# Newspaper Clips

**September 2-3, 2014**

**September 2**

**Economic Times ND 2/09/2014** P-4

## HRD Minister Set to Name Two Women to Top IIT Body

**NEW DELHI:** In a first-of-its-kind move, the HRD Ministry is set to appoint two women to the top decision-making body of the Indian Institutes of Technology (IITs). ET has learnt that HRD Minister Smriti Irani will nominate Padma Shri Vijaylaxmi Ravindranath, chairperson of Centre for Neuroscience at IISc, and Tessy Thomas, who was the project director for Agni IV Missile.

# Women scientists enter IIT council

http://timesofindia.indiatimes.com/home/education/news/Women-scientists-enter-IIT-council/articleshow/41470121.cms

NEW DELHI: The IITs, predominantly a male club that never had a woman director or scientist in its council, is in for a big change.

HRD ministry has nominated two women scientists Tessy Thomas and Vijayalakshmi Ravindranath to the IIT council, the apex body of 16 IITs.

A senior HRD official said, "The idea behind getting women scientists in the IIT council is to show that science is not the sole preserve of men. Women can be at par with men in carrying out research."

He said these two can act as role models. Thomas is the first woman to head India's missile programme. She is in charge of Agni-4 missile project of Defence Research Development Organization.

*Tessy Thomas. (TOI file photo)*

Ravindranath helped establish National Brain Research Centre. Her research on neurogenerative disorders can be used to develop disease-modifying therapies.

IIT council is headed by HRD minister and consists of three members of Parliament, chairpersons and directors of all IITs, chairperson of UGC, director general of CSIR, chairman and directors of IISc, nominee of HRD ministry and three appointees each of the ministry and AICTE.

*Vijayalakshmi Ravindranath. (TOI file photo by K Sunil Prasad)*

Tribune ND 2/09/2014 P-13

# Poor global ranking: President asks university teachers to introspect

ARTEEV SHARMA
TRIBUNE NEWS SERVICE

JAMMU, SEPTEMBER 1

President Pranab Mukherjee today asked the faculty members of the country's reputed universities and institutes of higher education to go for introspection as why not even a single Indian institute of higher learning had found a place in the list of 200 top world-class universities.

"There has been a substantial expansion in physical infrastructure in the area of higher education. We have 723 universities, over 35,000 degree colleges, 11,000 polytechnics, 69 IITs and a large number of institutes of management and science research. But unfortunately, not a single of them finds place in the list of 200 top world class universities rated by reputed international agencies," the President said while delivering his address at the 14th Convocation of University of Jammu here this evening.

The event was attended by Governor NN Vohra, who is also the Chancellor of the university, Chief Minister Omar Abdullah, who is also the Pro-Chancellor of the university, Chief Justice of the J&K High Court MM Kumar, several judges of the High Court, Cabinet ministers, legislators; Vice Chancellor of Jammu varsity Prof MPS Ishar, bureaucrats and Vice Chancellors of various universities.

President Pranab Mukherjee (C) with Governor NN Vohra (L) and Chief Minister Omar Abdullah during the 14th convocation of the University of Jammu on Monday. TRIBUNE PHOTO: ANAND SHARMA

He requested the faculty members to improve the quality of higher education.

"There is no lack of talent. We have bright students as well as teachers but we have to find the reasons as why not even a single institute of the country has not been rated in the list of 200 top world -class universities," he said.

He said the country had dominated the global education system for about 1800 years, viz from 6 Century BC to 12 Century AD and there was a need for faculty members and intelligentsia to seriously think as what went wrong thereafter. He cited the example of Nobel laureate CV Raman, saying he was the only scientist to get Nobel prize way back in 1930.

Describing J&K as "emerging as a knowledge hub" in the country, the President said all these institutions would benefit by collaborating in teaching and research and establishing common research facilities. "Most importantly, however, it will be the quality, spirit and ethos of the students and the faculty which will determine the footprints you leave on the sands of time. All graduating students would do well to remember that they are central to the vision of an India," he said.

> "There has been a substantial expansion in physical infrastructure in the area of higher education. We have 723 universities, over 35,000 degree colleges. But unfortunately, not a single of them finds place in the list of 200 top world class universities rated by reputed international agencies."
>
> **Pranab Mukherjee,** PRESIDENT

**Hindustan Times ND 2/09/2014** P-10

# IITs, IIMs to launch free online courses

HTSPECIAL

**Shishir Gupta**
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**NEW DELHI:** With an aim to providing education opportunities to all, the IITs, IIMs and central universities will soon offer free online courses through a web platform to be launched by the HRD ministry on September 25, the birth anniversary of Pandit Deen Dayal Upadhyay.

In the first phase, seven institutes — three IITs at Bombay, Chennai and Guwahati and four central universities (Delhi, Punjab, Manipur and Banaras Hindu University) — will offer courses in engineering, social sciences, agriculture, energy, management and basic sciences. Later, more institutes will get on the online platform, which would become a full-fledged Massive Online Open Course System (MOOCS) for India.

HRD minister Smriti Irani told Hindustan Times that the programme, dubbed SWAYAM (study webs of active-learning for young aspiring minds), is designed to enable any Indian, regardless of background or location, to access the best education. The MOOCS course will be free of cost to learners but if a learner requires a verified certificate, a small fee will be charged.

The ministry will also launch a slew of educational reforms including setting up of a national academic depository for central digitisation of awards, degrees and mark sheets, national e-library, quality enhancement programme for higher education teachers and 'know your college portals' to help students choose the right courses and the best institutions.

Irani said while the government is open to private participation in education, the motive should not be profit. "I have had conversations with Wipro chairman Azim Premji and Tata Group chairman Cyrus Mistry on the issue and believe in what Premji says that India should strive to build the brands of its public educational institutions," she said.

Concerned at the 50% dropout rate in grade eight among tribal girls, Irani recently told the CBSE chairman to identify 1,400 underprivileged children who had scored above 85% in Class X and ensure them help so that they could continue their studies.

The 'know your college' portal is aimed to provide information to prospective students in about 10,500 colleges that conduct 14,000 programmes and 17,000 levels in technical education.

**Times of India ND 2/09/2014** P-15

# 88% crack IIT-JEE in the first attempt

Hemali.Chhapia@timesgroup.com

**Mumbai:** The entrance exam to the Indian Institutes of Technology (IITs) has never had so many candidates who cracked the gruelling exam in the first attempt: 88% candidates qualified in the first shot this year.

Last year, 69.6% of aspirants qualified after taking the IIT-JEE (advanced) for the first time. Another 27.2% had to take the test again before they could walk past the gates of the IITs. This year, merely 12% students qualified after taking the exam for the second time. Since the last two years, the IITs have only allowed candidates two attempts.


"We are realizing that by restricting the number of attempts, the IITs are getting students who are very well-trained. I am not sure if it is putting more pressure on students, but students are a lot better prepared," says an IIT director. Slicing the statistics further shows that of the 9,795 students currently sitting in the first-year classrooms across IITs, the count of those who cracked the JEE (advanced) in the first attempt stands at 6,725 (68.65%).

Data till 2007 shows about 10% of the total aspirants were taking the JEE for the third time (or more). But with more students taking the test seriously, JEE-2006 saw the share fall as 43.5% candidates qualified in their first try, as compared to JEE-2005 in which only 28.49% got through the first time around.

In fact, a dean from IIT-Madras believes these statistics are a result of the changing profile of those who are making it to the IITs. "Students who are now walking into the IITs are mostly from cities and from middle-class households who can afford to pay for tuitions," he says.

Most of those who qualified—20,636 or 76%—are from urban centres, 3,862 (14.22%) are from towns, and 2,654 (9.77%) are from villages. Again, making for a sharp economic divide on campus, two large cohorts of students in the current batch are from the upper-middle classes and from the lower-income groups.

This year, 3,586 or 13.2% who qualified disclosed that the annual family income is over Rs 8 lakh. Three years ago, data revealed that about 9.3% of the qualified candidates had an annual family income of over Rs 10 lakh.

*For the full report, log on to www.timesofindia.com*

Deccan Herald ND 2/09/2014 P-8

# IIT, Nasscom to honour students

For the first time, the Indian Instuite of Technology (IIT) Madras with Nasscom will award 1,150 certificates to candidates across the country who successfully completed the first MOOC certification course on 'Programming, Data Structures and Algorithms' through online, *DHNS* reports from Chennai.

The proctored exams were held at 10 cities in the country to test those who had enrolled for the exams as part of the online course which started in March 2014, sources from IIT Madras said on Monday.

The portal offering IIT courses along the lines of MOOCs (massive open online courses) was launched in February this year. The portal is the latest initiative from NPTEL (National Programme on Technology Enhanced Learning) which is a joint initiative of the IITs, funded by the Ministry of HRD, Government of India.

Administration of the NPTEL programme and maintenance of the website is done by IIT Madras.

Business Line ND 2/09/2014 P-20

LANDMARK

# Nalanda University resumes its classes after 800-year break

## 15 students have been enrolled so far

INDO-ASIAN NEWS SERVICE

Patna, September 1

Classes opened on Monday at the Nalanda University, an ancient international centre for learning in Bihar, after a break of over 800 years with 15 students, its vice chancellor said.

"We have formally started the academic session of Nalanda University on Monday morning in the International Convention Centre at the Buddhist pilgrim town of Rajgir," Vice Chancellor Gopa Sabharwal told IANS. Rajgir is about 100 km from Patna.

Sabharwal said the ancient Nalanda University functioned from 413 AD to 1193 AD. Classes for the School of Historical Sciences and the School of Environment and Ecology have started for the first session 2014-15. She said there was an introduction session for students as well as faculty members as it was the first day of the classes, revived after over eight centuries.

"We have completed the first step towards a big mission for revival of ancient Nalanda University. Now more hard work has to be done for it," she said. Sabharwal said that the launch of the academic session of the university was a low key affair because the formal inauguration would take place in mid September after formal opening by external affairs minister Sushma Swaraj, who will be chief guest, and university will also invite ambassadors of the East Asian countries.

