

Newspaper Clips December 23, 2015

IISc makes big impact on small world of chips; devised a method to lay circuits in electronic chips

<http://economictimes.indiatimes.com/tech/hardware/iisc-makes-big-impact-on-small-world-of-chips-devised-a-method-to-lay-circuits-in-electronic-chips/articleshow/50289223.cms>

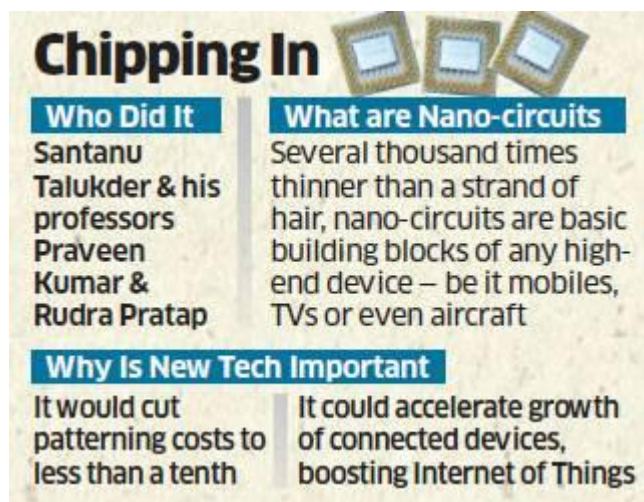
BENGALURU: Scientists at the Indian Institute of Science (IISc) have devised a method to lay circuits in electronic chips that is both cost-effective and energy-efficient, rare in a country known mainly for its software prowess.


A team of three — Ph D candidate Santanu Talukder and his professors Praveen Kumar and Rudra Pratap — found a way to etch nano-circuits on silicon chips at room temperature, which could potentially accelerate research efforts at the fundamental chip level. Talukder began his doctoral research in 2012.

Nano-circuits, several thousand times thinner than a strand of hair, are the basic building blocks of any high-end device — be it mobile phones, television sets or even aircraft.

Experts say the new technology, once in the market, could accelerate the growth of connected devices, which are dependent on lower power consumption and faster speeds.

"This is a game-changer because this makes the whole patterning technique affordable to a larger audience," said Pratap, chairperson of the Centre for Nano Science and Engineering, IISc, Bengaluru. "Most universities cannot even afford the available techniques for the sake of research."



Chipping In 

Who Did It Santanu Talukder & his professors Praveen Kumar & Rudra Pratap	What are Nano-circuits Several thousand times thinner than a strand of hair, nano-circuits are basic building blocks of any high-end device – be it mobiles, TVs or even aircraft
Why Is New Tech Important	
It would cut patterning costs to less than a tenth	It could accelerate growth of connected devices, boosting Internet of Things

Currently, electric circuits are etched using two methods: Electron-beam lithography and photolithography. But these, which came about during the semiconductor revolution in the 1960s, etch the circuit on polymer. The IISc team has devised a way to do the same on metal, making it easier to etch. The researchers outlined their technology in a paper published online by international scientific journal Nature. com on December 4.

"Patterning is one of the hardest tasks. The method we have developed could bring down the cost by a few millions on a single run. Moreover, it is energy-efficient and reduces the operating cost too," said Pratap.

LOWER PATTERNING COST

The team pegs the current patterning cost at Rs 2.5-3 crore, which they expect could drop to Rs 10-25 lakh with their technology. Pratap estimated that the completed product will be in the market in two years.

"We certainly want to market it," said Kumar. "But before that, we want to make this more user-friendly and develop the technology further. We are also looking for funding from the government."

Currently, companies such as Intel, Qualcomm and MediaTek incorporate nano-circuits in the chips they manufacture. All large companies are researching to pack more capacity into the chips even as they aim to reduce chip size. This new pattern of drawing circuits could give them some time until the former technology matures.

The team filed for a patent in December 2014. "The science is all sorted out, but the tech and engineering needs to be done," said Pratap.

