

# Newspaper Clips November 29-30, 2015

November 29

Times Of India ND 29/11/2015 P-23

Angels and venture capitalists are being inundated by funding applications. They say it's impossible to look through every request, and among the first filters they use is the educational pedigree of young entrepreneurs. But then, many deserving founders get ignored

# How the new caste system FILTERS FUNDING CHOICES

Anand J & Shiipa Phadnis TNN

**W**hen Nithin Kamath started online broking firm Zerodha in Bengaluru in 2010, most investors snubbed him. "Some gave me a little

face time, but even they weren't interested beyond ten minutes. At one point I realized I wouldn't be able to raise capital and so bootstrapped my firm," says the telecommunications engineer from Bangalore Institute of Technology.

Kamath is convinced that if he had had a degree from an IIT, it would have been a very different experience. As it turned out, Zerodha has become one of the top three retail brokers and volume contributors on most of India's leading stock and commodity exchanges, with average daily turnovers of over Rs 7,000 crore.

Some call it the new caste system. An entrepreneur with a degree from one of India's premier technology or management institutions — read IITs, IIMs, BITS Pilani — has a much better chance of catching an investor's eye and being funded.

Investors admit as much, but argue helplessness. They are inundated with hundreds of mails everyday with requests for funding. And educational and professional pedigree is one of the first filters used. "We don't have the time to see everybody. And let us be clear, human beings are biased. IITs are a signal that some degree of filtering has already happened," says Shekhar Kirani, partner at Accel Partners, one of the most successful VC funds of the country.

Data bears this out. Startup research firm Tracxn finds that 37% of the 3,373 startups founded in 2015 has been founded by alumni of at least one of the following prestigious institutes — IIT, IIM, BITS, and NIT (National Institutes of Technology). But as much as 67% of the \$7 billion of funding raised this year has gone to these startups.

Similarly, only 13% of the registered startups on online deal-making platform LetsVenture is founded by what it calls Ivy League founders — those from IIT, IIM, BITS, Indian School of Business (ISB), Oxford, Cambridge, and US Ivy League colleges. But these ventures ac-



**CHECK YOUR PRIVILEGE:** IIT Delhi has produced some of the most successful startup founders. The IIT tag opens many doors easily, while graduates of other schools are often snubbed

count for 27% of the funded ventures, and 34% of total funding. LetsVenture co-founder Shanti Mohan says many of her 'non-Ivy-League' startup founders are apprehensive about whether they would be able to raise funds.

Even in Silicon Valley, the absence of diversity in the startup ecosystem is a major discussion point. Some note the advantages enjoyed by graduates of universities like Stanford and Harvard. Others point to the difficulties faced by women and blacks. Tim Hwang, founder of legislative and legal data analytics firm FiscalNote, said in an latimes.com article recently that the problem was that the VC community was homogeneous — 92% of senior investment teams are male, and 78% are white. "In general, VC people don't take blind applications. If you want to pitch them, you'll need a 'warm' introduction — a recommendation from a mutual friend. But

given that a full three-quarters of white people have no minorities in their close social network, this is difficult... There's an old boys' club in Silicon Valley," he said.

Kirani too says that if somebody the VCs trust asks them to have a look at a

startup, the startup gets a shoo-in. "These are credible people and won't stake their reputation by recommending bad companies," he says. But that goes back to the IIT-IIM issue. The graduates from these institutions tend to be highly connected and networked, with large and active alumni forums that help members.

Sanjay Vijayakumar, chairman of Kochi's Startup Village, says IITs are a good filtering tool in an environment where most founders are young and without any track record. "In an early-stage startup, the idea would be in a fluid state. As the startup moves forward, it will see new problems emerge. Those from IITs are analytically good, and VCs believe they will be able to manoeuvre through this more easily," he says.

But some worry that such notions are often carried to absurd levels. Sutanu Banerjee did a degree in Chinese language from the Jawaharlal Nehru University (JNU) and has been running the New Delhi-based travel organizer Prakriti Inbound profitably for the past 15 years. He recently decided to raise some private funds to expand.

One of those who did a due diligence was a tech billionaire's private investment firm. Banerjee says he was disgusted by the mentality of the 20-something executive who came: "She asked how I could think of doing something so big without an MBA degree. She was surprised I had managed to bring so much technology into the business. It was like, if you don't have a degree from a reputed B-school or tech institution, you don't have the capacity to think."

### TILTING TO ONE SIDE

Of the 3,373 startups founded in 2015 (till date), 1,239, or 36.7%, have been founded by alumni of at least one of the following institutes — IIT, IIM, BITS, NIT

Of the \$7 billion raised this year till date, \$4.7 billion, or 67%, has been raised by startups founded by alumni of these top institutes

| Institute               | IIT   | BITS  | IIM   | NIT   |
|-------------------------|-------|-------|-------|-------|
| Startups founded (2015) | 632   | 116   | 263   | 228   |
| Funded (disclosed)      | 33    | 6     | 14    | 2     |
| Percentage funded       | 5.22% | 5.17% | 5.32% | 0.88% |