She said that till now 15 students have been enrolled in the university and more will be enrolled in coming days as the process of their application scrutiny and interview is still on. "We strongly hope that more foreign students will join the university because our thrust is research along with study," Sabharwal said. She said the university has attracted over 1,000 applications from around the world. University Dean Anjana Sharma said eight faculty members have joined the university and many more would join this month and in October.

Sharma said Upinder Kaur, daughter of former Prime Minister Manmohan Singh, will be a visiting faculty at the university. Kaur is teaching history at Delhi University. The university will come up in Rajgir, 12 km from where the ancient Nalanda University stood till the 12th century, when it was razed by an invading Turkish army.

The formal inauguration is expected in mid-September, Sabharwal said. The fully-residential university, to be completed by 2020, will eventually have seven schools, all for postgraduate and doctoral students, offering courses in science, philosophy and spirituality, and social sciences.

Deccan Herald ND 2/09/2014 P-3

FAST AND FURIOUS

# Student F1 Team Defianz blazes trail

Delhi's only Formula1 student team, Team Defianz, is roaring its way to glory. This group of 12 racing enthusiasts from the Delhi Technological University (DTU) recently participated in IMechE Formula Student – the world's largest annual motorsport competition for students at the Silverstone Circuit in UK. And now they are ready to blaze a trail at the Kari Motor Speedway, Tamil Nadu, where the Indian edition of the Formula Student event is being held for the very first time. *Metrolife* decided to catch up with these budding Narain Karthikeyans and Karun Chandoks from Delhi.

DTU has had a Formula racing team since 2004. In fact, the first team was formed solely for the purpose of participating in the prestigious IMechE Formula Student event. Since then, new students are inducted every year; they build a single-seater racing car, train themselves with the help of 'experienced seniors' and relevant portals and join in the overseas event. Hundred teams hailing from countries in Europe, America, Middle-East and Asia are a part of the event.

**"All the judges, ranging from top notch officials of Rolls Royce and Ferrari to Williams F1 team had a good word for us. The only disappointing round was Dynamics which we couldn't get through."**
**ROHAN PANDEY**


**PREMIER** Members of Team Defianz – Delhi's only Formula1 student team from Delhi Technological University (DTU).

"The challenge lies not only in making the car but also making it through bureaucratic procedures and diplomatic hurdles," says Ayush Garg, a final year mechanical engineering student and member of Team Defianz.

"Building a sports car is difficult and expensive. Expertise is hard to get. Each part has to be imported and costs hundreds of dollars, if not thousands. It takes months to construct a functional competitive sports car, especially when your team is small. Our budget is barely Rs 10 lakh when teams, like that of Germany, spend over Rs 10 crore to build their vehicle," he said.

"Then there are the visa troubles, thanks to which we couldn't make it to UK last year," Garg rued.

However, inspite of the roadblocks, Team Defianz has done exceptionally well for itself. Their sports car, this time, recorded an acceleration of 0-100 km/hr in less than five seconds (a superbike takes up to 10 seconds) with a CBR 600 cc F41 engine, fire proof open cockpit, double wishbone, disc brakes on all four tyres, an environment-friendly steel-frame and various essential safety measures.

Rohan Pandey, another exhilarated Team Defianz racer, informed us, "We scored very well in the Cost and Design rounds, 30/100 and 40/100 respectively. We were praised for having constructed a sports car of this quality at such low cost and with minimum carbon footprint. Our design was probably the best among all Asian teams. All the judges, ranging from top notch officials of Rolls Royce and Ferrari to Williams F1 team had a good word for us. The only disappointing round was Dynamics which we couldn't get through."

Irrespective, Team Defianz has made its mark again and the students are reaping the benefits of all the hard work put in. "All the final year student members have received placements from top notch automobile companies already, some impressed by the stint at Silverstone Circuit, UK, alone. The juniors are now preparing for the Kari Motor Speedway event," says Ayush, "Hopefully, we will do even better at this one."

More power to Team Defianz!

**Baishali Adak**

**Hindu ND 2/09/2014** P-13

# Stress on gender sensitisation in curriculum

## All States, stakeholders will be involved in drafting new policy

Smriti Kak Ramachandran

**NEW DELHI:** Gender sensitisation and inclusion will be the core of the curriculum for schools and the Ministry of Human Resource Development (HRD) will collaborate with the Ministry of Women and Child Development (WCD) to ensure the textbooks are free from gender biases. The HRD Ministry, which has begun the process of drafting a new education policy, wants curriculum to underline gender issues and has assured that all States and stakeholders will be involved in the process of drafting the new policy.

On Monday the HRD Minister Smriti Irani, while speaking on the sidelines of NCERT's 54th Foundation Day, said the year will be dedicated to the issues of gender inclusion and sensitisation. Union WCD Minister Maneka Gandhi, who was also present on the occasion, called for giving more stress to gender sensitisation and said it is imperative to include women's perspectives as well.

*Union Human Resource Development Minister Smriti Irani and Women and Child Development Minister Maneka Gandhi at the 54th Foundation Day celebrations of NCERT in New Delhi on Monday.* – PHOTO: MEETA AHLAWAT

Referring to the new education policy, Ms. Irani allayed fears that the NDA government will not take on board the opinion of States. The HRD Ministry has decided to earmark schedules for all States and regions to give their opinion on what India's new education policy should be.

With the last education policy drafted in 1986, the Minister said there is a need to relook at the policy to meet the aspirations and goalposts of a new India and to ensure the country is manpower ready in the next 10-15 years.

IITs and IIMs are being roped in to help with the drafting of the new policy. While the IITs have already identified 10 goalposts for the foundation of the new curriculum, after they were asked by Prime Minister Narendra Modi to do so, the IIMS have agreed to help with training school and college administrators.

## Kerala schools to buy radios for Modi's Teachers' Day speech

National Bureau

**NEW DELHI:** The Kerala Education Department has allowed schools without radios to buy one from Sarva Shiksha Abhiyan funds to broadcast Prime Minister Narendra Modi's address to students on Teachers' Day, September 5. English and Hindi teachers have been instructed to translate the address to Malayalam. Since Onam is round the corner and some schools may be closed, they have been asked to ensure that a recording of Mr. Modi's address is aired the day the school reopens.

Speaking to reporters at the BJP headquarters on Monday, Ms. Irani said: "Education is on the concurrent list. We cannot do anything without the State's consent. Some State Education Secretaries spoke to us about their concerns. Schools that want to broadcast the conversation can do so and the Centre will not enforce it."

**Times of India ND 2/09/2014** P-17

# 'Green' beats 'lean': Plants in offices boost productivity

**London:** 'Green' offices with plants make staff happier and more productive than 'lean' designs stripped of greenery, a new research has found.

In the first field study of its kind, researchers found that enriching a 'lean' office with plants could increase productivity by 15%. The team examined the impact of 'lean' and 'green' offices on staff's perceptions of air quality, concentration, workplace satisfaction and monitored productivity levels over subsequent months in two large commercial offices in the UK and The Netherlands.

© Randy Faris/Corbis

SEEDING SUCCESS

"Our research suggests that investing in landscaping the office with plants will pay off through an increase in office workers' quality of life and productivity," lead researcher Marlon Nieuwenhuis, from Cardiff University's School of Psychology, said.

"Although previous laboratory research pointed in this direction, our research is, to our knowledge, the first to examine this in real offices, showing benefits over the long term. It directly challenges the widely accepted business philosophy that a lean office with clean desks is more productive," said Nieuwenhuis.

Analyses into the reasons why plants are beneficial suggests that a green office increases employees' work engagement by making them more physically, cognitively and emotionally involved in their work.

"Psychologically manipulating real workplaces and real jobs adds new depth to our understanding of what is right and what is wrong with existing workspace design and management. We are now developing a template for a genuinely smart office," said co-author Craig Knight, from University of Exeter.

"The 'lean' philosophy has been influential across a wide range of organizational domains. Our research questions this widespread conviction that less is more. Sometimes less is just less," Professor Alex Haslam, from the University of Queensland's school of psychology, a co-author of the study, added. "Simply enriching a previously Spartan space with plants served to increase productivity by 15% — a figure that aligns closely with findings in previously conducted laboratory studies," Nieuwenhuis said. PTI

Times of India ND 2/09/2014 P-17

# This pacemaker is powered by heart

## Scientists Develop Batteryless Device

**London:** Researchers have developed a new batteryless cardiac pacemaker which is based on an automatic wristwatch and is powered by heart motion.

"Batteries are a limiting factor in today's medical implants. Once they reach a critically low energy level, physicians see themselves forced to replace a correctly functioning medical device in a surgical intervention," said Adrian Zurbuchen from the University of Bern, Switzerland. "This is an unpleasant scenario which increases costs and the risk of complications for patients," Zurbuchen said. He has now come up with a way to power a cardiac pacemaker with an alternative energy source — the heart motion.

Four years ago Professor Rolf Vogel, a cardiologist and engineer at the University of Bern, had the idea of using an automatic wristwatch mechanism to harvest the energy of heart motion. "The heart seems to be a very promising energy source because its contractions are repetitive and present for 24 hours a day, 7 days a week," Zurbuchen said. "Furthermore, the automatic clockwork, invented in 1777, has a good reputation as a reliable technology to scavenge energy from motion."

The researchers' first prototype is based on a commercially available automatic wristwatch. All unnecessary parts were removed to reduce weight and size. They developed a custom-made housing with eyelets that allows suturing the device directly onto the myocardium. The prototype works the same way it would on a person's wrist. When it is exposed to an external acceleration, the eccentric mass of the clockwork starts rotating. This progressively winds a mechanical spring. After the spring is fully charged it unwinds and thereby spins an electrical micro-generator.

To test the prototype, the researchers developed an electronic circuit to transform and store the signal into a small buffer capacity. They then connected the system to a custom-made cardiac pacemaker.