"Nano-electronics is a very promising field," said Chinnu Senthilkumar, chief technology officer at Exfinity Ventures, the venture capital firm floated by ex-Infosys veterans Mohandas Pai and V Balakrishnan. "If this method actually works, it can be a game-changer in the Internet of Things industry due to the industry's need for low power and small form requirements."

Senthilkumar holds nine patents in the domain of semiconductors and was formerly employed with Intel, Texas Instruments and SanDisk.

Times Of India ND 23/12/2015 P-06

Secondary particles pose bigger threat: IIT-K report

CHARTING THE GREEN COURSE
DELIBERATIONS AT EPCA MEETING ON TUESDAY



Manufacturers have the technology and type approval for transition to BS-IV from BS-III. Could lead to 80% reduction in PM emissions from trucks.

- BS-IV fuel by April 2016, except to a few border areas in the Northeast and a few other states
- Vehicle manufacturers say they can move to BS-IV only by 2017 and BS-VI by 2023
- Heavy diesel vehicle

Petroleum and natural gas ministry to supply BS-VI fuel by 2016

- EPCA pushes for BS-IV transition in heavy diesel vehicle segment as early as possible
- Considers exempting CNG and light commercial vehicles from paying environment compensation charge (ECC)
- Two-wheeler manufacturers can't move to BS-IV right away

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New Delhi: The national capital is facing a more serious pollution crisis from secondary particles, in addition to primary particles (PM2.5) being emitted from various sources like transport, waste burning or dust. The recent draft IIT Kanpur report has flagged that secondary particles which are formed from chemical reactions between gases like sulphur dioxide (SO2) and oxides of nitrogen (NOx) and not emitted directly from a particular source pose a larger problem.

In a meeting with vehicle manufacturers and Union ministers of transport and petroleum on Tuesday, members of Environment Pollution Control Authority (EPCA)

highlighted how high levels of secondary particles in Delhi's air makes strict control of diesel emissions even more pertinent.

About a quarter of the PM2.5 in Delhi is from secondary particles, according to experts and the theory that road dust is the worst source may not be true as it doesn't emit gases.

Sources told TOI that EPCA raised the issue of polycyclic aromatic hydrocarbons (PAHs), a carcinogen present in Delhi's air, when the Society of Indian Automobile Manufacturers (SIAM) raised objections to diesel being singled out for its pollution contribution. Since NOx is mainly a contribution of diesel emissions, experts said vehicular emissions are responsible for a major portion of the secondary particles in Delhi. Diesel fumes are also responsible for PAH in the city's air.

Government sources said they discussed the issue of secondary particles found by IIT Kanpur. "We have requested the IIT Kanpur team to give us a source-wise break up of what could be causing these secondary particles. Is it mainly vehicles or thermal plants or something else? The gases interact with each other, crystallize and then form such secondary particles," he said. The draft report has been submitted to the Supreme Court.

There were also deliberations on the timeline for introduction of BS-IV and BS-VI. While the MoPNG officials pre-

sented said they will be able to supply BS-IV fuel by April 2016 in the entire country except a few hilly and border states, and BS-VI fuel by 2020, SIAM said they will not be able to introduce BS-IV before 2017 and BS-VI before 2023.

EPCA was of the view that India can transition to BS-VI directly skipping BS-V also. But technology companies such as Bosch said there are technology issues with transitioning to BS-VI earlier. SIAM's view is to move to BS-V to 2020 and BS-VI to 2023. EPCA members asked manufacturers if it is so difficult to transition to BS-VI by 2020, why can't diesel be stopped altogether in the passenger vehicle category.

As for moving to BS-IV in the heavy vehicle category, all three major manufacturers said they had type approval to manufacture. EPCA members said there can be a reduction of 80% in PM emissions from heavy diesel vehicles once they transition to BS-IV. As of now not a single BS-IV heavy vehicle has been registered in Delhi despite the fuel being available.

