

## Newspaper Clips

### April 14, 2015

Times Of India ND 14/04/2015 P-5

# Come Saturday, IIT-D will show how cheap tech can simplify lives

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**New Delhi:** Right from an Android app to help partially disabled navigate a building without assistance to a device which lets the blind independently board public transport, several innovative products and solutions will be on display at IIT Delhi's open house on April 18.

Be it technology to convert carbon dioxide to fuel and beat global warming or an injectable hydrogel developed from mulberry silk cocoons designed to eliminate surgical solutions to back pain, the researchers, who have both creativity and scientific talent on their side, have put their best foot forward.

Funded by government agencies including the department of science and technology, some of these projects are on trial run or being used on pilot basis in various cities. For example, 'On Board' for the visually impaired is being used in Mumbai's BEST (Brihanmumbai Electric Supply and Transport) buses for a few weeks now, with 250 successful boardings.

High-impact and cheap, some of the gadgets comes at a fraction of the cost of existing technologies. A case-in-point is the injectable silk hydrogel developed from mulberry silk cocoon solution, which could impact millions suffering from back pain due to intervertebral disc degeneration.

"The present practice is to surgically make a metallic implant or fusion of the discs. A surgical procedure costs as much as Rs 10 lakh and is a temporary solution. The in-

## HIGH ON IMPACT, LOW ON COST

Combining creativity with a public spirit and scientific acumen, innovators have put forth several products on show at the IIT Delhi open house on April 18

### ON BOARD

**A bus identification system for visually impaired**

#### TECHNOLOGY

- Radio frequency-based system has two modules—for user and bus
- User initiates query for route number by pressing a switch
- Device speaks out numbers of all buses in vicinity
- User presses selection switch on



module immediately after hearing desired number

- Bus module responds with audio cues

**STATUS:** Installed on IIT Delhi and DU buses. Final pilot run taking place in Mumbai

### INTER-VERTEBRAL DISC TISSUE ENGINEERING

**Tissue-engineered disc with silk threads wrapped around silk hydrogels**

#### TECHNOLOGY

Controlled release of drug molecule from silk fibroin capsules will help disc cells produce tissue matrix that will help regenerate the tissue

**STATUS:** Awaiting approval for clinical trials



jectable hydrogel would be available at Rs 100 per disc, setting aside Rs 2,000-3,000 as doctor's fee. We are now waiting for approval of the clinical trials, but that will take 2-4 years. We're in touch with AIIMS though," Dr Sourabh Ghosh, department of textile technology, said.

By the time the silk hydrogel gets assimilated inside the body, the native tissue is regen-

### INALSI

**Indoor Navigation Access to Location Specific Information for partially handicapped to explore building spaces**

#### TECHNOLOGY

- An Android app. Hardware involves a user module (Android phone) and wall module
- A pedometer counts the steps the user takes
- Direction handling is done via infra-red signal receipt and transmission through Bluetooth
- Wall module periodically transmits IR signals in order to inform user module its location

**STATUS:** The prototype has been tested successfully at IIT Delhi campus



### CO2 CONVERSION TO FUEL

#### TECHNOLOGY

IIT-D has developed a reactor in the lab and converted CO2 to methane and some other value-added products.

While conversion to methane and other products is done from soluble CO2 in liquid medium, IIT-D engineers have used it directly in their reactor

**STATUS:** In dialogue with IOCL



erated. "This all-silk composite hydrogel system will be the first of its kind to provide both symptomatic and long term treatment for degenerative disc diseases," said Sumit Murabh, a research scholar on the project.

On Board is another low-cost project which is ready for technology transfer. The patent has been filed. According to Prof M Balakrishnan of the

department of computer science and engineering, "Visually impaired people avoid public transport. Right from knowing the bus route to availability of buses near them and boarding, they need assistance at every step. This system liberates them. The bus module costs just Rs 5,000-6,000 and the user device is for Rs 250. We will approach the government to make it mandatory use for public transport."

Hindustan Times ND 14/04/2015 P-10

# Irani forced to scrap move to monitor IITs, IIMs

**Brajesh Kumar**

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**NEW DELHI:** Centrally-funded higher-education institutions such as the IITs and IIMs that feared an encroachment on their autonomy may breathe easy for now after a proposal to increase the involvement of the human resource development ministry in their functioning was given a quiet burial.

A ministry bid to oversee every Memorandum of Understanding by these institutions with any other national or international institute was

scuttled after it developed cold feet over the legal tenability of such a move, sources said.