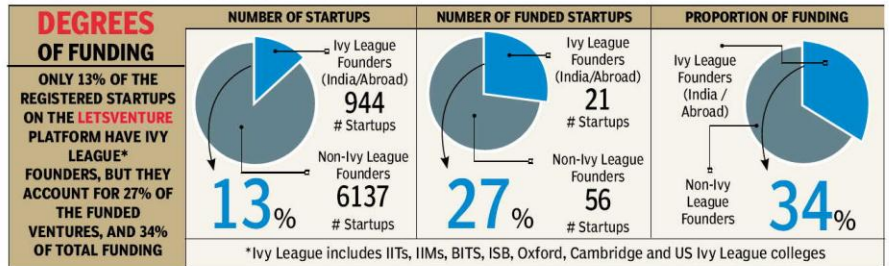
● Undisclosed funding rounds will raise the funding figures

● Some startups have founders from a combination of these institutes

Source: Tracxn

### UNICORN COMPANIES AND THE INSTITUTES THEIR FOUNDERS ARE FROM

- Flipkart** | Sachin Bansal & Binny Bansal (IIT Delhi)
- Snapdeal** | Kunal Bahl (Kellogg School of Management, US) & Rohit Bansal (IIT Delhi)
- Ola** | Bhavish Aggarwal & Ankit Bhati (IIT Bombay)
- Paytm** | Vijay Shekhar Sharma (Delhi College of Engineering)
- MuSigma** | Dhiraj Rajaram (University of Chicago, US)
- Zomato** | Deepinder Goyal & Pankaj Chaddah (IIT Delhi)
- InMobi** | Naveen Tewari (IIT Kanpur & Harvard), Abhay Singhal (IIT Kanpur), Amit Gupta (IIT Kanpur), Mohit Saxena (IIT Roorkee)
- Quikr** | Pranay Chulet (IIT Delhi & IIM Calcutta)



## Kakodkar Claim Rings False

OPINION | A JAYAKRISHNAN



Jayakrishnan is a professor at IIT Madras and former VC of the University of Kerala.

The controversy involving Anil Kakodkar and Smriti Irani has surfaced once again with the Union Human Resource Development minister alleging that the former tried to push his own candidate as director of a new IIT in contravention of rules. The issue dates back to March this year when Kakodkar put down his papers as chairman, board of governors of IIT Bombay, over a disagreement on the choice of IIT Ropar director.

Kakodkar has said he did not break any rules, adding that one of the search-cum-selection committee members suggested the name of another candidate to be included in the list to be interviewed. According to him, there is no impropriety as the idea was 'to get the best person for the job'. The notification issued by the Ministry of Human Resource Development (MHRD) for the appointment of director, IIT, invited applications as

well as nominations from eminent persons. Applicants were required to send a vision statement for the institution.

Nominations are usually made by the 'eminent' persons at the behest of those who want to buttress their candidature to display their reflected eminence. Propriety demands that members of the committee don't propose a candidate, as such an action is likely to influence the selection. So, there is impropriety as Irani rightly pointed out in this case.

Technically, one could argue that the committee has every right to propose the names, as Kakodkar has said, taking refuge in a preposterous view that it also consists of 'eminent' persons. Ethically and morally, however, this argument would be considered untenable.

Furthermore, the committee is required to examine the vision document to judge and satisfy itself as to whether the candidate has the vision for transforming the institution. In fact, much of the personal discussions should revolve around the candidate's vision since the rest of the eligibility criteria could easily be quantified from the candidate's CV. A nomination from an 'eminent' person is never a substitute for this document.

According to documents received from the MHRD against an RTI request, Kakodkar had nominated a candidate who didn't meet the eligibility criteria for the post of director, Indian Institute of Science Education and Research, Thiruvananthapuram, at the fag end of UPA II. Besides Kakodkar, three other 'eminent' persons who held positions as directors of national institutes also nominated the candidate. Can Kakodkar and the three others say they

**PROPRIETY DEMANDS THAT MEMBERS OF THE COMMITTEE DON'T PROPOSE A CANDIDATE, AS SUCH AN ACTION IS LIKELY TO INFLUENCE THE SELECTION**

were not part of the wrongdoing?

The diligent bureaucracy in MHRD did not short-list this candidate for not satisfying the eligibility criteria, and the candidate 'was not considered suitable for appearing for personal discussion' by the selection committee, revealed the RTI reply. Interestingly, the selection panel found the rest of the interviewed

candidates not suitable for the job.

Paradoxically, the same committee called for further nominations in flagrant violation of the law without resorting to notifying the vacancy in public domain, and made a selection. Would Irani now retract this appointment if it is found to be not in accordance with the law?

This is not the first time that the selection of an IIT director has generated a flutter in the academic community. Chairman, board of governors of IIT Kanpur, M Anandkrishnan's choice of a relatively junior Indranil Manna as the institute's director, allegedly overlooking the claims of senior professors and deans, generated much heat recently.

He also courted controversy over the appointment of Chandra Krishnamurthy as Vice Chancellor of the Pondicherry Central University, sent on leave by the MHRD after prolonged agitation by the faculty and students demanding her removal for various irregularities.

Academic and scientific communities in India are generally squeamish in exposing wrongdoings at the highest administrative levels for fear of reprisals. The cardinal character of the scientific enterprise is that it is rational, logical, objective and free from parochialism. But, all is not transparent, objective, rational and lawful in the Indian scientific establishment. It badly needs Socrates in the boardrooms. *drjk.set@gmail.com*

## Getting into an IIT: The bleak future for students

<http://www.pagalguy.com/articles/getting-into-an-iit-the-bleak-future-for-students-37600934>

You change from A to B to get rid of something. After 3 years, you change from B to C since the initial change didn't work out, and in this process you try to bring another change, and scrape off an earlier one, hoping that all of it works out this time. Confused?