SIAM submitted that it is for a fleet renewal policy where incentives are given for scrapping of old vehicles that are still on BS-III or BS-II norms. But EPCA, headed by former director (enforcement) Bhure Lal said they have a strong objection to the proposal. "We are still 15 years behind Europe. There is no point in scrapping the fleet and then people ending up new vehicles of the older technology. We don't support any scrapping unless new norms are in place," a member said at the meeting.



Economic Times ND 22/12/2015 P-16

Cos Line Up with Job Offers at Newer IITs

AN UPWARD TREND New IITs at Hyderabad, Gandhinagar, Indore, Ropar and Mandi report 10%-20% rise in the average salaries being offered at ₹10-12 lakh

Sreeradha D Basu & Prachi Verma Dadhwal

Mumbai | New Delhi: Placements at newer Indian Institutes of Technology have got off to a strong start, with IITs in places such as Hyderabad, Gandhinagar, Indore, Ropar and Mandi reporting 10%-20% rise in the average salaries being offered at ₹10-12 lakh.

"At the undergraduate level, most companies don't differentiate between older and newer IITs in terms of salary. So the average salary we get is comparable to that of the older IITs and our numbers are improving year-on-year," said B Venkatesham, faculty-in-charge for training and placement cell at IIT Hyderabad.

Almost all these institutes ET spoke to said that compared to some time last year, a higher percentage of their students have already got job offers.

IIT Hyderabad, which started placements on December 1, has placed around 44% of its overall

batch size of 400. Among others, which started their placement process earlier, IIT Mandi has placed 65% of its students while Ropar and Indore IITs have placed over 70% of their students.

Sources involved with the placement process say that as brand value and awareness among the recruiter community increases, placements will continue to see an upward trend.

While newer IITs don't get as many of the highest-paying recruiters as the older IITs, significantly smaller batch sizes help them maintain average salaries at comparable levels and also to get job offers for almost all their students. "Since last three years, we have been achieving 100% placements. Also since last two years, the gap is narrowing down every year compared to old IITs," said Nirmala Menon, assistant professor at IIT Indore.

Samar Agnihotri, assistant professor at School of Computing and Electrical Engineering, IIT Mandi, said the average salary offered to its students have gone up to ₹11-12

ON HIRING
We will be hiring around 50 graduate engineers from the new IITs compared to 40 from the old IITs

RAJESHWAR TRIPATHI
Chief people officer, auto & farm sector, at Mahindra and Mahindra

lakh this year from ₹9 lakh last year. "The gap in salaries is coming down with the same set of companies that have so far been confined to old IITs also making visit to our campus. For next year, we are optimistic we'll be sharing even more companies with old IITs. The interest has started building up since last two years," he said.

First-timers on the campus at IIT Mandi this year included Flipkart, eBay and Mahindra & Mahindra. Online shopping portals and star-

tups were among the most aggressive recruiters here.

At IIT Ropar, the average salary has seen a jump to ₹12 lakh. Amazon paid the highest salary on campus and about one-third of the recruiters who have visited so far are first-timers. This included startups such as Prado, Axtria and Saavn.

At IIT Gandhinagar, where close to 200 students are participating in placements, Texas Instruments, Samsung, HSBC, Wipro, Arvind Infrastructure, Innoplexus and Virtusa are among the first-timers.

At IIT Hyderabad, the highest package so far is ₹35 lakh from an IT company, a near 21% increase over last year's top offer of ₹29 lakh. The institute has seen around six international offers from the likes of Yahoo Japan, Hikari Tsushin and Murata Electronics. Around 52 companies have made close to 170 offers at the institute. The debutantes here included DE Shaw, Dewanta, Wells Fargo, Bookmyshow.com and Entransys.

Several companies have made a large number of offers in the newer

IITs. At IIT Hyderabad, for instance, 67 companies have made more than 12 offers each, led by Entransys that made 16 offers. Flipkart and eBay have made the most offers at Mandi while at IIT Indore, Steelwedge, Microsoft, Mahindra and Eicher have made more than 10 offers each. Mahindra & Mahindra is visiting many of the newer IITs including Hyderabad, Gandhinagar, Indore, Jodhpur, Patna, Mandi, Ropar and Bhubaneswar, besides established IITs.

