

Some of the biggest factors that will contribute to attracting foreign players to India, says Altbach, is a huge and somewhat underserved market of students. "Some foreign universities may want a beachhead in India for research programmes, collaboration, and the like. Some

may want to make money — but that would be difficult under the conditions placed by the Indian authorities — I think that placing conditions on profit-making is a good thing," he adds.

Commenting on the proposal, Abhijit Banerjee, Ford Foundation International professor of economics at the Massachusetts Institute of Technology, says, "It depends a lot on other policies that the government may or may not enact. Right now, the best Indian higher education is in the public sector. It is incredibly scarce and heavily rationed but very cheap for those who get in. For a bright child from a low income background, it is the best shot he or she has, albeit a long shot. The entry of these new universities will make it even harder for these public universities to hold on to their best faculty members. To counter that, the UGC needs to allow merit pay so that they can compete on salary to hold on to their best faculty. Otherwise, the public system may get decimated."

Banerjee says it's important to open up opportunities in these new varsities to low income households especially, "if we think

that the public system will be weakened by their entry. They should be required to admit, say 50%, of the class on merit rather than based on ability to pay. These merit students should be chosen on the basis of a competitive exam and the fees for them should be on a sliding scale based on family income," he adds.

Says Rahul Choudaha, director of research and strategic development at World Education Services — a New-York based non-profit specialising in international education, "The intention of attracting foreign universities is laudable, however, the execution remains questionable. It is important to ensure that quality institutions are allowed in India. Some expectations like deposit of ₹25 crore and ranking of top 400 are still impractical."



We are looking to increase multiple research collaborations with India and to promote two-way exchanges of students and faculty for mutual benefit

Leszek Borysiewicz, vice chancellor, University of Cambridge



India is an exceptional location for universities to offer courses. However, we do not have plans to build brick-and-mortar facilities in India at this time

Garth Saloner, dean, Stanford Graduate School of Business, Stanford University

# Revitalising educational bodies

**T**HE recent action of the ministry of human resource development (MHRD), asking a University Grants Commission (UGC) member to quit, is under scrutinising discussion among academicians. The show cause notice issued by the HRD ministry to psephologist and Aam Aadmi Party member, Prof Yogendra Yadav, asking why he should not 'retire' as member of the UGC, has triggered reactions about the UGC's and similar other bodies' recent policy decisions.

Yadav claims that last year in October, when the formation of the Aam Aadmi Party was announced, he had proposed to resign and consulted the then HRD minister, Kapil Sibal's office, which had advised him against such an action. Further, it is also claimed that various similar actions such as a member of the UGC becoming a cabinet minister, and a card carrying member of CPM becoming the chairman of the Indian Council of Historical Research, among others, were under discussion as well.

It is not a matter of worry whether Yadav wins the final battle with MHRD or not. The real issue is the declining level of leadership in UGC, particularly memberships being given to persons with weak knowledge of the education domain. If one critically studies the contribution by the previous chairman and commission members, one is rightly disturbed by the "strategy and actions of the commission". Indeed, when global education is treated as the most critical service in a knowledge linked society and modern technologies are being used to deliver education to students, we have been struggling to initiate changes in the field of higher professional education for

Arun Nigavekar



**THE NEXT STEP:** The main theme of education is to create matured youths who are socially grown and are aware of continuously changing financial systems in poor, developing and developed economies

the past decade or so.

Planning to create 13 or 14 legal Acts in order to meet the youth's expectations in the education sphere seems rather lousy. What was needed instead was to create an integrated and interlinked approach that matched global educational standards. However, when one looks at the list of members, (with no background in the education field), recommended by the MHRD to various educational bodies, one finds that these members are mostly education-business propagators with deep concerns about some legal provisions of the commission that strengthen their "for profit educational institutions working within the framework of legal public structure". They were least bothered about the state or central government's role in strengthening the relevance

and quality of education.