“Apart from the fact that central universities, IITs and NITs are vested with the power, through their respective acts, to enter into agreements with foreign institutions, it would simply be impossible for the ministry to vet every collaboration,” a faculty member at a top IIT said.

The proposal came during HRD minister Smriti Irani's conference with more than 200 vice-chancellors in September last year, where she directed all universities to send MoUs signed by them in



■ Smriti Irani

the last 25 years to the ministry.

A file that proposed all future MoUs be routed through the ministry was moved after the conference but was shelved following strong reservations.

The 18 functioning Indian Institutes of Technology alone collaborate academically with over 500 overseas institutions, in addition to the 100 other joint projects by other universities. The ministry not only lacked the wherewithal to go through every collaboration but would also end up impinging on the institute's autonomy granted by Parliament, sources said.

Senior academics said the proposed move went against the collaborative spirit of the Institute of Technology Act 1961, under which the premier institutions were set up.

HT.COM ND 14.04.15 P-6

# IIT-B alumni launch business forum

## SEEDING INNOVATION Education, healthcare and environment to be top priority

HT Correspondent

The Indian Institute of Technology- Bombay Alumni Association (IITBAA) launched a Global Business Forum (GBF), a platform to showcase technology and research by students, alumni and faculty members of the institute.

The project, which was inaugurated on Friday, will also facilitate collaboration with business organisations and government agencies. The forum will focus on technological innovations in eight special interest groups/sectors like education, healthcare, energy, environment, among others. (See below)

DB Pathak, educationist and professor at IIT-B; Ajit Ranade, president and chief economist at Aditya Birla Group and Ashank Desai, founder and former chairman of Mastek Limited were present at the launch at the Mumbai Press Club.

The project brings together 1000 plus IIT-B alumni working in 13 different countries, 10 state and central government ministries, 200 industry partners, students and faculty members.

Pathak said, "Through this forum, IITians from different countries will come together to address national issues and will create suitable business models. Development, now days, seems to have become the agenda only of the government. We need to change that. Our trilogy includes academia, industry and government (and they) need to align themselves to make it everyone's agenda. It should be a people's movement."

The initiative is endorsed by union defence minister Manohar Parrikar, who is also



■ The project brings together more than 1000 Alumni working in 13 countries.

FILE PHOTO

**DEVELOPMENT, HAS BECOME THE AGENDA ONLY OF THE GOVERNMENT. WE NEED TO CHANGE THAT TO MAKE IT EVERYONE'S AGENDA. IT SHOULD BE A PEOPLE'S MOVEMENT.**

DB PATHAK, IIT-B Professor

an IIT-B alumnus. Parrikar, in a statement issued to the press, said, "Even as India continues to face enormous challenges, even as many Indians still endure problems of a nation

in transition, we cannot lose sight of the new emerging India. Through such forums, we need to empower next generation of Indian entrepreneurs."

Experts said that involvement of industry is important in promoting innovations. Ranade said, "It is important to showcase these innovations to the world through GBF. Along with researchers, we will also involve vendors and suppliers."

Ranade added, "Many of India's developmental challenges can be addressed through innovation and enterprise but it would require a new business model based upon improved dialogues between education sector, government and the market place."

### HIGHLIGHTS

- GBF will organise a convention every year. This year, it will be held between October 16 and 18 at Goa.
- It will be attended by 1100 IIT-B alumni currently working as researchers, policy makers, bureaucrats, investors, entrepreneurs, central cabinet ministers and chief ministers.
- The forum will shortlist 10 start-ups for every special interest group which will be given assistance.
- The project will give education, infrastructure and healthcare as top priority.

Asian Age ND 14/04/2015 P-3

# Requirement norms may be cut

**NITIN MAHAJAN**  
NEW DELHI, APRIL 13

In a move that could help major expansion in the education sector, the Narendra Modi government is likely to reduce mandatory land requirement norms for Central universities, IITs, IIMs and other educational institutes.

Sources said that the move is likely to be pushed by the Union human resource development ministry in the next

## EDUCATION BODY

### LAND

few weeks and is being done in an effort to reduce cost escalation and land acquisition troubles in setting up such institutes.

The step follows recent recommendation made by a committee appointed by the ministry which suggested cutting down the land requirement for educational institutes by up to 95 per cent. To over-

come land constraints for educational institutes the committee, headed by higher education secretary S.N. Mohanty and comprising other experts, urged the government to go in for vertical growth instead of horizontal sprawls, and reduce cost and land acquisition hassles. The committee was set up by the HRD ministry about six months ago to suggest ways for rationalising land requirement for educational institutes.