"We will be hiring around 50 graduate engineers from the new IITs compared to 40 from the old IITs," said Rajeshwar Tripathi, chief people officer, auto & farm sector, at M&M. "We are offering roles predominantly in R&D, product development and other critical areas," he said.

Ravi Mohan Prasad, faculty-in-charge of training and placement cell at IIT Ropar, said, "Apart from the entire computer science and engineering batch, about 40% of our mechanical engineering students have also received core engineering offers."

Strong Demand for New IIT Grads

Newer IITs, including Hyderabad, Gandhinagar, Indore, Ropar and Mandi, are seeing a 10-20% jump in average salaries to ₹10-12 lakh during placements this year

Institutes have managed to place a larger chunk of their batch so far compared to same time last year

At IIT Hyderabad, which started placements three weeks ago, 44% of its overall batch have got jobs

At IITs such as Mandi, Ropar and Indore, which started placements earlier, 65-70% have been placed

First-timers across various campuses included the likes of HSBC, Texas Instruments, Wells Fargo, Innoplexus and Practo

At IIT Indore, Steelwedge, Microsoft, Mahindra and Eicher have made more than 10 offers each

At IIT Hyderabad, around 6-7 companies have made more than 12 offers each. Flipkart and eBay have made the most offers at Mandi

At the undergraduate level, most companies don't differentiate between older and newer IITs in terms of salary. So the average salary we get is comparable to that of the older IITs and our numbers are improving year-on-year

B Venkatesham
Faculty-in-charge for training and placement cell at IIT Hyderabad

In Last 4 years 139 Universities established in India: HRD Minister Smriti Zubin Irani

<http://indiaeducationdiary.in/Shownews.asp?newsid=36951>

Report by India Education bureau, New Delhi: During the last three years (2012, 2013 and 2014) and current year, 139 Universities (2 Central Universities, 32 State Universities, 104 Private Universities and 1 Deemed to be University) have been established in the Country. The State-wise details of these Universities are as under:

Central University (2): Uttar Pradesh-1 and Bihar-1.

State University (32): Assam-2, Delhi-1, Gujarat-2, Haryana-4, Kerala-3, Madhya Pradesh-1, Punjab-1, Rajasthan-6, Telangana-2, Tamil Nadu-3, Uttar Pradesh-1 and West Bengal-6.

Private University (104): Arunachal Pradesh-7, Assam-2, Chhatisgarh-3, Gujarat-9, Haryana-12, Himachal Pradesh-5, Jharkhand-2, Karnataka-10, Maharashtra-4, Madhya Pradesh-5, Manipur-1, Odisha-1, Punjab-8, Rajasthan-15, Sikkim-1, Uttar Pradesh-7, Uttarakhand-5 and West Bengal-7.

Deemed to be University (1): Haryana-1.

Government has not granted permission to private universities to collaborate with foreign institutions.

Degrees awarded with due permission of University Grants Commission (UGC) by approved Private Universities are valid for all purposes including appointments in Government services in the country.

This information was given by the Union Human Resource Development Minister, Smt. Smriti Zubin Irani yesterday in a written reply to the Lok Sabha question.

From illustrious students, IIT now moves to award winning campuses

One has heard of IITians winning accolades for their work the world over, but trust them to have a campus that is just as good. The IIT campus buildings in Gandhinagar, Gujarat have bagged the top prize for being earthquake resistant by Housing and Urban Development Corporation Limited (HUDCO). And the credit goes to Professor Sudhir K Jain, director of the institute and an expert in earthquake engineering.

The campus in Palaj, Gandhinagar won the first prize in the category of “Cost Effective Rural/Urban Housing Including Disaster Resistant Housing” at the HUDCO Design Awards 2015. The notable innovation in earthquake resistant building technology used in constructing the staff housing and student hostels at the institute’s campus is the first large-scale application of earthquake-resistant “confined masonry construction” in India in residential buildings.