Educational bodies such as UGC, AICTE and many others have linked professional education with fields like medical, law and agriculture, among others. Their roles are crucial in these areas and that is why they are supposed to be independent entities. They are even run, supported and advised by factual leaders of respective domains. However, today all the so-called independent bodies are almost defunct and are run by persons who have absolutely no contact or familiarity with the ground reality across rural India.

India has no choice but to radically make these bodies autonomous. Moreover, recognised and authentic experts who are familiar with the country, the changing world and the difficulties faced by education institutions in

rural and semi-rural cities, must be made part of such long-term strategy devising bodies. The real challenge is to integrate various subjects and faculties addressing issues that accommodate subjects, skills and knowledge related expectations of industries, business and governmental bodies, and join hands with world-renowned academic, research and development institutions. The main theme of education is to create matured youths who are socially grown and are aware of continuously changing financial systems in poor, developing and developed economies.

If educational bodies exercise policies created by the central government, in the right sense, then they would succeed in establishing operational contacts with state gov-

ernments. This would set up operational and professional links with the state MHRDs. In the long run, states would like to be a proactive part of these bodies. Today, these intuitions are looked upon as central MHRDs, but earlier, it used to be a balanced view since the same political party was responsible at both the central and state level.

Unfortunately in the present scenario, these organisations are run by people who are academically incompetent, afraid to be honest while devising schemes and are worried about their own positions (mainly because they got various positions by pleasing the government in the first place). They are not organically linked with colleges and public as well as private universities, which are in direct touch with the growing youth. In addition, they are struggling to survive the competitive environment created by professional private companies that attract youths by offering practical education required by industries. These private educational 'companies' provide hands-on experience to students by establishing contacts with growing industries to understand expectations of graduates, bringing in working staff from industries and involving students in direct project related experiences.

So the government must quickly revitalise UGC and related bodies by making them autonomous, and monitor that only honest and competitive persons become a part of such institutions.

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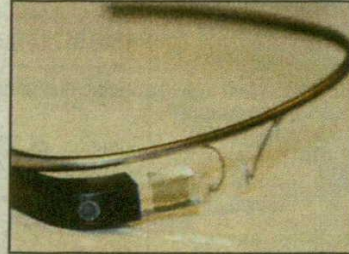
(The writer is former chairman of UGC, former vice-chancellor of University of Pune and founder director of NAAC)

# In a first, Chennai doc uses Google Glass to air ops live

Ekatha Ann John | TNN

**Chennai:** When the surgeon's scalpel drew a red line on the patient's abdomen, two blocks away a group of medical students leaned toward their screens. The procedure was a simple hernia operation, but the surgical team members were unusually upbeat as they turned to look at the latest gadget in the operation theatre—the Google Glass worn by their chief.

As the medical fraternity in the West debates the usefulness of the newest device produced by Google, doctors in India have joined the chorus with bouquets and brickbats, even as a surgeon in Chennai became the first in India to live-stream a surgery using the Google Glass. On Tuesday, Lifeline Hospitals live-streamed an upper gastro-intestinal laparoscopy on a 45-year-old man and a hernia repair on a 42-year-old woman to medical students two blocks away using Google Glass. "It



**Google Glass is a wearable computer that has a frame similar to traditional eyeglasses. It follows voice commands to take photos and videos that show the viewpoint of the user**

felt like I was glancing at my rear view mirror while driving. I was focusing on the surgeries and talking to my students at the same time. At one point, I stopped feeling it was an external device," said Dr J S Rajkumar, chief surgeon at Lifeline.

Google Glass is a wearable computer that has a frame similar to traditional eyeglasses. It follows voice commands to take photos and videos that show the viewpoint of the user. The surgeries were live-streamed on Google Hangout as well. Doctors say the gadget is yet another step forward in opening the doors of the operation theatre. "People need to know what is hap-

pening behind those doors. This is one more gadget towards that end. Students can see the surgical procedures through their seniors' eyes, quite literally. This is a phenomenal surgical tool," said Dr Rajkumar.