No wonder why you won't be. Instead of being a story, such is the situation of the IITs at present. They are so confused about what new 'thing' should be brought in the pattern of selecting students to the premier engineering institutes of India.

Back about 30 years, admission to the IITs used to be based on a solely subjective exam, and AIEEE + other several state entrance CET exams were being conducted parallel to it. Some years later, IITs changed from a subjective format to objective, then to objective with negative marks, then to objective with negative marks with multiple correct answers, and then to no fixed patterns. But the AIEEE and CETs were still there.

Getting admission into an IIT became increasingly difficult. So, the number of students flocking to coaching classes increased, who then started earning a lot of money! This didn't get off well with the government, as they started wondering how coaching classes were earning such big amounts.

So they thought of a plan. A plan to bring a change. A change to scrap off the CETs and the AIEEE forever and combine all of these exams into the JEE (Main). 3 years back, the government brought in reforms which made JEE (Main) the filter for students to get selected for JEE (Advanced), which still remained as the official and actual IIT entrance test. Only 1.5 lakh students of the 11 lakh+ who gave JEE (Main) could appear for the JEE

(Advanced). So, taking a shot at the actual IIT exams was also not possible once you didn't clear the JEE (Main) and didn't score well in your Class 12 board exams - something no engineering aspirant ever thought of earlier.

If you thought this is it, then no. Not at all. In 2016, the powers that be have decided to increase the number of students qualifying for JEE (Advanced) to 2 lakh. State exams like CET will take place again, as some states are dissatisfied with how the JEE is conducted. So, now a student will have to study for JEE (Main), JEE (Advanced), CETs, Class 12 Board exams, other private universities' exams like BITSAT, SRMEEE, VITEEE, etc.

Still, the story isn't over yet. Come 2017, they have thought of a new plan to pressurize the students even more. They are saying, 'you are already giving so many exams, then why not one more?'

From 2017, a student will have to give an online aptitude test that will evaluate their scientific mettle and innovative thinking ability. About 4 lakh students who clear this test will be allowed to give the JEE, which will be nothing but the JEE (Advanced), and then there will be a common counseling process for admission into the IITs, NITs and other major national engineering institutes. Around 40,000 students will be able to seek admission through this common counseling process. But the CETs still remain, Class 12 board exams still remain.

As a summary for an engineering seat in any of the IIT's, a student has to write a test, to write another test, to write an advanced version of the actual test.

This process has so many twists in its procedure. Almost a year will need to be taken to just understand the technique alone. In fact, it has more twists than an Abbas-Mustan movie. And this is definitely more entertaining and realistic in comparison. You think that the format has been decided. And then they are like, 'no, not so early, give another exam!'

That day isn't far when a child will be tired of giving so many exams, that the importance of any specific exam will be null and void. A day before the exam, he in his casual attitude will be, "Accha okay! Exam hi dena hain na, de denge... Kitne dein?"

And the biggest irony in all of this is that the powers that be are bringing in this 'aptitude test' to curtail the dependence of a student on coaching classes. This was the same thought 3 years ago when they first introduced the JEE (Main) & JEE (Advanced). Now, they are bringing in another aptitude test, to be conducted by the still-to-be-created National Testing Survey (NTS). Even more, they are also planning to introduce a Subjective paper, held after JEE (Advanced), from 2017.

Maybe after all of these tests, you can conduct interviews too! Wow! That would be so exciting! To give an interview for admission into an engineering college - not exit it and get a job! They expect the demand for coaching classes to reduce after these changes. But more the number of exams you introduce, the demand for coaching classes will increase tenfold. Since the time the JEE (Main) & JEE (Advanced) were introduced, the demand for coaching has increased 25% from what it was before.

To put an end to all this, the committee should think about rectifying and improving the current system, understand what mistakes are being carried out in the two-tier system, and remove them from the core, instead of bringing up a new exam every other day. Something needs to be done, and you need to be done with the continuous to & fro movement in decision making, and the tussle between the government and the IITs.

Otherwise, if such situations are to continue, the chances for a student to clear and get a seat in the IITs is pretty bleak. Finally, those successful in getting admission will certainly be the best students in the country. Yet, some good and efficient students would lose their opportunity in the process. Thus, something needs to be done rapidly for the betterment of students and institutes as well!

*Note: This article about BVBSBIT Mumbai has **not** been written by the PaGaLGuY Editorial Team. Readers should research and verify the claims and judgements in the article before reaching a conclusion.*

## IIT Kanpur wants campus near Lucknow Airport

[http://www.business-standard.com/article/current-affairs/iit-kanpur-wants-campus-near-lucknow-airport-115112900011\\_1.html](http://www.business-standard.com/article/current-affairs/iit-kanpur-wants-campus-near-lucknow-airport-115112900011_1.html)

The premier Indian Institute of Technology, Kanpur (IIT-K) is mulling an extension [campus](#) near the [Lucknow airport](#) for greater collaboration with industry and researchers due to direct air connectivity.

The industrial city of Kanpur still lacks a functional civil airport and the Lucknow campus of the [IIT-K](#) is projected to help in forging partnerships in research and skills training.

The Institute is seeking 20 acres of land from the Uttar Pradesh State Industrial Development Corporation (UPSIDC) near Lucknow airport provides direct air connectivity to several key Indian and some Gulf destinations.

IIT-K has submitted a formal proposal to the UP government and a Detailed Project Report (DPR) is likely to be prepared soon.