The researchers successfully tested the system in in vivo experiments with domestic pigs. The mechanism allowed them for the first time to perform batteryless overdrive-pacing at 130 beats per minute. "We have shown that it is possible to pace the heart using the power of its own motion," Zurbuchen said. PTI

## Glucose substance 'kills' good cholesterol, ups risk of heart disease

A substance formed from glucose in the body damages 'good' HDL cholesterol, potentially increasing the risk of heart disease, a new study has found. The substance, methylglyoxal — MG, destabilizes high density lipoprotein and causes it to lose the properties which protect against heart disease. HDL damaged by MG is rapidly cleared from the blood, reducing its HDL content, or remains in plasma having lost its beneficial function. Low levels of HDL are closely linked to heart disease, with increased levels of MG being common in the elderly and those with diabetes or kidney problems. "We can now focus on developing drugs that reduce the concentration of MG in the blood, but it will not only be drugs that can help. We could now develop new food supplements that decrease MG," said lead researcher Naila Rabbani of the Warwick Medical School said. PTI

# Smart Bucket Challenge: IIT-B students' version of the viral campaign

Tuesday, 2 September 2014 - 5:25am IST | Agency: DNA

http://www.dnaindia.com/mumbai/report-smart-bucket-challenge-iit-b-students-version-of-the-viral-campaign-2015445

Taking a cue from the 'Ice Bucket Challenge', which has gone viral across the world, students of IIT Bombay launched a 'smart bucket challenge' on Sunday. It addresses the needs of the people of Hirewadi, a village near Karjat.

Under the campaign, the students distributed buckets of rajma, soyabean, dal, wheat, and utilities mainly consisting of a first aid kit, mosquito coils and colouring books, to the families of Hirewadi, a small hamlet comprising over 30 households. The students adopted the village a year ago and aim at developing it as a model village.

"The Smart Buckets were distributed in the entire village and villagers were taught the importance of a balanced and healthy living," says Sanchita Dhas, a student and one of the six members of TechGSR (Tech Geek Social Responsiblity), a socio-tech body of Abhyudyay, a social platform of the institute which is spearheading the campaign funded by a Mumbai-based RMT ready mix.

TechGSR aims at improving the standards of living of rural people and to create employment with resources available in their vicinity, keeping in mind their skill set.

Rhythima, a team member and final year student of mechanical engineering, says, "After several visits to the village this year, the team has identified some major problem statements, which include – develop an efficient smokeless chulha with household materials, create a pressure-based drip irrigation technique (which doesn't require electricity), water purification, catalytic natural manure-making device, effective household lighting, use of only one bulb to illuminate the entire house, a vehicle mobility solution for medical emergencies and model creation for handicraft-based sustainable enterprise."

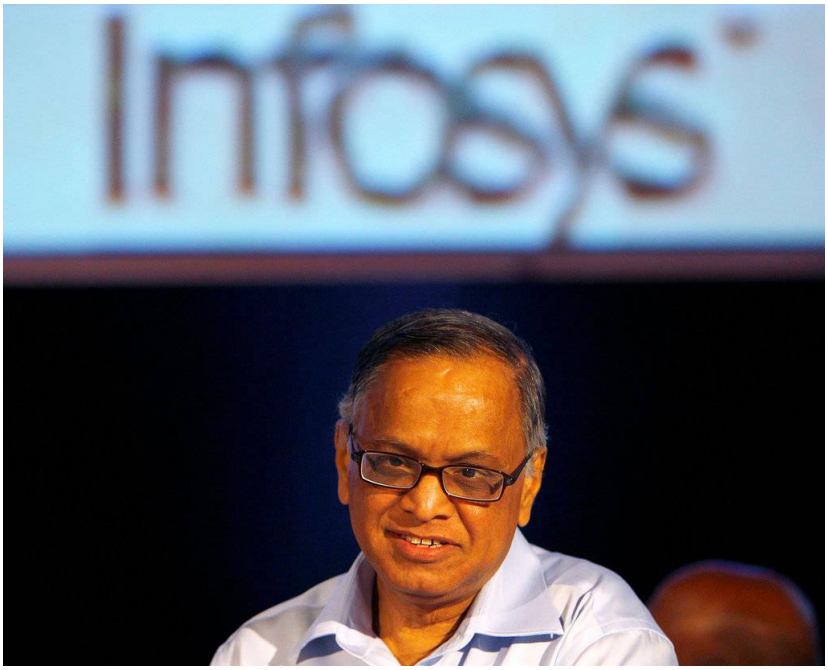
# From RBI Governor Raghuram Rajan to Goa CM Manohar Parrikar: 10 famous IITians who didn't end up as engineers in India

http://ibnlive.in.com/news/from-rbi-governor-raghuram-rajan-to-goa-cm-manohar-parrikar-10-famous-iitians-who-didnt-end-up-as-engineers-in-india/495570-79.html

It is a dream for every Indian school child studying science in India to get into the prestigious IITs. The Indian Institute of Technology is a name that tops the list when you ask an engineering enthusiast about their future plans. The coveted engineering institute has produced some of the most famous Indians who hold responsible positions in Indian government.

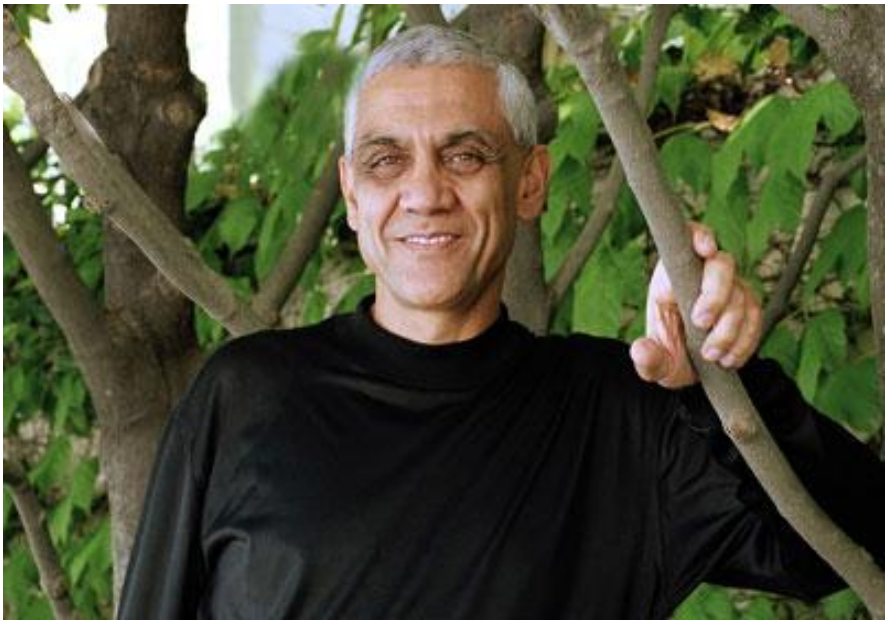
The IITs have not only produced the best engineers in the world, but also IAS officers and politicians. While Chetan Bhagat became an author, the Manohar Parrikar became the Chief Minister of Goa. From Dr. D Udaya Kumar who designed the rupee symbol to D. Subbarao, the Governor of the Reserve Bank of India, IITians have taken won accolades across the globe. A huge number of IITians are currently serving the government of India and you'll find them all mentioned on this Quora discussion. Did you know these famous Indians studied at IIT?

**Raghuram Rajan: Raghuram Govinda Rajan is the 23rd Governor of the Reserve Bank of India after taking charge of India's central banking institution on 4 September 2013, succeeding Duvvuri Subbarao. Rajan was chief economic advisor to India's Ministry of Finance during the previous year and chief economist at the International Monetary Fund from 2003 to 2007. He graduated from the Indian Institute of Technology, Delhi with a bachelor's degree in electrical engineering in 1985 and later received a Post Graduate Diploma in Business Administration from Indian Institute of Management, Ahmedabad in 1987. He won Director's Gold Medal in IIT Delhi and was a Gold medalist at IIM Ahmedabad.**




**NR Narayan Murthy: Nagavara Ramarao Narayana Murthy is an Indian IT industrialist and the co-founder of Infosys. Murthy studied electrical engineering at the National Institute of Engineering, University of Mysore, and M. Tech at the Indian Institute of Technology, Kanpur. The Infosys co-founder has been listed among the 12 greatest entrepreneurs of our time by Fortune magazine. He has been described as Father of Indian IT sector by Time magazine due to his contribution to outsourcing in India. Murthy has also been honoured with the Padma Vibhushan and Padma Shri awards.**

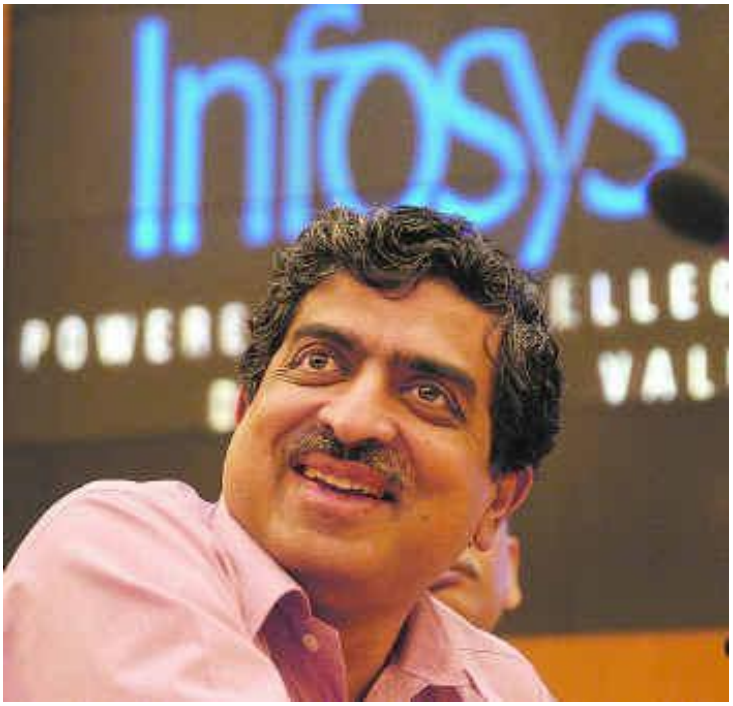
**D Subbarao: Duvvuri Subbarao is an Indian Economist, Central Banker and Civil Servant. He was the 22nd Governor of Reserve Bank of India, who served under Prime Minister Dr.Manmohan Singh. Dr. D. Subbarao is a 1972 batch Indian Administrative Service (IAS) officer of Andhra Pradesh cadre. On 5 September 2008, he was appointed the 22nd Governor of Reserve Bank of India (RBI). His term was supposed to be completed in September 2011. But breaking from tradition, the Union Government of India issued an extension by 2 years until 4 September 2013. He graduated in Physics B.Sc (Hons.) from Indian Institute of Technology, Kharagpur (class of 1969). He received an M.Sc degree in Physics from Indian Institute of Technology Kanpur. Subbarao topped the Civil Services Examination in 1972 and was assigned the Andhra Pradesh cadre.**