[#Best campus #iit #iit gandhinagar](#)

Prof Jain says, “IIT-Gn aspires to become an educational institution of world stature and lays strong focus on innovation. Development of our 400-acre campus on the banks of the Sabarmati in Gandhinagar provided us great opportunities to innovate. The HUDCO Award is recognition of one of the innovations in campus development. Confined masonry construction has the potential to transform earthquake-resistant construction in India.” In addition to improved earthquake resistance, confined masonry technology also provides significant cost savings.



The master plan envisages a compact, walkable and low energy use campus. Some of the sustainable features of the campus infrastructure include alternative and sustainable strategies covering for rainwater harvesting, grey-water reuse in flushing and root zone treatment plant for sewage. The buildings at the campus focus on being low rise and high density with safety standards and GRIHA rating. The fly ash brick used for the construction was manufactured at the construction site itself.

HUDCO instituted these design awards in 2012 to give recognition and felicitate innovative ideas and initiatives that contribute to make Indian cities inclusive, livable and environmentally sustainable.

Guess we can take out a leaf from this IIT's book!

DILEMMAS

Campuses draw up checklist for startup recruiters, blacklist some

There is no foolproof mechanism to identify a promising startup and one that might fail a year down the line. Taking a cue from the heavy layoffs across some companies this year, top institutes have come up with subjective ways of collating, collecting and analysing information about companies that are approaching them for final placements this year.

As a member of the IIM Rohtak placement committee puts it, "Startup businesses generally offer high packages to attract good talent. That is the premium they pay to compete with the bigger brands."

What, however, is the best way to evaluate the health of any startup company? At IIM Calcutta, for instance, Professor Rajiv Kumar, chairperson, career development and placement office, informs that placement officials have a checklist for startups willing to recruit

from campus. "The job title might say head of strategy or AVP strategy for instance, but the content of the role and job description is important. Also, we check the expected number of positions the company is willing to offer to IIM Calcutta graduates. If a company, for instance, wants to offer four or five roles instead of two or three we get to know how robust the company's growth is.

We also look at the profile of people who are working in the startup. For instance, we're confident about companies that have people who have exited big firms to join them.

We look at the compensation a firm is offering and within that we look at the fixed component vis-à-vis variable or stock options."

At IIT Madras, Dr Babu Viswanathan, training and placement advisor says, "During the general body meeting with students before the placement season begins, I do tell them about the risks of joining startups and incidents we have had in the past."

Babu also informs that placement committee faculty members from all IITs meet once before the placement season to make sure that companies don't divide and conquer. The committee also blacklists companies that they feel

are not suitable for recruiting graduates from all IITs.

Padmaja Ruparel, co-founder and president, Indian Angel Network, advises students to assess the source of funding and financial health of the company before joining a startup. "If the company is hiring, they need to be able to pay salaries. Joining well funded companies reduces early job risks. One must also do a quick check whether the companies have raised any funding," she says.

Talking to existing employees and peers to get an insight into the company provides more colour to one's research, she adds.

Indian companies need to list on the government's Registrar of Companies (ROC) and file their financial statements. Ruparel asks graduates to register at the ROC website to assess the company's growth potential.

- Rozelle Laha



Panjab Kesari ND 23/12/2015 P-03

तकनीक में रेलवे को मिला आईआईटी का साथ

नई दिल्ली, (ब्यूरो): कोहरे के आगे घुटने टेक चुके रेल मंत्रालय को आईआईटी से मदद की दरकार है। इसी के मद्देनजर मंगलवार को रेल मंत्री सुरेश प्रभु की मौजूदगी में आईआईटी और रेल मंत्रालय के बीच 'सेंटर फॉर रेलवे रिसर्च' स्थापित करने के लिए एमओयू साइन किए गए। इस दौरान रेल राज्य मंत्री मनोज सिन्हा ने कहा कि ठंड के मौसम में पूरा उत्तर भारत साधन विहीन हो जाता है। कोहरे की वजह से ट्रेनें लगभग ठप हो जाती हैं। कोहरे से लड़ने के लिए रेलवे के पास अब तक कोई कारगर तकनीक नहीं है।