The campus would complement the ongoing academic research, training, industrial and manufacturing activities of the Institute, IIT-K Associate Professor (Finance & Entrepreneurship) [Dr B V Phani](#) told Business Standard. He is directly associated with the project.

He said the Lucknow campus project was estimated at nearly Rs 300 crore and would take 3-4 years to complete once work begins on the ground. "The campus would offer world class facilities for skill development, training and manufacturing, besides common facilitation centres and spaces for industries."

The campus would additionally serve as an incubation centre to promote enterprise and entrepreneurship in consort with industry.

Meanwhile, IIT-K is keen to join hands with other reputed institutions in the region viz. Indian Institute of Management, Lucknow (IIM-L), Lucknow Biotech Park, Hartcourt Butler Technological Institute (HBTI), Kanpur, UP Council of Science and Technology (CST) etc.

"We want everyone on board so that we could work together and contribute towards the success of the proposed campus in Lucknow," Phani added.

He noted UP's strength lies in agriculture, traditional industries/craftsmanship and tourism.

"However, the state is still not able to compete on the [national](#) and international stage. IIT-K wants to directly contribute towards enabling UP realise its full economic potential by capitalising on its core strengths through technological innovations and interventions," he said.

IIT-K already has a smaller campus in Noida spanning roughly 5 acres. Another block is likely to come up in Noida next year. Besides, the Institute has an incubation facility at the famed Wall Street in New York, USA.

Phani maintained IIT-K had one of the best academic and training ecosystems in India in terms of space, campus, lab facilities, testing/prototyping etc. He is the coordinator of SDBI Innovation Incubation Center at IIT-K.

Of late, IIT-K has been making efforts to improve its teacher-student ratio by inducting more faculties. Against the sanctioned strength of 650 teachers, the campus only has 500 faculty members, including 100 odd PhD students.

Individual faculty members have been suggested to contribute in their capacity towards better research works, publications and academics, so that it cultivates a more positive image of IIT-K in global academic and professional circuit, which ultimately helps in bettering global rankings.

Spread over 1,055 acres, IIT-K is situated on the Grand Trunk (GT) road in Kanpur City. It first started from a borrowed building of HBTI in 1959 with 100 students before flowering into a major educational hub with 6,500 students today.

All this while, IIT-K is making structural changes in pursuit of higher rankings, including increasing intake of foreign students. There is a strong belief amongst the IIT-K community that the low global rankings are not reflective of the actual academic and infrastructure facilities available in the campus, but more structural and procedural that impedes fair analysis of the ground realities.

The Institute has signed two MoUs with the National University of Singapore and the Melbourne University (Australia) to offer joint degrees.

While, IIT-K was ranked 271st in the QS World University rankings released last month, the Institute exited from the list of top 100 of another prestigious rankings, the Times Higher Education University Asia Rankings 2015, although it had figured amongst top 100 last year.

In the QS World University rankings, two Indian institutes viz. Indian Institute of Science (IISc) Bengaluru and IIT Delhi were ranked within the top 200 at 147 and 179 places respectively.

However, IIT-K was declared best engineering institute in India by India Today Group-Nielsen Best Colleges Survey for the second year on the trot. IIT Delhi was ranked second.

## **Super 30 to be Super 60 from 2016**

<http://timesofindia.indiatimes.com/city/kolkata/Super-30-to-be-Super-60-from-2016/articleshow/49962752.cms>

KOLKATA: Extreme thirst to achieve the desire, continuous hard work, only positive thinking and great patience - are the four success mantra for Anand Kumar, the acclaimed creator of Super 30. Social media, cellphones, television are a strict no-no for the IIT aspirants, prescribe the veteran trainer who have been widely renowned for coaching candidates successfully cracking the IIT-JEE examination termed as one of the toughest entrance examination. "It is a tough going for the Whatsapp, Facebook and Twitter generation if the first thing one does is to wake up and check their social website accounts. To crack the IIT-JEE, one needs dedication and concentration which is absent in most," said Anand Kumar while addressing a packed house of students and parents inside the Science City Auditorium on Saturday.

Narrating his experience as a teacher who have been credited to have scripted as many as 333 success stories out of 390 JEE aspirants at his coaching centre, Kumar pointed out that during the two years of training the chosen 30 students do not have any access to social networking sites. "I do not subscribe to newspapers for them. All the students need to continuously think about study and solving problems. I believe social networking sites are nothing more than distraction for the students aspiring to crack the examination," added Anand Kumar.

In a bid to improve chances of students from Bengal cracking the IIT-JEE, Super 30 has joined hands with

Adamas Career. "Next year after the board examinations end we will organize test in five places across Bengal including Durgapur, Burdwan, Midnapur, Siliguri and Kolkata. The selected 30 under privileged students will be taken to Patna where they will be given coaching for two years along with the other 30 students," said Anand Kumar. The cost will be borne by Adamas Career.

However only the selected few will not be the only one to rip the benefit of IIT-JEE training, "I will also hold a 10-day crash course where we will try to solve the problems in detail and try to dig deeper into the problems," Kumar said. Even the aspirants from privileged section of the society may participate in a 10-15 days crash course which may be organized by Super 30. "From 2016 we may plan to hold online classes," the creator of Super 30 added.

Once the session got over, students of Adamas International School tried to reach out to Kumar who gave out quite a few tips. Standing in the queue to meet Kumar on stage was Jyotishko Roy - a class X student from the school. He asked why was History and Geography equally important for an IIT aspirant? To which Kumar answered, "it is important to gain knowledge in each subject and not only science. Moreover weightage is still attached to the marks in class XII examination for selection in IIT's."