**Vinod Khosla: Vinod Khosla is an Indian-born businessman who is currently listed by Forbes magazine as an American billionaire. Khosla was one of the co-founders of Sun Microsystems, a company which created the Java programming language and Network File System (NFS) after his departure as founding CEO and chairman in the early 1980s. It is said that Khosla read about the founding of Intel in Electronic Engineering Times at the age of fourteen and this inspired him to pursue technology as a career. He went on to receive multiple degrees from the Indian Institute of Technology Delhi (IIT Delhi), India (Bachelor of Technology in Electrical Engineering), Carnegie Mellon University (Masters in Biomedical Engineering), and Stanford Graduate School of Business (MBA).**

**Manohar Parrikar: Manohar Parrikar has been the Chief Minister of Goa since 9 March 2012. Previously he was Chief Minister from 2000 to 2005. He is a member of the Bharatiya Janata Party (BJP) and represents the Panaji constituency in the Legislative Assembly of Goa. Parrikar is a graduate in metallurgical engineering from IIT Bombay (1978). He is the first IIT graduate to become the Chief Minister of any Indian state. He was awarded by IIT Bombay with the Distinguished Alumnus Award in 2001.**

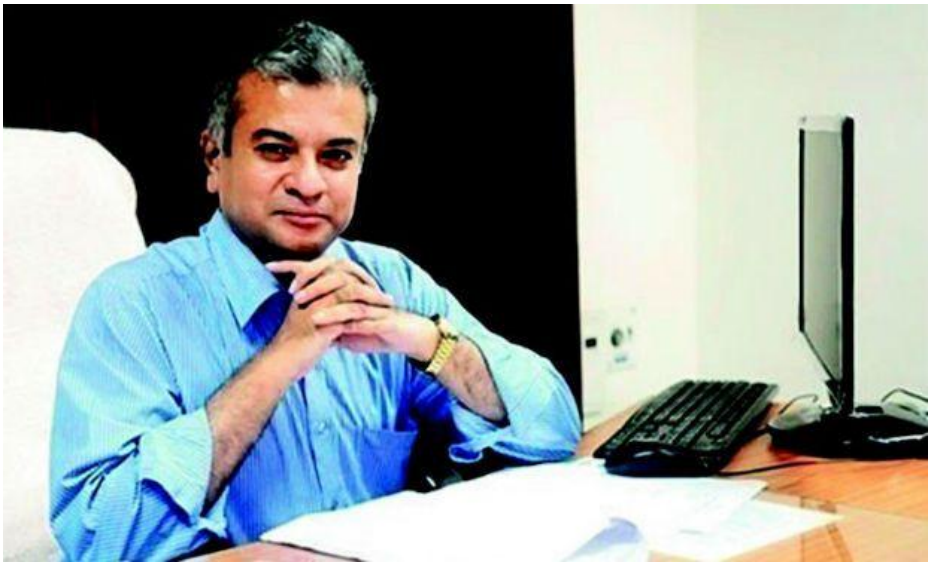
**Jairam Ramesh: Jairam Ramesh is an Indian economist and politician belonging to the Indian National Congress. As a Member of Parliament, he represents Andhra Pradesh in the Rajya Sabha. In July 2011, Jairam Ramesh was elevated to the Union Council of Ministers of India and appointed Minister of Rural Development and Minister of the new Ministry of Drinking Water and Sanitation. However in the cabinet reshuffle in October 2012, he has been divested of the portfolio of Ministry of Drinking Water and Sanitation. He was previously the Indian Minister of State (Independent Charge) at the Ministry of Environment and Forests from May 2009 to July 2011. Ramesh graduated from IIT Bombay in 1975 with a BTech in Mechanical Engineering.**




**Nandan Nilekani: Nandan Nilekani was the Chairman of the Unique Identification Authority of India (UIDAI). After a successful career at Infosys, he headed the Government of India's technology committee, TAGUP. Nilekani received a bachelor's degree in electrical engineering from the Indian Institute of Technology Bombay, Mumbai. In 1978, Nilekani had started his career at the Mumbai-based Patni Computer Systems, where he first met N.R. Narayana Murthy who interviewed him too. In 1981, Nilekani, Murthy, and five others left Patni to start their own company, Infosys.**

**Kiran Bedi: Once a powerful police official, Kiran Bedi is now a social activist and a retired Indian Police Service (IPS) officer. Bedi joined the police service in 1972 and became the first woman officer in the IPS. Kiran Bedi held the post of Director General at the Bureau of Police Research and Development before she voluntarily retired from the IPS in December 2007. After a Master's degree in Political Science from Panjab University, and Bachelor of Laws in 1988 from Faculty of Law, University of Delhi, she obtained a Ph.D. in Social Sciences from the Department of Social Sciences, Indian Institute of Technology Delhi where the topic of her thesis was 'Drug Abuse and Domestic Violence'.**

**Dr. D Udaya Kumar: Udaya Kumar Dharmalingam is the designer of the Indian rupee sign. His design was selected from among five short listed symbols. According to Kumar the design is based on the Indian tricolour. He is currently an assistant professor at IIT Guwahati. He received his master's degree, an MDes in Visual Communication, from the Industrial Design Centre (IDC) of IIT Bombay in 2003. He also completed his doctoral studies at the IDC, receiving his PhD in 2010.**



**Raju Narayan Swamy: Raju Narayana Swamy is an officer in the Indian Administrative Service. He is Chief Vigilance Officer of Central public undertakings. A graduate in Computer Science from IIT Chennai, he turned down an MIT scholarship to pursue a career with the Indian Administrative Services. Swamy has 25 books to his credit. He won the Kerala Sahitya Akademi award for a travelogue.**

# Calcutta University to open gates for Australian students

http://timesofindia.indiatimes.com/city/kolkata/CU-to-open-gates-for-Oz-students/articleshow/41452705.cms

KOLKATA: Calcutta University will join the ranks of some other national universities when it signs an MoU with the University of West Sydney on September 4, becoming a member of the New Colombo Plan — an initiative launched by the Australian government to give Australian undergraduate students an opportunity to study in countries in the Asia Pacific region.

Australian students will be able to avail of scholarships in 35 countries, including India, Indonesia, Vietnam, Singapore and Hong Kong.

"Australian varsities are entering into tie-ups with universities across the globe. Only five Indian varsities have been identified to sign MoUs with as many Australian universities. CU apart, Jawaharlal Nehru University, Delhi University, University of Hyderabad and Mysore University were selected by the Indian government and UGC for the Connect India programme, which the Centre will launch to bring foreign students to study in the country. By selecting CU, the centre has recognized the university's excellence," said VC Suranjan Das.

# IISc., ISRO on mission monsoon

http://www.thehindu.com/news/national/karnataka/iisc-isro-on-mission-monsoon/article6370491.ece

The complex yearly phenomenon of the monsoon, upon which much of the country's economy is based, will be the subject of a massive international research project involving the Indian Institute of Science (IISc.) and the Indian Space Research Organisation.

Indian and U.K.-based scientists will sail for a month in the Bay of Bengal as part of the multi-crore project to better forecast the monsoon. The study is funded by UK's Natural Environment Research Council, and the Ministry of Earth Sciences.

Using ship and air-based observations in the Bay of Bengal, scientists will study the formation of clouds over the ocean and also ocean salinity and temperature. "The first step to be able to better predict the monsoon is to understand the processes taking place over the ocean, where most cloud formations happen," said P.N. Vinayachandran, Professor at Centre for Atmospheric and Oceanic Sciences, IISc.

Ocean gliders and profiling floats would be used to measure salinity and temperature: the two most important properties of the ocean, he added. The research project will be three to five years long and will begin in 2015.

India receives 80 per cent of its rainfall from the southwest monsoon, and having accurate predictions at least one season in advance is essential, Prof. Vinayachandran said.

# 'IISc's Alumni are Global Achievers'

http://www.newindianexpress.com/cities/bangalore/%E2%80%98IISc%E2%80%99s-Alumni-are-Global-Achievers%E2%80%99/2014/09/01/article2408671.ece

BANGALORE: As a scientist, Prof Anurag Kumar works on mathematical modelling of communication networks such as the Internet, WiFi, cellular systems, methods of improving them and new designs. Now, as director of the premier Indian Institute of Science (IISc), Bangalore, he says his focus is to make it one of the top institutes in the world. He took over as IISc director on August 1.

"Rankings vary. The first batch of undergraduates will pass out this year from IISc. In the Shanghai Rankings, we are between 300-400 in the world and the first in the country. As of now, we do not have Nobel Prize winners in the institute. That counts in the rankings. The aim is certainly to go up in the list. We are seized of this issue and working on it," Prof Kumar said.

He felt rankings depend on a variety of factors -- publishing in the right journals, getting visitors from abroad, international collaborators, etc. The visibility of IISc does not correspond to its size and its reach, he felt.

"A good university is world class because it creates alumni who go and serve the country. IISc is playing a world class role in the nation. IIScians play leadership roles in different government institutions, industries, etc. Rankings do not include all that," he said.

Historically, the institute has played a role in setting up the first national internet and power system in the country. It has also contributed in a big way to science and research activities.