The committee has proposed reducing mandatory land requirement for an Indian Institute of Management which currently stands at 200 acres to 10 acres of land in urban areas and between 50 and 60 acres in non-urban areas.

Similarly, it proposed Indian Institutes of Technology, National Institutes of Technology (NITs), and Central university can be opened in 260 acres, 150 acres and 250 acres respectively.

Hindustan Times ND 14/04/2015 P-7

# AICTE to review DU colleges with B.Tech courses

**Press Trust of India**

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**NEW DELHI:** In a breather for 27 DU colleges that have been seeking AICTE nod for running B.Tech courses, the regulator has agreed to take a fresh view of the case.

"It was agreed at a meeting between Delhi University and AICTE officials that the AICTE will take a lenient view and examine the case from a fresh perspective," highly-placed sources said.

"AICTE is likely to conduct

a fresh inspection of the colleges and consider it as a special case," they added.

In a fresh twist to the stand-off between DU V-C and the HRD ministry over the introduction of FYUP, AICTE had last week asked the colleges to submit an affidavit within "six hours" through which they were asked to promise they would address the shortcomings of faculty and infrastructure within the next six months.

The principals found the deadline to be "impractical"

and, as a result, only about six colleges are understood to have submitted the same.

"After the six-hour deadline passed, DU had approached AICTE, explaining the difficulties in adhering to the directive. The varsity was assured that non-submission of the affidavit would not impact the procedure of granting the nod in this case," sources said.

B.Tech programmes in Computer Science, Electronics, Food Technology, Instrumentation Electronics and Polymer Science were

launched as part of the Four-Year Undergraduate Programme (FYUP), which was last year scrapped following UGC intervention. UGC had, however, directed DU to continue with these five B.Tech programmes only for the benefit of the over 6,000 students admitted in the academic year 2013-2014. The colleges were asked to seek approval from the All India Council for Technical Education (AICTE), the apex advisory body regulating technical education in the country.

Times Of India ND 14/04/2015 P-19

# Nasa offers \$18k to volunteers for 70-day 'bed rest'

Lamiat Sabin

© Louie Psihoyos/Corbis

Nasa is offering \$18,000 to human lab rats who agree to stay in bed for 10 weeks during a test lasting a total of more than three months. The ones selected by the space agency will spend 70 days being prodded and poked by scientists who would gauge how effective exercise would be for astronauts who lose muscle, cardiovascular and bone function while in zero-gravity conditions.

Test subjects — split into exercising and non-exercising groups — would first spend two to three weeks moving around and doing normal everyday things inside the "bed rest facility". Then they would spend 10 weeks lying in a bed with their body tilted slightly backwards with their head down and feet up in the in the Nasa Flight Analog Research Unit in Houston, Texas.

Back and neck pain from constant lying down is often cited by test subjects. Also, the only way to relieve and clean oneself is by using a plastic bedpan and washing with a hand-held shower-head while still horizontal.

Reading, studying, using



**SPACE TEST**

computers and doing activities that do not involve much movement are permitted, however there is the risk of aching arms and chronic sleepiness from remaining in one position for so long.

The next 14 days would entail "reconditioning activities" — squatting, cycling and walking while still lying down — and regular tests to see how regular exercises assist the body in adapting back to normal.

Nasa is looking for healthy participants who will have to pass tough fitness tests, as they have to be of similar physical condition to an astronaut. Candidates also have to be American citizens or residents. Nice, but mind and neck-numbing, work — if you can get it. THE INDEPENDENT

## IISc develops alarm to save water waste

<http://www.bangaloremirror.com/Bangalore/Others/IISc-develops-alarm-to-save-water-waste/articleshow/46912701.cms>

Researchers from the Indian Institute of Science (IISc) have developed a prototype of a monitoring system that can help identify water leaks and raise alarms. This is a significant development because, according to a 2013 UNICEF survey, India has only four per cent of the fresh water resources of the world for 16 per cent of the world population.

Water loss during distribution is considered a major waste. Measurements of per capita water availability indicate that India is currently water-stressed; future projections indicate that India may have water scarcity by year 2050. In this scenario, leakages in the water distribution system can have a huge impact on water availability.

"It has been observed that a large amount of water loss happens close to the source of purified water, even before the distribution network," says study author Vignesh Kudva, a graduate student at IISc's Department of Electronic Systems Engineering.