Samit Ray, chairman of Rice Group and chancellor of Adamas University said, "we want students to be equipped with all the information and details required to crack entrance examinations. By associating with Super 30, we want to give our students guarantee and satisfaction that we are the medium for their success."

November 30

## **NIT director resigns after MHRD intervention**

<http://www.thestatesman.com/news/bengal/nit-director-resigns-after-mhrd-intervention/107368.html>

Silence reigned at the National Institute of Technology, Durgapur, with eleven days of continued agitation, sloganeering and shouting coming to a halt on Sunday when the director of the institute finally declared that he was going to put in his papers.

The Ministry of Human Resource Development (MHRD), to put an end to the impasse, asked Tarkeswar Kumar, the director to resign on Sunday. Kumar's responsibility became the focus of controversy after the death of a final year electrical engineering student Prosenjit Sarkar on 18 November due to alleged negligence of the institute's medical unit. Despite his severe illness in the semester examination hall, Prosenjit was sent back to his hostel room. Dr A Sarkar, the medical officer, according to Uditya Ghosh and Rahul Das, batch-mates of the deceased, "mocked Prosenjit's illness, saying it was just a plea to escape the exams."

Prosenjit, however, succumbed on the way to a private tertiary care hospital in the night.

This caused the NIT student to erupt in protest and they gathered to address their grievances to the director, but the latter refused to face the angry horde. The students staged protest in front of his residence till the wee hours of the following morning but the director had called up the police, alleging that the students were about to attack his house.

A RAF contingent was immediately pressed into action by the Asansol Durgapur Police. However, they held back as they found nothing foul on the part of the students.

The Students' Gymkhana came forward to lead a mass boycott of academic activities since 19 November and put forward two major demands - resignation of the director and punitive measures against the medical officer along with other medical staff involved.

Though the NIT had constituted a seven-member inquiry committee led by Dr A K Saha, it is yet to table a report. The Gymkhana had sought intervention by Smriti Irani, HRD minister and she reciprocated immediately and sent two senior MHRD officials, R S Solanki and P K Saha, who arrived at the campus on 24 November.

Considering the deteriorating situation, according to the senior officials: "Irani gave consent to ask the director to step down to put an end to the issue."

On Sunday, Tarkeswar Kumar convened an urgent meeting in which all the Deans with the NIT and three Gymkhana leaders -Rohit Kumar Yadav, Sagar Bhartiya and Eslavath Deevakiran Naik- were also asked to attend.

"He, in the presence of the students stated that he was going to put in his papers," said Anirudhha Ganguly, dean (Administration), NIT.

The chairman, Board of Governors, NIT, Professor A B Bhattacharya told The Statesman from New Delhi: "The MHRD asked me to instruct Tarkeswar to tender his resignation. On Monday he will put in his papers. This was a dynamic and unprecedented decision."

He added: “Considering the continued uproar there, MHRD found this as the most suitable decision.” Prof Bhattacharya further said: “I shall be at NIT within a couple of days and director from some other NIT will be asked to take interim charge.”

Read more at <http://www.thestatesman.com/news/bengal/nit-director-resigns-after-mhrd-intervention/107368.html#1vzr72PKMqZlej6w.99>

## Smriti Irani to launch Gian at IIT Gandhinagar

<http://www.ahmedabadmirror.com/ahmedabad/others/Smriti-Irani-to-launch-Gian-at-IIT-Gandhinagar/articleshow/49973678.cms>

Union Minister of Human Resource Development, Smriti Irani, is all set to inaugurate a new Ministry of Human Resource Development (MHRD) scheme, Global Initiative of Academic Network (GIAN), at IIT in Gandhinagar on Monday. The scheme aims at boosting the quality of country's higher education institutes. Irani will also launch GIAN with two 10-day-long courses - '3D Digitisation for Cultural Heritage' at IIT Gandhinagar, and 'Orthopaedic Biomechanics: Implants and Biomaterials' at IIT-Kharagpur.

They are among 201 courses approved to be conducted under GIAN so far from among 488 courses proposed by higher education institutes in India. MHRD has allocated Rs 35 crore for GIAN for the current financial year. Under the scheme, 500 international faculty will be engaged this year to offer short courses and programmes throughout India. Nearly 200 Indian institutes will host GIAN courses.

This number will grow to 500 institutes in following years. Goals of GIAN include sharing of academic credits, development of a repository of learning materials, availability of content through a National Digital Library, catalysing interaction between faculty and students from across India and abroad, and forging academic and research collaborations across the world.

## IIT-M develops method to track cyclones accurately

<http://timesofindia.indiatimes.com/home/science/IIT-M-develops-method-to-track-cyclones-accurately/articleshow/49976369.cms>

CHENNAI: Predicting the weather is a tricky business; sometimes the weather man gets it right, but more often he cops the flak for getting it wrong. To reduce the window of mistakes and to improve the accuracy of forecasts, researchers at the Indian Institute of Technology-Madras are developing a technique that will depend that is fed into high quality data from satellites on supercomputers. They have been working on the 'data assimilation' method for more than a decade, where they combine numerical weather models with satellite and/or radar data to reduce errors in prediction of tropical cyclones.



Traditionally, IMD meteorologists follow the synoptic method for cyclone prediction in which weather observations taken on the ground or from ships and in the upper atmosphere with the help of sensors attached to balloons are used to make forecasts. The data from various sources are then plotted on a weather map to get a synoptic view of the world's weather. The numerical model, which meteorologists say improves forecast accuracy, is employed for cyclone



forecasts two to three days prior to their estimated landings.