IISc produces over 200 high quality PhD students annually. Quite a few of them go on to become faculty members in Indian institutions of higher education or researchers in industry and government research and development laboratories.

The institute produces more than 400 Masters degree holders every year who are highly sought after by the industry. IISc leads the nation in high quality international research publications in science and engineering, and is consistently ranked No. 1 in the country in this measure of scientific achievement, he said.

**September 3**

**Business Standard ND 3/09/2014** P-20

# Govt to reverse brain drain, bring back NRI scientists

## Science & technology ministry is in talks with scientists

SANJEEB MUKHERJEE & SUSHMI DEY
New Delhi, 2 September

**WELCOME STEP**

- Ministry of science & technology approached eminent scientists to work in India; to float special scholarships to encourage scientists to come back
- Scientists to be inducted in various institutions & departments either on a permanent or temporary basis
- Most of these scientists and researchers are from prominent global universities

In a bid to reverse the brain drain of the past few decades and to bring back scientific talent, the Narendra Modi government has initiated talks with many eminent non-resident Indian scientists, who left the country to pursue research overseas.

The ministry of science and technology has approached about a dozen well-known scientists from across the world in an effort to bring them back to various departments under the ministry, said Jitendra Singh, minister of state (independent charge) for science and technology.

According to Singh, the government is trying to facilitate and create a conducive environment along with social infrastructure to attract the scientists who had left the country many years ago for various reasons.

**The government is trying to facilitate and create a conducive environment to attract the scientists**

These scientists, mostly coming back through different government fellowships, will be inducted in various reputed institutions and departments, including the Council of Scientific & Industrial Research, Jawaharlal Nehru Centre for Advanced Scientific Research, Bose Institute and many other research centres, mainly those funded by the government.

According to K Vijay Raghavan, secretary (additional charge) to Department of Science and Technology (DST), the department has constituted two different re-entry fellowships - Ramalingaswami and Ramanujan fellowships — under which scientists are coming back and taking up projects in India.

The ministry plans to float more such fellowship going forward and create a conducive environment to hold back such talent on a permanent basis, Singh added.

A senior official from the ministry of earth sciences said most scientists who have been shown interest in coming to work in India are from reputed universities and many of them have shown interest in participating in projects run by India Meteorological Department. Most of them want to work in India on a temporary basis, the official clarified.

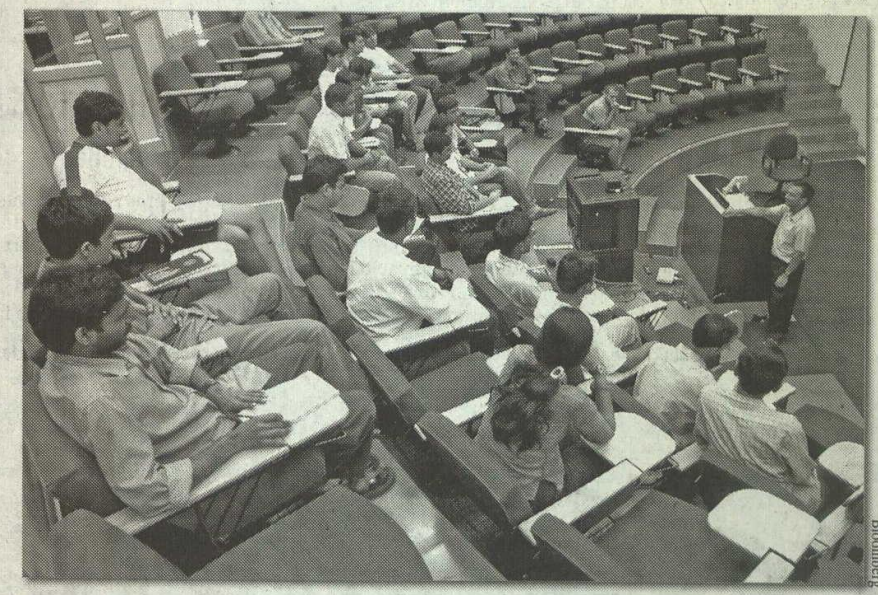
DST is also in talks with various domestic as well as multinational pharmaceutical companies to partner for research in the area of drug discovery. "We are trying to involve the industry at two levels. One, we are in talks with some companies on projects where they can take care of the funding part. Secondly, there are also companies which have their own research and development (R&D) wings. So, we are discussing if we can collaborate with them and take the research forward," said Singh.

He added that government institutions, which were so far focused on researching on India-centric diseases such as malaria, tuberculosis and vaccines, are now looking at lifestyle diseases including diabetes, cardiovascular and cancer. Singh was speaking at a function of his ministry to sign a Memorandum of Understanding with All India Institute of Medical Sciences to partner for furtherance of cancer research.

Asian Age ND 3/09/2014 P-11

# Disruptive innovation in education

Arun Nigavekar



Bloomberg

**TAKE NOTE:** India certainly needs a uniform and comprehensive policy; therefore, we must urgently bring disruptive innovation in the education sector, which is vital for the nation's further development and progress

THE past two weeks had a fair share of interesting news regarding the education sector. One was the anguish expressed by President Pranab Mukherjee over the fact that no higher education institute of the country figures in the list of the world's top 200 schools. Inaugurating the country's first Indian Institute of Engineering Science and Technology (IIEST) at Howrah's Shibpur on August 24, the President said: "We have more than 720 universities, 37,000 degree colleges and 11,000 polytechnic institutes. Yet what saddens me the most is that the standards of higher education institutes compared to international benchmark is abysmally low here." He added: "In the list of top 200 universities prepared by grading organisations, not a single Indian institute, such as the IITs, NITs or universities, finds a place." The views expressed by the President are not new, as many previous Presidents have also expressed their views on similar lines.

The other news was with reference to a few incomprehensible actions by two apex bodies that are directly connected with dynamic changes in higher education — University Grants Commission (UGC) and All India Council for Technical Education (AICTE).

The issue, on which the UGC used its authority rather vehemently, is linked with the duration of degree programmes. They insisted that degree courses must be completed in three years, instead of four years. Few months ago, University of Delhi also faced a similar situation. The central university is fully funded by the ministry of human resource development (MHRD) through the UGC, that objected to the university's action of launching of a four-year undergraduate programme (FYUP), which was commenced two years ago. Initially, the UGC did not address this issue, rather congratulated the university's authority for such a flexible change. However, after the new government came to power, it suddenly became active and forced Delhi University to shut down the FYUP.

If one looks carefully at DU's four-year arrangement including the curriculum covered in the first year, it did not bring out any academic or structural change using a well-planned or comprehensive framework. Indeed, if the story is correct, its own academic faculty was not consulted in this major exercise. However, the UGC didn't just ask DU to implement this every educational institution to follow its dictate, be they state universities or central universities or national level institutions like the Indian Institute of Sciences, Tata Institute of Fundamental Research or national entities created by the Atomic Energy and Space Research Organisation.

Interestingly enough, the AICTE is silently watching this dilemma with an observant eye. It too played a similar role in management and engineering education by taking several academically unanswerable decisions in the past 10 years. The organisation was more worried about the financial pressure on families and interference by the 'masters' of this country. AICTE was, and still is, struggling in an environment upon which it has absolutely no control. During this ambiguous situation, private and deemed-to-be universities were moving in the professional education domain, merrily doing what they felt was a good approach for expanding their institutions and consolidating their bargaining power in the admission process.

Many complexities also revolve around the disciplines that are handled by Medical Council of India, Dental Council of India, Ayurveda Council, and the Bar Council among others. These councils set up by Parliament and controlled by various ministries have their own kingdom. They act as masters of their respective domains and simply do not bother about the MHRD or the UGC. Interestingly enough, the institutions that cater to these councils give degrees recognised by the UGC. The scenario is further becoming complex mainly because of the rise in number of students in higher education and increasing pressure from employing agencies, industries and businesses. Today there are 13 million students in the higher education sphere; this number would rise to 50 million by 2020 due to the impact of Right to Education Act and a major push to primary education. Industries are demanding skills education for workers at various stages, namely lower-level, mid-level, upper-level workers and graduate experts. They want each of the skills-trained workers to have a larger foundation in fundamental knowledge and hands-on experience.

The complex issues that have been presented in this column have been repeated time and again. Many reports and several strong academicians have written about this grey area as well. On a positive note, the MHRD has now appointed a committee to look into operations of the UGC, though one should not expect a miraculous approach from this committee. We must look into the higher education domain in totality by bringing all chief ministers and state-level education ministers on a single platform to deliberate on this crucial matter, and let the prime minister carry the torch. India certainly needs a uniform and comprehensive policy; therefore, we must urgently bring disruptive innovation in the education sector, which is vital for further development and progress of India.

arun.nigavekar@mydigitalfc.com

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

Hindustan ND 3/09/2014 P-1

कुछ अलग

मद्रास, गुवाहाटी और कानपुर आईआईटी ने इसी साल से शुरू की योजना, अब छात्र तनावमुक्त होकर व्यापार पर दे सकेंगे ध्यान

# कारोबार में चूके आईआईटी छात्रों की दोबारा प्लेसमेंट

नई दिल्ली | अनुराग मिश्र

आईआईटी अपने उन छात्रों को एक और मौका देने जा रही है,जो कोर्स पूरा करने के दो साल बाद भी किन्हीं कारणों से अपने व्यवसाय को परवान नहीं चढ़ा सके। ऐसे छात्रों का आईआईटी दोबारा प्लेसमेंट करवाएगी। आईआईटी मद्रास, मुंबई, गुवाहटी और कानपुर ने इस साल से इस प्रक्रिया को शुरू भी कर दिया है।

**नौकरी की गारंटी से विकल्प मिला :** आईआईटी मुंबई के प्लेसमेंट प्रमुख मोहक मेहता कहते हैं, इस व्यवस्था से छात्रों में बिजनेस की भावना बढ़ी है, क्योंकि अब उनके पास भविष्य में नौकरी की गारंटी है।