The IISc research team made a prototype to measure inflow and outflow of water for a medium-sized campus. The test-bed was the water distribution system in a part of the IISc campus. Water supplied from water distribution authority is stored in ground level reservoirs and overhead tanks and is further distributed to the rest of the campus. Inflow of water can be measured at the point of water entry inside the campus.

However, measuring outflow at all the output pipes can be challenging. "Many pipeline systems are underground. It is a tedious and costly affair to identify the correct places, dig and install sensors at the correct locations," Vignesh explains.

The alternative to this is to install flow measurement sensors at the input and then measure water volume in the water reservoirs.

The volume of water inside the reservoir would give the accumulated difference between inflow and outflow of water. "We can then calculate the outflow," said Kudva.

The sensors also need to be made tamper proof to avoid accidental tampering or intentional theft. "The best way to do this is to install monitoring system components at the time new installations are made," Kudva says.

The sensors consume very little power and the estimated battery life is about two years.

Researchers used EPANET, the US Environmental Protection Agency's modelling software for modelling of water supply distribution system, to model their test-bed water distribution system.

Then they used this model to analyse the flow and water volume data. The reservoir water volume graph shows a typical pattern according to inflow and usage of water. Any anomaly in this pattern could be used to raise an alarm. Co-author Vignesh informed, "For example, during the research period, we realised that the water volume inside a certain reservoir had gone down to zero in a very short interval. The programmed alarm system sent a warning signal. Investigations pointed to a tap that was accidentally kept open". This system's advantage is that it could be constructed from off the shelf, not very expensive components.

## IIT-Jodhpur students call of stir

[http://www.business-standard.com/article/pti-stories/iit-jodhpur-students-call-of-stir-115041200766\\_1.html](http://www.business-standard.com/article/pti-stories/iit-jodhpur-students-call-of-stir-115041200766_1.html)

Agitating students of [IIT Jodhpur](#) today decided to call of their two-week long stir demanding removal of the institute's director C V R Muthy for his "dictatorial attitude", after a committee formed by the Centre assured to look into all issues.

Academic and administrative activities will resume in the institute from tomorrow, two days after the Union HRD Ministry appointed 3-member committee submitted its report to the government.

"In respect of committee's request to allow normalcy to return to the institute, we are ending the blockade of administrative activities, and resuming academic activities from Monday," the students said.

But they have decided to continue their protest in a symbolic manner until their demands are completely met.

They said that even though the director was a member of the committee that visited IIT Jodhpur on Friday, they believe that the committee has taken into consideration all the issues and demands in their report and has forwarded it to the concerned authorities.

Keeping with the assurance of the committee, headed by member of Board of Governors (BoG) of IIT Jodhpur D R Mehta, to call a meeting of the BoG in two weeks' time to discuss all contentious issues, the students have requested the intimation of the date of the meeting by tomorrow.

They said the meeting of the BoG with the students is of utmost urgency as it will be a major step towards a better IIT Jodhpur and would provide an opportunity to talk about unanswered issues raised with both the BoG and administration in past one and a half months.

The students have been agitating against a recently-passed code of conduct, which prevents them from speaking to media about the institute and "on controversial topics".

They have warned that any delay in resolving issues will not only upset the momentum of required actions, but also be a betrayal with the student community.

Later they took out a march from IIT campus wearing black clothes as a gesture of the reiteration of their vow to continue their protest against the Director.

## IIT-Roorkee catalyst to curb Kanpur tannery wastes

[http://www.business-standard.com/article/sme/iit-roorkee-catalyst-to-curb-kanpur-tannery-wastes-115041301052\\_1.html](http://www.business-standard.com/article/sme/iit-roorkee-catalyst-to-curb-kanpur-tannery-wastes-115041301052_1.html)

With over 700 tanneries facing an uncertain future for spewing pollutants into the river Ganga at Kanpur, Indian Institute of Technology (IIT)-Roorkee has come up with a solution to curb their toxic wastes.

Under a pilot project, [IIT-Roorkee](#) has developed a catalyst which can be used in the redesigned chambers to bring down the level of TDS (dissolved solids) from 18,000-25,000 parts per million (PPM) to 1,000-1,500 PPM, which is well under the permissible limit.

The pilot project has been given to IIT-Roorkee by a consortium of five top tanneries of Kanpur, which includes Mirza International, Asia's biggest tannery, says Prof Shishir Sinha of the department of chemical engineering at IIT-Roorkee. Super House, Model Exim, Kingston and Allen Cooper are the other four tanneries in the consortium.