When IIT-M researchers analysed the 2010 tropical cyclone Jal to evaluate the capability of their technique, they found that with the numerical model, they improve prediction by up to 35% for a 24-hour forecast and up to 12% for a 54-hour forecast. The numerical-based weather forecast system has a 60-70% prediction accuracy .

"What we are doing at IIT-M is not extensively used in operational forecasts as we need to test these for several types of situations," said Chakravarthy Balaji, professor at department of mechanical engineering. "Many countries have adopted data assimilation technique and it's time that India employ the model," he added.

| <b>IIT-M'S TECHNIQUE</b>   | <b>IMD FORECASTING METHOD</b>   |
|--|---|
| <ul style="list-style-type: none"> <li>▶ Works on 'data assimilation' technique to reduce errors and improve forecast of tropical cyclones</li> </ul>  | <ul style="list-style-type: none"> <li>▶ Uses synoptic meteorology to predict tropical cyclone</li> </ul>   |
| <ul style="list-style-type: none"> <li>▶ Combines satellite and/or radar data with 'numerical weather models'</li> </ul>   | <ul style="list-style-type: none"> <li>▶ Data is collected from various sources (ground, ships and upper atmosphere) through weather balloons</li> </ul>  |
| <ul style="list-style-type: none"> <li>▶ WRF, a next generation numerical weather prediction system, is run on supercomputer VIRGO</li> </ul>  | <ul style="list-style-type: none"> <li>▶ Data is then plotted on a weather map to get a synoptic view of the world's weather; helps study movement of low pressure areas, air masses, fronts, and other weather systems like depressions and tropical cyclones</li> </ul> |
| <ul style="list-style-type: none"> <li>▶ Forecast is done for six to seven days. However, reliability is high for up to three days</li> </ul>  | <ul style="list-style-type: none"> <li>▶ Meteorologists say this method is effective for six to 24-hr prediction, beyond which numerical models are used</li> </ul>   |
| <ul style="list-style-type: none"> <li>▶ Capability of technique was tested by analysing the tropical cyclone Jal; found it improves forecast by up to 35% for a 24-hr forecast and up to 12% for a 54-hr forecast</li> </ul>  | <ul style="list-style-type: none"> <li>▶ For long-range monsoon prediction, IMD uses statistical model, based on historical data</li> </ul>   |

At IIT-M, researchers collect data from ground-based doppler weather radars and from multiple satellites like tropical rainfall-measuring mission, a Nasa satellite, Megha-tropiques, an Indian satellite and INSAT3D. These satellites have radiation detectors and scanning mechanism that identify visible, infrared or microwave radiation emanating from the land and ocean.

This ensemble of data is run in Weather Research and Forecasting model, a next generation numerical weather prediction system. They fed the data into supercomputer VIRGO, along with experts' inputs on weather systems over the years to correct errors. The forecast can be done for 7 days, but reliability is high for up to 3 days.

The professor said the numerical model they use is time tested and the novelty in the research is the multi-pronged approach in predicting weather systems, selection of instruments on satellites to gather data, frequency selection for radiometer systems on satellites to scan the earth and measure radiation emanating from land and ocean.

He said observations made over the years through this technique will help in studying long-term patterns in the atmosphere and climate change. It can also help build a large database over the Indian Ocean, considered a 'data deficient' region. Former deputy director general of regional meteorological centre, Chennai, Y E A Raj said IMD, at present, uses statistical model, which is based on past data, for long range tropical monsoon forecasting and that a research is on to use satellite and radar data in numerical models. "Numerical models will be very good for up to one week. While statistical models depend upon equations and correlations, they are useful for long-range forecasting," he said.

IMD will be validating seasonal forecasting model developed at the Experimental Climate Prediction Centre, US, for more years before it can be used for operational purpose.

## **Special report on 'India's energy outlook' to be presented at IIT-B**

<http://timesofindia.indiatimes.com/city/mumbai/Special-report-on-Indias-energy-outlook-to-be-presented-at-IIT-B/articleshow/49976422.cms>

MUMBAI: The 'Presentation and discussion of the World Energy Outlook Special Report: India Energy Outlook', will be officially launched on December 1 at the Victor Menezes Convention Centre of the IIT-Bombay. The presentation and the discussion of special report is organised by the International Energy Agency with support from IIT-B, British Deputy High Commission, the Council on Energy, Environment and Water and Prayas (Energy Group).

The presentation of key findings from the report will provide insights into India's energy outlook, considering its implications not only for the country's development, energy security and environment, but also for a global energy system in which India plays a greater role.

The World Energy Outlook (WEO) is the flagship publication of the International Energy Agency, the Paris-based international organisation provides authoritative statistics and analysis on a wide range of energy topics. This WEO Special Report - India Energy Outlook - includes detailed projections for Indian energy development out to 2040.

## **UGC plans largest knowledge portal**

<http://www.thehindu.com/todays-paper/tp-in-school/ugc-plans-largest-knowledge-portal/article7930721.ece>

The University Grants Commission(UGC), the apex body tasked with maintenance of standards in higher education, has proposed an “all-inclusive and interactive” portal, the largest internet language site in the world, where knowledge in all Indian languages will be collected and disseminated.

In a letter to Vice Chancellors earlier this week, UGC Secretary Jaspal Singh Sandhu has asked all universities and colleges to share digitised and non-digitised material in various languages available with them for the ambitious ‘Bharatvani’ project.