He, however, added, "We did face some practical glitches like problems with wi-fi and the battery dying early." Although the gadget is still to hit the market, Google distributed 2,000 of the gizmos earlier this year for testing before its release to the general public. Besides being an educational tool, doctors say the technology could be used to view X-rays, MRI images and other medical information as they conduct surgeries.

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# CSIR tries crowdsourcing new TB, malaria drugs

Himanshi Dhawan | TNN

New Delhi: Giving crowdsourcing a whole new meaning, scientists at the Council for Scientific and Industrial Research have initiated a country-wide venture to build a chemical library with diverse compounds that will successfully drive drug discovery programmes, particularly for neglected diseases like TB and malaria.

CSIR had launched the Open Source Drug Discovery (OSDD) project in 2008 with the objective of discovering drugs for TB, malaria and other diseases through open innovation and sharing of research. The OSDD Chemistry outreach initiative (OSDD-Chem) builds on the pro-



gramme. Under it, students are trained in synthetic chemistry and compounds synthesized in OSDDChem centres at universities, colleges and other institutes are forwarded to the OSDDChem database and sent to CSIR-Chemical Drug Research Institute (CDRI). Scientists say lack of chemically diverse compounds is a key factor for the poor success rates of anti-infective drug development.

So far, 34 institutions, including the IITs in Delhi, Kharagpur, Madras and Bombay, and the University of Delhi, are part of the project. Not only has OSDDChem succeeded in developing a national online repository of small drug-like molecules, it is now venturing into building chemical libraries with diverse compounds for driving successful drug discovery programs.

"This (the OSDDChem project) aligns with the OSDD policy of 'no molecule will be left behind' for screening against neglected diseases and the assurance that the molecules submitted to OSDD will be taken up for screening against neglected tropical infections like TB and malaria," a scientist said.

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# 10 contenders for Nobel peace prize

Kounteya Sinha | TNN

London: The Nobel Institute is in the final stage of choosing this year's Nobel peace prize winner, having shortlisted ten nominees out of a list of 259 that included 209 individuals and 50 organizations.

The original list included 12 Indians – the second highest from a country after the US.

“We are in the finish line of choosing the Nobel peace winner,” Geir Lundestad, head of the Nobel Institute, told TOI from Oslo. The winner will be announced on October 11.

He had earlier said that the “biggest mistake” in the Nobel's 112-year history was not having given the peace prize to Mahatma Gandhi.

The list originally included Malala Yousafzai, the Pakistani schoolgirl-turned icon who was shot by the Taliban, Myanmar's president Thein Sein and former US president Bill Clinton.



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# From today, top UK colleges to provide free courses online

Kounteya Sinha | TNN

London: Britain's leading universities will begin offering free online courses from Wednesday.

Students will be given remote access to tutorials featuring high-profile lecturers and will be able to browse treasures held by the British Museum and British Library, which are partners

in the scheme. Indians are among the highest enrollers in Britain's biggest open online courses.

Bristol, St Andrews, Warwick, Leeds, Nottingham and Exeter, which all charge fees of £9000 (\$15,300) a year for a degree on campus, are among the 23 UK universities backing FutureLearn, the company be-

hind the venture.

FutureLearn, the first UK-led provider of massive, open, online courses (MOOCs) will unveil its first courses from top UK and international universities.

India is among the top ten countries in terms of registrations along with Australia, Brazil, Canada, France, Greece, Ireland, Spain, UK and US.

The first courses will cover literature, history, social sciences, computing and IT, environment and sustainability, marketing, psychology and physical science. September's release will mark the beginning of FutureLearn's open beta phase of development, which runs until early 2014.

*For the full report, log on to [www.timesofindia.com](http://www.timesofindia.com)*

**STUDENTS' GAIN**