**मोटी सैलरी छोड़ अपने व्यवसाय को तरजीह :** आईआईटी गुवाहटी के प्रोफेसर का कहना है कि गोल्डमैन सैश, अमेजन, गूगल और ई-बे जैसी कंपनियां उनके छात्रों को 20 से 40% अधिक सैलरी पैकेज ऑफर कर रही है। बावजूद इसके छात्र अपने कारोबार को तरजीह दे रहे हैं। अब तक नौ से अधिक छात्र प्लेसमेंट में न बैठने का विकल्प चुन चुके हैं।

**तनाव मुक्त करता है निर्णय :** आईआईटी मुंबई के छात्र उन्नी कृष्णन का कहना है कि मैंने प्लेसमेंट में बैठने से इंकार कर दिया है। मैं एक छोटे शहर से आता हूं और बचपन से मेरी इच्छा व्यापार करने की है। पहले मैं अपने इस फैसले को लेकर दुविधा में था कि अगर बिजनेस नहीं चला तो क्या होगा। लेकिन अब मेरे पास दो साल बाद भी आईआईटी की प्लेसमेंट में बैठने का विकल्प है। अब में तनाव मुक्त होकर अपने लक्ष्य पर ध्यान दे सकूंगा। वहीं एक अन्य छात्र ने कहा कि छात्र नौकरियों को दरकिनार कर सामाजिक कार्यों से जुड़ी कंपनियां खोल रहे हैं।

## दिल्ली यूनिवर्सिटी के एफएमएस में हॉलीडे नीति

- डीयू के फैकल्टी ऑफ मैनेजमेंट स्टडीज (एफएमएस) की प्लेसमेंट ने हॉलीडे नीति शुरू की है।
- इसमें छात्र को अपना कारोबार शुरू करने की छूट दी है। अगर कारोबार नहीं चलता है तो कोर्स खत्म होने के अगले दो साल तक वह प्लेसमेंट प्रक्रिया में हिस्सा ले सकते हैं।
- आईआईएम बेंगलुरु, अहमदाबाद और कोलकाता भी छात्रों को कारोबार शुरू करने के लिए प्लेसमेंट प्रक्रिया से अलग होने का मौका देते हैं।

# Rajasthan-born math researcher at Stanford wins major award

Hindustan Times (Jaipur)

Himanshu Asnani, 27, an Indian-born mathematics researcher at Stanford University Electrical Engineering School in the US, is the winner of the Marconi Society Paul Baran young scholar award for 2014.

“The prestigious award will be presented to Asnani at our annual event Oct 2 at the National Academies of Sciences in Washington,” Society’s young scholar selection committee Bob Tkach told IANS through email Tuesday.

Asnani, who hails from Kota in Rajasthan, is also a system engineer at the Swedish telecom major’s R&D centre in the Silicon Valley.

Though Asnani aspired to become a neurosurgeon as a child under the influence of his parents who are doctors, his exposure to mathematics and physics got him fourth rank in the IIT joint entrance exam.

Graduating from IIT-Bombay in electrical engineering in 2009, Asnani went to the US to do masters (MS) at Stanford and enrolled for Ph.D in the same subject.

Named after Nobel laureate Guglielmo Marconi, who invented radio, and set up in 1974 by his daughter Gioia Marconi Braga through an endowment, the Marconi Society awards annually outstanding individuals whose scope of work and influence emulate the principle of ‘creativity in service to humanity’ that inspired Marconi.

# MHRD all set to overhaul the UGC

http://www.nordiccentreindia.com/news/132-mhrd-all-set-to-overhaul-the-ugc.html

In fulfillment of an order by the central government, the Ministry of Human Resource Development (MHRD) has appointed a high-level committee to suggest ways to restructure the University Grants Commission. The order also seeks to amend the UGC Act of 1956 in order to re-organise the UGC to bring out reforms in the higher education sector.

# Colleges line up for live classes by IIT professors under novel programme

K R Rajeev, TNN | Sep 3, 2014, 03.11AM IST

http://timesofindia.indiatimes.com/City/Kozhikode/Colleges-line-up-for-live-classes-by-IIT-professors-under-novel-programme/articleshow/41557059.cms

KOZHIKODE: Self-financing engineering colleges, along with a dozen other government engineering colleges (GEC) and other colleges in the state are busy adapting their time-tables to enable virtual lectures by IIT professors in their classrooms under the MHRD- funded quality enhancement in engineering education (QEEE) programme.

The innovative nation- wide programme was launched earlier this year as a part of the action plan to fix dilution of quality and shortage of faculty that is crippling the country's engineering education following the sudden and massive expansion in the number of engineering colleges.

Under the `direct to student' programme live classes by IIT professors are made available to non- IIT and non-NIT engineering colleges across the country through DTH and online platforms.

Ashok Jhunjhunwala, chairman of the QEEE and professor of IIT Madras said that the programme is currently being delivered to nearly 120 engineering colleges across the country and that they hope to extend it to 500 colleges. "Currently we are offering live lectures from IIT professors in 15 engineering subjects. The plan is to provide high quality content delivered directly to the students using latest technology so that superior scholastic inputs are integrated into current learning and pedagogical practices in the colleges in order to enhance the quality of engineering education," he added.

T P Byjubai, Principal of Government Engineering College, Kozhikode, one of the participant colleges in the QEEE programme said that the programme has been very helpful as students are getting professors from IIT to give them lessons. "We started the programme last week and we are getting around four hours of live lectures in three branches every week. There is also scope for interactivity which enables students to ask questions and clear their doubts," she said.

# IIT-M students get to sample the IAF life

http://www.thehindu.com/news/cities/chennai/chen-events/iitm-students-get-to-sample-the-iaf-life/article6370535.ece

The students took part in an interactive programme seeking to initiate them to career prospects in the Air Force. Photo: G. Krishnaswamy

It was a breathtaking experience for physically challenged C.S. Niranjan, a third-year aero space engineering student of IIT-Madras (IIT-M).

One of the 52 students of IIT-M at the Air Force station, Tambaram, on Monday morning, Niranjan got an idea of just what a career with the Indian Air Force (IAF) would be like, through 'Guardians of the Sky', an interactive programme initiated by the IAF. Air Marshal S. Sukumar, air officer-in-charge personnel, IAF, flagged off a rally from the station.

After experiencing parasailing, Niranjan said he was amazed at the experience that was "different from anything we learn in the classroom."

Similar views were expressed by Jadhav Dattatreya, a fifth-year student of the department at IIT-M, who was excited to be part of the learning team. His first flight had strengthened his ambition to become a pilot, he said.

An IAF adventure team, comprising parasailing instructors, guided the students, some of whom had a opportunity to participate in a parasailing experience, while others got to handle hang gliders.

For the IAF, a release said, the novel effort is a way of reaching out to the youth by offering opportunities in aero sports and of making them more 'air-minded'. The team visited the campus of IIT-M, where the students were given a presentation about career prospects in the IAF. They are expected to visit Hindustan Institute of Technology and Science in Padur on Tuesday.

Young IAF officers in rally vehicles, along with support staff, will cover Chennai and seven other cities — Tiruchi, Madurai, Thiruvanathapuram, Kochi, Kozhikode, Mangalore and Bengaluru — before September 27. The drive will target 16 premier educational institutes of these cities, with a multidisciplinary group of IAF officers interacting with students and providing them with details on career opportunities in the IAF.

# IITian from Kota bags Marconi award in US

http://indiatoday.intoday.in/story/iitian-from-kota-bags-marconi-award-in-us/1/380429.html

Himanshu Asnani, 27, an India-born mathematics researcher at Stanford University Electrical Engineering School in the US, is the winner of the Marconi Society Paul Baran young scholar award for 2014.

"The prestigious award will be presented to Asnani at our annual event Oct 2 at the National Academies of Sciences in Washington, DC," Society's young scholar selection committee Bob Tkach told IANS through email Tuesday.

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The award, with a cash prize of $4000 (Rs.2.4 million), is given to scholars who are 27 or younger at the time of the nomination, as Marconi was 27 years when he invented the wireless telegraphy.

"In addition to citation and cash prize, the award provides travel stipends to its winners for many years to enable them attend our events, as we consider them to be an integral part of the Society," Tkach said in the e-mail.

Asnani's academic and entrepreneurial achievements also stood out in a review of the nominated researchers from the world over the society undertakes every year.

"Asnani's outstanding work and contribution to point-to-point and multi-terminal channel coding and source coding problems were impressive," Tkach recalled.

The award recognises individuals who demonstrate exceptional scientific talent and entrepreneurial skills at a young age with potential to make advances in telecom and internet.

"In studies too, Asnani made profound contributions to our understanding of the fundamental limits in new communication and data compression (point-to-point and multi-terminal). His work spans from theoretical to the applied," his primary advisor at Stanford Tsachy Weissman said in a statement from the university.

Unlike many, Asnani is attracted to problems and is as passionate about understanding their theoretical underpinnings as he is about developing, implementing and experimenting with practical schemes that make a difference.

"What intrigued me was the idea that communication and networking could be used to connect and inspire people. By helping people share ideas and questions and answers, I was applying theory to real life problems with tangible impacts and outcomes," Asnani noted.

Asnani's initial research focused on cooperation in communication, which can boost the performance of a network.

"He developed insights and results of independent theoretical significance and uses them for guiding the design of new schemes in the motivating problem domains," says Weissman observed.

Asnani's assignments at Ericsson include designing next generation communication and computer networks. He also leads Ericsson's collaborations with startup partners and vendors to port new features and applications in the cloud platform.

Through symposia, conferences, forums and publications, the Society also promotes awareness of major innovations in communication theory, technology and applications with particular attention to understanding how they change and benefit society.

# Irani Sets a Scorching Pace to Keep HRD Ministry Flag Flying

http://www.newindianexpress.com/nation/Irani-Sets-a-Scorching-Pace-to-Keep-HRD-Ministry-Flag-Flying/2014/09/02/article2409414.ece

NEW DELHI: The HRD Ministry (MHRD) under Smriti Irani has several laudable initiatives to its credit during the 100 days of Narendra Modi Government.