“Bharatvani is a project with an objective of delivering knowledge in and about all languages in India using multimedia (ie text, audio, video, images) formats through a portal (website),” Sandhu said in his letter to the Vice Chancellors.

“This portal is proposed to be all inclusive, interactive, dynamic and moderated,” he added.

The government is launching this project to accommodate and strengthen the oral tradition by disseminating and presenting the unwritten vernaculars, country’s classical literature in different languages, develop e-content and present the country’s linguistic diversity in cyberspace, Sandhu said in the letter.

The UGC secretary said according to the Census of India, 2001 there are 122 scheduled and non-scheduled languages and 234 mother tongues.

Speaking about the project, he said, "It has been proposed to develop it as the largest language portal in the world by aggregating multimedia content from all Indian writers, government and non-governmental institutions, institutions like boards of education, textbook corporations, universities, academies, publication houses etc.

"The idea is to make India an Open Knowledge Society, in the era of Digital India," he added.

The UGC secretary also asked universities to share the names of institutions and individuals who could provide such material for this project.PTI

## **IISc reaches out to corporates, alumni**

<http://timesofindia.indiatimes.com/city/bengaluru/IISc-reaches-out-to-corporates-alumni/articleshow/49976329.cms>

BENGALURU: Following in the footsteps of elite institutes like IITs and BITS Pilanis, the Indian Institute of Science, Bangalore, is reaching out to its alumni and corporate giants to raise funds for research. With its strong alumni presence across the world, the institute is hoping to get support through grants, gifts and donations that will enable researchers to travel for fellowship, help in startups, state-of-the-art labs, amenities for visitors and training programmes.

IISc initiated the funding programme in July this year and specified the departments in need of funds. The maximum funding so far came for Advancement of Photonics, with two former faculty -- Professor Ananth Selvarajan (ECE) and his wife Indira Devi -- contributing Rs 20 lakh to the department of electrical communication.

Govindan Rangarajan, chairman, division of interdisciplinary research, IISc, told STOI, "We have been relying on government funds alone, but since other national institutes are also raising funds through corporate social responsibility and alumni, we are only following this, but are late. We want our donors to know that something concrete will be done with their funds and so we've mentioned the departments along with the target amount for the respective areas in need of funds."

The largest funding the institute needs is in the area of Support for Teacher Training. The institute is aspiring to support various education initiatives, training programmes and talent development, and IISc's new Challakere campus in Chitradurga.

"The government funding is generous but there are certain areas where more money is needed. Our alumni is not financially strong, unlike other institutes, because they are into government jobs and academics. But we are hoping to meet the target, steady and slow," he said.

# IITs expect good placement this year

13 institutes to place around 10,000 students during the placement season

KALPANA PATHAK & VINAY UMARJI  
Mumbai/Ahmedabad, 29 November

Amid lay-offs by start-ups and paucity of H1B Visas, the Indian Institutes of Technology (IITs) will begin placements on Tuesday. The 13 IITs plan to place around 10,000 students beginning December 1 in the first phase of placements at IITs. The second phase is spread through a few months beginning January.

The IITs expect a robust placement season this year and placement officials expect an average increase of 5-10 per cent in salaries this year.

Although start-ups continue to vie for Day-Zero slots, blue-chip companies including Google, Microsoft, Facebook and Oracle have been the top pick. Information technology (IT), consulting and core manufacturing, along with finance sectors will also participate in placements.

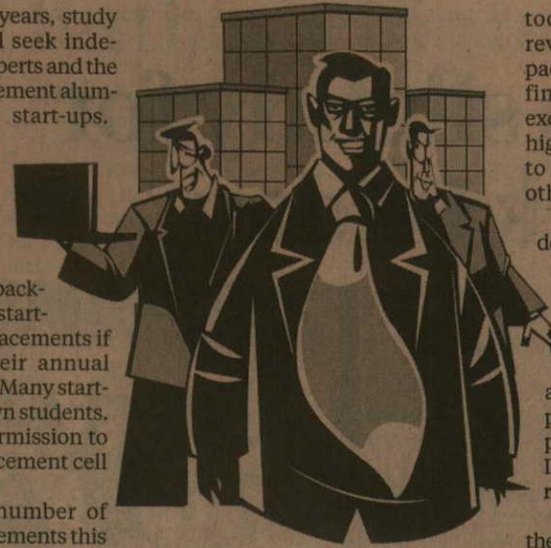
Among start-ups, Housing.com, TinyOwl and Zomato, which till last year were among the largest recruiters on IIT campuses, will not be participating in this year's placement. This August, IITs had decided that before inviting start-ups for campus placements, they would review their balance

sheets for the past three years, study their annual reports and seek independent feedback from experts and the Indian Institute of Management alumni employed by these start-ups. However, with most start-ups having been floated by their own students, IITs say the due diligence this year might not be as stringent as in previous years.

"We will allow a basic background check regarding start-ups, we cannot decline placements if they do not furnish their annual reports or balance sheets. Many start-ups are founded by our own students. We cannot deny them permission to be on campus," said a placement cell official at IIT-Bombay.

IITs said while the number of firms participating in placements this year is more than last year, the same might not translate into more number of profiles.

"Gradually, firms are coming with very specific profiles in mind for placements at IITs. Hence, given that they are coming to recruit students for specific roles, the numbers are anticipated to be more or less same as last year," said an institute source at IIT-Guwahati.