ऐसे में आईआईटी के तकनीक विशेषज्ञों को इस विषय में रिसर्च करने की जरूरत है। रेलमंत्री सुरेश प्रभु ने कहा कि बजट भाषण के अनुरूप 'सेंटर फॉर रेलवे रिसर्च' स्थापित किए जा रहे हैं। रेल नेटवर्क के तकनीकी विकास में यह सेंटर अहम भूमिका निभाएगा। रेलवे बोर्ड के चेयरमैन एके मित्तल ने कहा कि 1853 में रेलवे की शुरुआत के वक्त यूरोप के बराबर की तकनीक भारत में भी थी। लेकिन वक्त के साथ हम पिछड़ते चले गए। उन्होंने कहा कि रेलवे को आत्मनिर्भर बनाने के लिए देश में ही नई और उन्नत तकनीकें विकसित करनी होंगी।

Pioneer ND 23/12/2015 P-05

RAILWAYS SIGN IIT PACTS FOR RESEARCH

New Delhi: The Railways on Tuesday signed MoUs with Indian Institute of Technology (IIT) — Kanpur, Madras and Roorkee, for setting up the Centres of Railway Research. "I am confident that these Centres for Railway Research would contribute immensely towards providing solutions for utilization of Railways' assets in a more cost effective manner," Railway Minister Suresh Prabhu said after signing of the MoU with IITs. The MoU was signed by representatives from IITs and railways amid the presence of senior officials from both sides.

Union Minister of Human Resource Development Smt. Smriti Zubin Irani Launched All India Survey on Higher Education (AISHE)

<http://news.niticentral.com/2015/12/22/union-minister-of-human-resource-development-smt-smriti-zubin-irani-launched-all-india-survey-on-higher-education-aishe/>

The Union Minister of Human Resource Development Smt. Smriti Zubin Irani launched the Sixth All India Survey on Higher Education (AISHE) in New Delhi today. Speaking at the event she highlighted the fact that the Gross Enrollment Ratio (GER) has shown significant improvement from 19.4% in 2010-11 to 23.6% in 2014-15. She expressed confidence that the target of 30% GER by 2020 as envisaged in 12th Plan would be achieved. She highlighted that efforts be made to increase number of female teachers in higher education. Union Minister also highlighted that this data base acts as rich depository that gives direction while devising policies to improve higher education. Union Minister suggested that State universities in conjunction with regulatory bodies like AICTE should strive to update curriculum, which may include industry participation, use of ICT enabled education, collaboration with international organizations to make education more dynamic and increase employability. While appreciating the initiatives of states of Gujarat, Karnataka, and Odisha; The Union Minister called upon Ministry of Human Resource Development to explore the feasibility of replicating best practices like 'Jnana-Samnvay' of Karnataka at national level. She also congratulated all stakeholders involved in the process of All India Survey on Higher Education.

The survey covers all the Higher Education (HE) institutions of the country including Universities, Colleges and Stand-Alone institutions. The entire survey has been voluntary, based on motivation of respondents; and without any statutory mandate in place for collecting information of this nature. It needs a Survey like this to bring out the correct and complete picture of the system so that relevant statistics are available to the Central Government as well as State Governments, in order to devise future policies. The survey is also unique in the sense that it is a participatory effort between State Governments, Regulatory Statutory Authorities and the Ministries of the Government of India. The survey compiles and manages statistics directly online from respondent institutions. The main items of data collection under survey are Basic details, Programme details, Teaching and Non-Teaching staff, Student Enrolment, Examination Result, Infrastructure, Scholarships and Financial. The AISHE data is the source of information for 'Know Your College' portal (KYC) www.knowyourcollege-gov.in/

With the launch of 2015-16 survey, the time-lag will be reduced to bare minimum. All the institutions located in the country are requested to participate in the Survey and provide relevant data.