The HRD Ministry is all set to establish a National Academic Depository for maintaining academic awards and certificates/degrees in a central database in electronic format. This digitisation of degrees would provide online access to academic awards, check forging of mark sheets and save time by eliminating the need to physically approach educational institutions to obtain all such academic awards.

To help undergraduate students make an informed decision regarding the college they want to join, the ministry has developed a Know Your College application.

Under the Swayam initiative of the MHRD, to be launched on September 25, 2014, professors of Centrally-funded institutions (like IITs, IIMs) will offer free online courses in a variety of disciplines.

The MHRD is also working to launch the national e-library, an online portal which will democratise access to knowledge by ensuring that quality content from the Central universities is available in a digital format that can be easily accessed by students, working professionals and researchers across the country via laptops, desktops, smartphones and tablets.

The ministry also plans to make 20 classrooms in 21,000 colleges (total 4.20 lakh classrooms) Wi-Fi enabled to help students access academically relevant websites through their laptops/phones. Over 600 universities have already been connected with one Gbps bandwidth. The campuses of 140 Centrally-funded institutions under the MHRD will be made Wi-Fi enabled.

Under the Padhe Bharat Bade Bharat initiative, a sub-programme of the Sarva Shiksha Abhiyan (SSA), a programme for reading, writing, and comprehension in language and basic numerology  skills in mathematics has been implemented in 17 states and all Union Territories.

Hindu ND 3/09/2014 P-13

# Nothing Vedic in 'Vedic Maths'

## Advocating 'Vedic mathematics' as a replacement for traditional Indian arithmetic is hardly an act of nationalism; it only shows ignorance of the history of mathematics

C.K. Raju

Gujarat has made it compulsory for school students to read the texts of Dinanath Batra, endorsed by Prime Minister Narendra Modi. According to news reports, Mr. Batra has now proposed a non-governmental education commission which will Indianise education through, for instance, Vedic mathematics. The Minister for Education has also mentioned Vedic mathematics as part of her agenda.

### Ignorant of tradition

One appreciates the desire of these people to work for Indian traditions. But where in the Vedas is "Vedic mathematics" to be found? Nowhere. Vedic mathematics has no relation whatsoever to the Vedas. It actually originates from a book misleadingly titled *Vedic Mathematics* by Bharati Krishna Tirtha. The book admits on its first page that its title is misleading and that the (elementary arithmetic) algorithms expounded in the book have nothing to do with the Vedas. This is repeated on p. xxxv: "Obviously these formulas are not to be found in the present recensions of Atharvaveda." I have been pointing this out since 1998. Regrettably, the advocates of "Vedic mathematics," though they claim to champion Indian tradition, are ignorant of the actual tradition in the Vedas. Second, they do not even know what is stated in the book — the real source of "Vedic mathematics." Third, they are unaware of scholarly writing on the subject. When education policy is decided by such ignorant people, they only end up making a laughing stock of themselves and the Vedas, and thus do a great disservice to the very tradition which they claim to champion.

Everyone learns how to add, subtract, multiply and divide in school. Why should we replace those algorithms with "Vedic mathematics"? Will that Indianise education? No. The standard arithmetic algorithms actually originated in India, where they were known by various names such as *patiganita* (slate arithmetic). However, the word "algorithm" comes from "algorithmus": the Latinised name of al Khwarizmi of the 9th century House of Wisdom in Baghdad. He wrote an expository book on Indian arithmetic called *Hisab al Hind*. Gerbert d'Aurillac (later Pope Sylvester II), the leading European mathematician of the 10th century, imported these arithmetic techniques from the Umayyad Khilafat of Córdoba. He did so because the primitive Greek and Roman system of arithmetic (tied to the abacus), then prevailing in Europe, was no match for Indian arithmetic. However, accustomed to the abacus (on which he wrote a tome), Gerbert was perplexed by algorithms based on the place-value system, and foolishly got a special abacus (apices) constructed for these "Arabic numerals" in 976 CE. Hence the name "Arabic numerals" — because a learned pope amusingly thought there was some magic in the shape of the numerals which made arithmetic efficient.

ILLUSTRATION: SATWIK GADE

Later, Florentine merchants realised that efficient Indian arithmetic algorithms conferred a competitive advantage in commerce. Fibonacci, who traded across Islamic Africa, translated al Khwarizmi's work, as did many others, which is why they came to be known as algorithms. Eventually, after 600 years, Indian algorithms displaced the European abacus and were introduced in the Jesuit syllabus as "practical mathematics" circa 1570 by Christoph Clavius. These algorithms are found in many early Indian texts, such as the *Patiganita* of Sridhar or the *Ganita Sara Sangraha* of Mahavira, or the *Lilavati* of Bhaskara II. So, advocating "Vedic mathematics" as a replacement for traditional Indian arithmetic is hardly an act of nationalism. On the contrary, it only shows ignorance of the history of mathematics. Spreading this ignorance among future generations will weaken the nation, not strengthen it.

The techniques of "Vedic mathematics" are designed for mental arithmetic, traditionally used by lower caste artisans such as carpenters or by people like Shakuntala Devi. There are many other such systems of mental arithmetic today. If that is what we intend to promote, we should first do a systematic comparison. We should also be honest and refrain from using the misleading label "Vedic" which is the main selling point of Bharti Krishna Tirtha's system, and which attracts gullible people who infer value just from the wrapper.

**Wrong solutions persist because an insecure political dispensation values the politically loyal over the learned**

### Suppressing real Mathematics

Promoting the wrongly labelled "Vedic mathematics" suppresses the mathematics that really does exist in the Vedas. For example, Yajurveda 17.2 elaborates on the decimal place value system (the basis of Indian algorithms) and some of those names for numbers are still in use, though terms such as arab (arbudam) have changed meaning. That passage shows that the place value system extends back to Vedic times, and it was a late acquisition only in mathematically backward Europe.

Likewise, the theory of permutations and combinations is built into the Vedic metre (and Indian music in general), as explained in various texts from Pingala's *Chandahsutra* to Bhaskar's *Lilavati*. The *aksa sukta* of the Rgveda gives a beautiful account of the game of dice, which is the foundation of the theory of probability. The romantic story of Nala and Damayanti in the Mahabharata further relates dice to sampling theory (to count the number of fruits in a tree).

More details are in my article on "Probability in Ancient India" available online and published in the Elsevier *Handbook of the Philosophy of Statistics*. However, all these scholarly efforts are jeopardised, for they too are viewed with suspicion.

We need to change the Western and colonial education system, especially with regard to mathematics. Traditional Indian *ganita* has much to offer in this process, but "Vedic mathematics" is definitely not the right way.

Wrong solutions like "Vedic mathematics" persist because an insecure political dispensation values the politically loyal over the learned who are loyal to the truth. ("Merit" apparently is important only in the context of reservations.) Such political processes are historically known to damage real traditions.

As I wrote over a decade ago in my book *The Eleven Pictures of Time*, those who attain or retain state power through religion are the worst enemies of that religion, whatever be the religion they claim to represent: Christianity, Islam, or Hinduism.

*(C.K. Raju is author of* Cultural Foundations of Mathematics. *He was professor of mathematics, and Editorial Fellow of the Project of History of Indian Science, Philosophy and Culture.)*

Indian Express ND 3/09/2014 P-10

# UGC doesn't get it

## It needs to learn from the IITs, not impose its outdated norms

SANJAY G. DHANDE

THE UGC had recently undertaken a review of the structure and duration of four-year programmes leading to a bachelors degree in the arts or sciences. Referring to the National Education Policy, it directed all academic institutions to follow the 10+2+3 model. However, by also sending this regulation to the IITs, the UGC has created a furore. The IITs are governed by the IIT Act and the IIT Council. The UGC's action is being seen as an intrusion on academic autonomy.

The policy framework for higher education has been guided by the reports of well-known commissions such as the Radhakrishnan Commission, the Kothari Commission. Unfortunately, most of these reports are reasonably old and do not address present-day issues. By imposing certain provisions on the dynamic IITs, the UGC is barking up the wrong tree.

The IITs have evolved a unique model of higher education thanks to the freedom and autonomy provided to them by the IIT Act. They have evolved a model of science education that is the envy of many international academic institutions. Science education includes the social sciences — economics is taught alongside physics, chemistry, mathematics and scientific computing. But what is so unique about these programmes? First, all students — engineering and science — are admitted through the same entrance process. The second unique aspect is the common core programme. A set of 10 courses in natural sciences, engineering sciences, technical arts, social sciences and humanities is taken by all students.

The IITs have a semester system. Their credit-based system awards a degree based on the acquisition of credits — not on the number of years completed. An intelligent student can register for more credits and graduate earlier than usual. This is not possible in a rigid paper- and year-based academic programme. Besides, the continuous evaluation method, course-based promotion, quizzes, tutorials and mid-semester examinations all add up to a very different, dynamic academic environment for both students and teachers.

For a vibrant academic environment, the curriculum must frequently be updated. In many IITs, the curriculum is evaluated every 10 years. The views of students, alumni and other stakeholders are taken into account during this process. The revised model is discussed extensively in the senate, and only then is it implemented. This is where Delhi University's FYUP went wrong. Unfortunately, the baby was thrown out with the bathwater.

The UGC has not understood this process of design and implementation in academic programmes. Rather than encouraging a vibrant academic environment, it operates with a license-permit-raj mindset. Instead, the UGC should follow the IIT model and extract lessons from it. It should actively help institutions that wish to implement dynamic, credit-based, semester-system programmes. Unfortunately, the UGC has never been an instrument of change. In fact, it is a hindrance to change. It does not provide academic guidance or support to institutions. It just issues diktats that are called regulations.

**The UGC has never been an instrument of change. In fact, it is a hindrance to change. It does not provide academic guidance or support to institutions. It just issues diktats.**

In the 1960s and '70s, the IITs used to have a five-year programme for both engineering and science degrees. Then, the engineering programme was redesigned to be completed in four years. Recently, the bachelors programme in science was also modified to four years, with a provision that a masters degree in science or engineering could be obtained by completing a fifth year. A student with a BSc in physics could get an MSc in physics, or even an MTech in electrical engineering, say, by completing a fifth year. Many options are available. In short, there is freedom for learning.