However, at IIT-Madras, both the number of firms and profiles have increased compared to last year. Against 239 firms offering 319 profiles last year, IIT-Madras has so far this year seen confirmation from 293 companies for 418 profiles.

IITs this year have also decided not to reveal salary figures. The All IITs Placement Committee recently

took an informal decision not to reveal the details of compensation packages offered by recruiters during final placements. IITs say in some exceptional cases, salaries offered are high and revealing such figures tends to put unnecessary pressure on other students.

"Students and parents alike start developing unnecessary expectations from offers during placements. At times, this also impacts students' performance during placement interviews. Hence, IITs have decided it is safer to reveal the average salary packages offered in a particular year at the end of the placement process," said a source at IIT-Guwahati. IIT-Bombay, too, refused to divulge salary details.

IITs divide salaries into two parts - the guaranteed or fixed component and the variable component. They say they consider only the fixed component in their placement records.

V Babu, advisor, training and placement at IIT-Madras, said: "The overall placement scenario looks very encouraging. We hope to surpass last year's figures. There appears to be a 5-10 per cent increase in the average packages depending on the sector."

# Skilling development for a better quality of life



**ANINDYA MALLICK**

**I**NDIA'S demographic advantage—with over 50% of the population expected to be under the age of 25 years by 2020—is a well-known fact across the globe today. However, for the country to leverage and benefit from this advantage, it needs to be ensured that our youth is adequately prepared for productively participating in the path to economic development and prosperity.

In today's times, with easy access to information, the youth—irrespective of whether they are based in urban or rural areas—aspire for a better quality of life. Such aspirations can only be fulfilled through productive participation of the youth in economic development. Further, they should be able to take advantage of employment opportunities that are expected to emerge through various programmes such as Make-in-India and Digital India as well as those aimed at encouraging entrepreneurship and job creation in the micro, small and medium enterprises (MSME) sector.

With the current gross enrolment ratio in the higher education space being at around 20%—which is below the global average of 26%—there is a large population of the youth who are left out of the higher education system. In fact, it is estimated that around 84% of India's population of age 15 years and above are either not literate or have not completed secondary level of education. This is a significantly large population, which includes youth in the working-age group who will need to be skilled for gainful employment. Studies indicate that only around 5% of the working-age population, excluding those having higher education and farm workers, have been formally skilled. There is an urgent requirement for bringing our youth population within the formal skilling ecosystem for meeting the twin objectives of providing employable workforce for the industry as well as meeting the youth's aspirations for a better quality of life through increased earning prospects.

One of the key objectives of the Skill Development Mission is that the youth should acquire skills which would contribute towards making India a modern economy. Today, there is an entire ecosystem in place for achieving this objective, which includes various initiatives.

- National Skills Qualification Framework (NSQF) for identifying competency-based skill levels required by industry;

- Sector Skills Councils in all key sectors such as automotive, capital goods, electronics, construction, plumbing, agriculture, IT and ITeS, retail, and banking, financial services & insurance (BFSI), which brings in the industry/sector connect for ensuring employable skills;

- Funding mechanism for encouraging setting up skill development and training institutes in PPP mode;

- Schemes for adoption of government-owned vocational training centres by the private sector;

- Labour market information systems for matching skill demand and supply, etc.

To help training providers identify

courses, several studies on skill gaps at regional and sector levels have been commissioned by the government and Sector Skills Councils. In addition, to promote skill development, the mission has sought to introduce various key measures.

- Recognition of prior learning (RPL) based on skills acquired through experience which can be certified and built upon to improve employability;

- Industry recognition of certified skills, along with willingness to pay a premium in recognition of improved efficiency and productivity;

- Programmes such as Pradhan Mantri Kaushal Vikas Yojna which can be leveraged by students to fund their training courses;

- Ensuring skilling courses include necessary soft skills such as language, basic IT and financial literacy for enhancing employability as well as for those who choose to become entrepreneurs, etc.

A key challenge for formal skills training has been societal attitude which traditionally has preferred formal higher education over skills training. An attempt has been made to address this through positioning vocational training as a successful career option through targeted awareness campaigns, integration of skilling in formal school education, certification and diploma from skills universities and community colleges to be established.

The opportunity for formally certified skilled youth from India lies not only within the country but globally as well. While the average age of the Indian population is expected to be 29 years by 2020, larger economies such as the US, European countries and Japan will be facing the ageing population problem, with the average age being 40, 46 and 47 years, respectively. This provides an enormous opportunity for Indian youth in seeking opportunities abroad leveraging the skilling ecosystem in India. The skill development mission also seeks to address overseas employment with the objective that youth in India should be trained to the highest global standards to access employment opportunities abroad and international mobility. Key initiatives in the mission include ensuring equivalence between NSQF and International Qualification Framework, partnerships with leading vocational training institutes in other countries, identifying global workforce requirements in key sectors in select destination countries leveraging Indian embassies and research organisations, etc.

While the intent is there to promote formal skilling for ensuring that the youth get the advantage of participating in the economic growth and can look forward to a better standard of living, the implementation and turning this vision into reality would depend on the key actors in this journey—which include governments both central and state level implementing the policies and enabling regulations, training providers offering affordable courses with curriculum aligned to industry requirements and getting themselves accredited by concerned Sector Skills Councils, industry willing to pay premium salaries to certified trained youth as compared to unskilled/informally trained persons, and finally the youth opting for formal skill development courses as per their aptitude. If this is achieved, over time India will be recognised as the talent capital of the world.

*The author is a senior director with Deloitte in India*