"We have successfully launched a pilot project at [Kanpur](#) to curb pollution of tanneries by developing a catalyst which can be used in redesigned chambers to bring down the level of TDS," said Sinha. He refused to identify the catalyst, saying that IIT-Roorkee will soon apply for a patent for it. "But I can say that this project has been working very well for over six months now," said Sinha.

Similarly, IIT-Roorkee is also working on a solution to bring down the level of hazardous chrome, which is very high in the wastes discharged by tanneries. "We are also very close to finding a final solution to the chrome problem," said Sinha.

The National Green Tribunal had recently warned of complete closure of over 700 tanneries at Kanpur, terming them among the highest sources of pollution in the Ganga. The tribunal had also stated that if effective steps are not taken, the tanneries would be closed.

"Since thousands of people will be affected by the closure of tanneries, we will do everything to find a lasting solution to the problem," said Sinha.



## Babus, RSS, BJP: One-time Modi favourite Smriti Irani is pissing everyone off

<http://www.firstpost.com/politics/babus-rss-bjp-one-time-modi-favourite-smriti-irani-is-pissing-everyone-off-2194061.html>

The babus are upset, the RSS is seething and the BJP isn't in any mood to defend her.

Smriti Irani, once seen as a favourite of Prime Minister [Narendra Modi](#) after being given the charge of the Human Resource Development ministry may be on her way out or at least see her wings clipped, if the latest issue of the *Outlook* is to be believed.

Irani is on the cover of this week's edition of the magazine. She has been accused of rubbing colleagues in the BJP up the wrong way, failing to understand the RSS's demands when it comes to the education sector and being unable to retain key administrative officials in the ministry.

Irani's tenure hasn't lacked for controversy. Among the controversies surrounding Irani are her educational qualifications, the decision to celebrate 'good governance day' instead of Christmas day in CBSE schools, respected nuclear scientist Anil Kakodkar threatening to quit from the board of IIT-B directors and dropping German as a third language in Kendriya Vidyalayas.



Is Irani headed out? PTI image

But none of these seem to have tempered the manner in which she deals with her ministry and the job at hand. Reportedly wary and distrustful of bureaucrats, Irani has reportedly been known to humiliate and put them down in ways that have resulted in more than one of them seeking transfers.

So while a vice chancellor of a central university is quoted as saying those trying to suggest ideas to Irani could be told "this is not your classroom, this is my ministry", a senior ministry official speaks about how she flung a file at additional secretary-rank official only to apologise later, and promise to 'restore his honour'.

An earlier [India Today article](#) had also reported that Irani had once told a top official that although she had less education, she had more brains than him, accused another of selling the sovereignty of the nation and told an official at a meeting of an academic body 'I am the council'.

Not surprisingly the official who reportedly had a file thrown at him reportedly preferred to opt for a transfer rather than have his honour restored, and other bureaucrats have been cited as wanting to be repatriated rather than continue to have to deal with her.

But despite bragging of long standing third generation ties with the RSS, the organisation [reportedly has no love](#) lost for her and they believe she will be out of her position "very soon".

Apart from believing that she doesn't really understand the workings of the ministry or their concerns, the RSS is not very happy with the manner in which Kakodkar was treated and believe she's "rude, oppressive and bossy". They have reportedly taken their concerns to the Prime Minister and party president Amit Shah.

However, there's unlikely too much sympathy coming from Shah either given the minister reportedly said that she had been excluded from the party's national executive because the Prime Minister was out of town. Irani, whose prime weapon against all opponents so far has been the fact that she enjoys the Prime Minister's confidence may now have the scales tipped against her.

According to the [Outlook piece by Saba Naqvi](#), the BJP has its own problems with the minister. Senior leaders are unhappy with the manner in which she has been treating senior leadership, including not standing to greet [Rajnath Singh](#), not responding to requests for appointments and making people who do meet her feel "uncomfortable".

One woman BJP leader said that when Irani was the subject of a sexist barb from JD(U) leader Sharad Yadav they would have ordinarily commiserated and rallied around her.

"But the problem is that she does not seem to like most of us, so some of us would not dare to commiserate with her," the leader said.

For her part, Irani has responded to the Outlook cover story in a tweet:

Irrespective of whether she finds herself censured by the prime minister or not as predicted, it remains to be seen whether the assessment of Irani improves for the better in the coming days.

"If my work revolves around what kind of publicity I will get, then I will not be a constructive minister," she told *India Today* in December. The government will be hoping she can live up to those words.