Let us now consider the question of jurisdiction. The IITs are governed by the IIT Act, 1961. The apex body for all IITs is the IIT Council. The format of degrees and their titles are approved by the council. However, curriculum details are designed and approved by the senate and board of governors. The UGC and AICTE chairmen are members of the IIT Council. As such, the UGC should only write to the IIT Council, which could, in turn, deliberate on this issue, an essentially academic matter.

The question is, what should the UGC do? It should invite IIT directors for a discussion, exchange views and evolve a policy that allows innovation in academics in India. The UGC must respect the academic strength of institutions and allow them to flourish. It should help universities compete at the international level. Most importantly, the UGC must not adopt a confrontational attitude. All of us want excellence in higher education — the IITs and the UGC should each be able to appreciate the other.

*The writer is former director, IIT, Kanpur, and member, UGC. Views are personal*

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Hindu ND 3/09/2014 P-19

KNOWLEDGE SECTOR

# Education gets a boost, but scepticism too rises

Smriti Kak Ramachandran

If the Modi government's assurance of fulfilling the promises made in the election manifesto is anything to go by, then the education sector, right from the primary level, is in for a revamp.

The manifesto describes education as the "most powerful tool" for the advancement of the nation and the "most potent weapon" to fight poverty.

Among the announcements of the Modi government in its first 100 days have been the intent to strengthen education for all, provide modern education for minorities, improve higher education through the setting up of new Indian Institutes of Technology and the Indian Institutes of Management and give a fillip to research. The government announced the scrapping of the Four-Year Undergraduate Programme of Delhi University, which had left the academic world divided, in the interests of students.

While all these announcements have been welcomed, the government's intent to revitalise and reorganise curriculum that will "make future generations proud of their culture, heritage and history is being received with scepticism.

Declarations made by non-governmental organisations such as the Shiksha Bachao Andolan Samiti about rewriting textbooks have put the government on the back foot as concerns are being expressed about the authenticity of the content it suggests for the books.

As the government tries to prevent the alleged "saffronisation" of education from dominating the discourse, the spotlight is also on issues that need immediate attention. For instance, with 6,06,191 teachers' posts lying vacant at the primary level both in the State sector and under the Sarva Shiksha Abhiyan, the government has its task cut out.

**CATCH 'EM YOUNG:** *The government's plan to revitalise the curriculum has caused concerns about saffronisation of textbooks.* – PHOTO: SANDEEP SAXENA

**TEACHER TRAINING IS AN AREA THAT NEEDS REFORMS AS DOES THE TEACHER-STUDENT RATIO**

Faculty shortage in institutes of higher learning, even the IITs, paucity of funds for research and disconnect between the industry and the education sector are the other areas that will need work on a war footing.

Training the teachers is yet another area that needs reforms as is the teacher-student ratio.

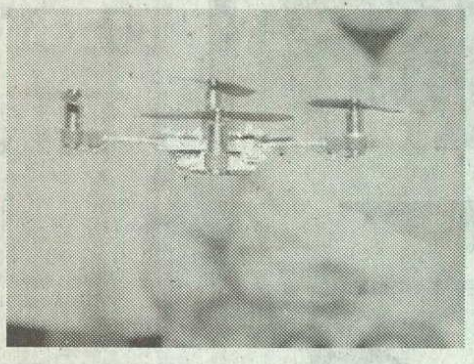
While the Prime Minister has spelt out the link between education for the youth and employment, skill development and education programmes to produce an employable workforce are also on the new government's agenda.

In July 2013, addressing students of Fergusson College in Pune as Chief Minister of Gujarat, he said: "A huge amount of Indian currency is spent to buy imported weapons for the security of the nation. Why? Friends, don't we have such engineers in the country, don't we have that mettle, or don't we have that talent that can make defence equipment on our own, which not only protect our nation but can also be sold to the world, and make the common man of India feel proud. In the engineering colleges of India, there is no subject of defence engineering."

India's growing need for skilled professionals will also have to be addressed as it is anticipated that five lakh skilled workers will be needed over the next 10 years in various sectors such as aviation, food processing, automobiles and healthcare; the percentage of skilled workers in India is just 6.7 per cent as compared to China's 50 per cent and European Union's 75 per cent.

Asian Age ND 3/09/2014 P-11

# GADGET GEEK ROBOTIC BIRDS THAT LOOK AND FLY LIKE REAL



**London:** A Dutch designer has come up with unique remote-controlled robotic birds that look and fly exactly like the real creatures and act as a deterrent to flocks of nuisance birds.

Brainchild of Nico Nijenhuis from Clear Flight Solutions in The Netherlands, the "Robirds" actually flap their wings to fly, and in a way that makes them remarkably similar to the real thing.

"Birds are beautiful creatures. However, if you work in aviation, waste management or agriculture, you will be aware that birds can be a very tough problem to deal with. Birds are not only a nuisance, they can also be a serious threat to safety in aviation," the creators wrote on their website.

The Robird is an environmentally-friendly solution for all such bird-related problems, they wrote. According to the creators, the Robird can fly in and around problem areas, encouraging nuisance birds to leave by exploiting the natural instinct of birds to avoid predators, particularly through silhouette and wing movement recognition, *Gizmag* reported. The creators claim that as the system is fully remote controlled by an operator on the ground, difficult birds can be persuaded to leave by singling them out with the Robird to chase them away. Targeted bird populations learn to avoid what they perceive as the active stalking grounds of a bird of prey and that bird numbers in the areas of Robird operation drop by 50 per cent or more, according to the creators.

The Robirds virtually eliminate the chances of nuisance bird flock habituation in the long term, the report said.

With a body length of up to 58 cm and a wingspan of 120 cm the peregrine falcon model can reach 80 km/h and is designed to act as a deterrent to birds of up to 3 kg. — *PTI*

# SMARTWATCH PROJECTS TIME, TEXTS, TWEETS ON HAND

**London:** A smartwatch which projects the time onto your hand and may even be able to show texts, Facebook updates and tweets is being developed. The watch, called Ritot, has raised over $1 million on crowdfunding website Indiegogo.

The waterproof device will use a digital light procession (DLP) matrix to beam the time onto the back of the wearer's hand. As well as the time, the watch will be able to show texts, Facebook updates, tweets and caller ID if hooked up to a smartphone, according to a description of the watch on Indiegogo. The projection disappears automatically in 10 seconds. While a working prototype has not been developed yet, the watch is expected to be ready for shipping by February next year, according to Sky News.

Currently, the development of the first components is under way, including an accelerometer, processor, the DLP matrix and battery. — *PTI*

Economic Times ND 3/09/2014 P-6

# B'lore Project may Hold Key to Solving Urban Mess

**BUMP UP** Bangalore, Swedish scientists jointly developing tool to harness big data for solving future problems

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**Bangalore:** If Bangalore's population goes up another 10%, how bad the city's water problem can get? Is there another garbage crisis in the making? These are some questions that often catch the city administrators flat footed.

Without coherent data or tools to process them quickly, officials often struggle to equip the city for the future. But that could change if teams of scientists from Bangalore and Sweden succeed in their mission.

Scientists at the Indian Institute of Management in Bangalore and the Stockholm Environment Institute are creating a data-driven solution, called the Bangalore Urban Metabolism Project (BUMP), to predict and help solve problems of the future.

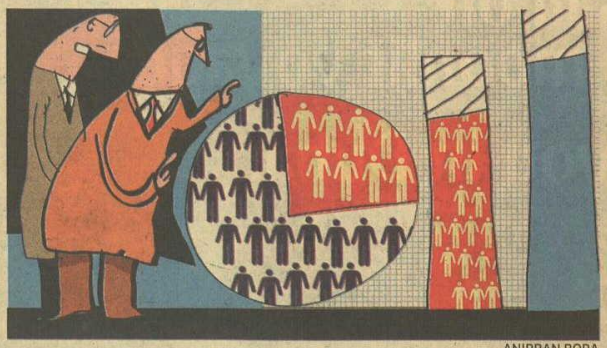
"Big data is useful, but only when contextualised," said Deepak Malghan, who is one of four key people behind the project. Malghan is an assistant professor at the centre for public policy in IIM-Bangalore.

Big data, or a set of complex and large data sets, are not only useful for enterprises but are also becoming increasingly useful in understanding growing cities and urban problems.

"Suppose you are trying to locate public toilets in the city, what kind of data might be useful? It turns out that carefully combining data from our water and electricity utilities can shed completely new light on this question," said Malghan, who has specialized in ecological economics.

Eric Kemp-Benedict and Vishal K Mehta from the Stockholm Environment Institute are the other two scientists behind the solution. The fourth person is a Web developer.

"The data framework that we are trying to build helps provide a deliberative platform for discussing alternative visions for the city," said Malghan who added that "data for data's sake" is of no use. "I like to use data as if people mattered," he said.



ANIRBAN BORA

Currently, the Web-based solution can take in data such as supply and demand and create various projections for the future. The team is updating BUMP with data from 2014. The portal is now being used by researchers, public agencies and urban planners.

"A lot of thought seems to have gone into it. It's just a matter of getting more data into the tool so that it becomes more useful for urban planning," said Nisha Thompson, the co-founder of DataMeet, a community for data science and open data enthusiasts.

The bigger goal of the project, which began in 2012, is to develop what is being called the metabolism framework using which consumption data will be compared with social, economic and demographic information and predict scenarios in the future. The plan is to take the model to other cities as well.

While some public agencies have started using data-based models to look into the future, getting government officials to adopt such tools remains a challenge. It is also difficult to source accurate data at the city level.

"Unlike national data, at the city level, the lack of consistent data becomes a challenge," said A Ravindra, chairman of the Centre for Sustainable Development. "For instance, if you are looking at water, your estimation should include a rigorous analysis of all sources available and not just surface water."

Planners also had little access to rigorous research or data tools, said Ravindra, who was previously chief secretary to the Karnataka government.