The major findings of the AISHE 2014-15 are as follows –

- 1) Increase in overall enrolment from 27.5 million in 2010-11 to 33.3 million in 2014-15.
- 2) Improvement in Gross Enrolment Ratio which is a ratio of enrolment in higher education to population in the eligible age group (18-23) years from 19.4% on 2010-11 to 23.6% in 2014-15.
- 3) Gender Parity Index (GPI), a ratio of proportional representation of female and male, has marginally improved from 0.86 to 0.93 to the corresponding period.
- 4) Number of institutions of higher education listed on AISHE portal has also increased significantly – universities from 621 to 757 and colleges from 32, 974 to 38,056 during the same period.

The Survey was initiated in the year 2011 to prepare a robust data-base on higher education. Keeping in view the usefulness of data collected during the very first year, Ministry decided to make this survey an annual exercise of data collection in higher education sector. So far, survey for the year 2013-14 has been completed and data collection for 2014-15 is under progress and is likely to be completed very soon. Final report for the year 2013-14 and the provisional report for 2014-15 are available.

Govt to provide Wi-Fi to all central universities soon

<http://indiatoday.intoday.in/education/story/wi-fi-to-central-universities/1/553316.html>

The government will provide Wi-fi connectivity to all central universities under the National Mission on Education through Information and Communication Technology (NMEICT) programme. The government announced the plan in Lok Sabha on December 21.

According to PTI reports, in a written reply in Lok Sabha, Human Resource Development (HRD) Minister, [Smriti Irani](#) said that two central universities, Allahabad University and North Eastern Hill University are already covered under Department of Electronics and Information Technology (Deity) programme.

The government informed that the proposal to provide Wi-fi to remaining 38 central universities has been approved and will be implemented soon. "For the remaining 38 central universities, Project Approval Board of NMEICT in its 31st meeting has approved the proposal for providing Wi-fi at the cost of Rs. 335.85 crore," Irani said.

Recently, Irani also announced that all [CBSE](#) books and learning material will be made available online, for free, as a part of the centre's good governance efforts. The announcement was made on December 19 at a function organised at a Kendriya Vidyalaya in East Delhi. She said that the initiatives would be undertaken to ensure holistic nurturing and improve learning outcomes at these schools.

Indian-American Researcher Named Fellow Of US Academy



<http://www.ndtv.com/indians-abroad/indian-american-researcher-named-fellow-of-us-academy-1257883>

New York: A prominent Indian-American bioengineering researcher has been named as a fellow in the US' National Academy of Inventors for his work in inventing path-breaking healthcare technologies.

C Mauli Agrawal, an IIT-Kanpur alumnus, is the Vice President of Research at the University of Texas at San Antonio. He will be formally inducted in April next year.

His work in orthopaedic implants, cardiovascular biomaterials and diabetic foot products has drawn recognition.

His bioengineering research has resulted in 28 patents.

Mr Agrawal, 56, will be among 582 fellows in the National Academy of Inventors (NAI). He was selected for the honour because of his research and innovations in orthopaedic and cardiovascular biomaterials and implants.

"It is a great honour. Some of the greats, at least in my field, are members of this academy. It's good for San Antonio that we get more people there. Any recognition like this puts the spotlight on UTSA and I think that's great," Agrawal was quoted as saying by San Antonio Express News yesterday.

He has been in San Antonio since 1991. He worked at the UT Health Science Centre for 12 years before joining UTSA (University of Texas at San Antonio) in 2003.

Most of his work in San Antonio has focused on developing implants from orthopaedic and cardiovascular materials. His research group's work led to the formation of an engineering company that developed scaffolding that can be implanted in patients to help develop cartilage or bone.

Dr Steven Bailey, the cardiology division chair at the health science centre and a longtime colleague of Mr Agrawal's, said the recognition is well-deserved.

"He's been incredibly insightful in terms of not only what can be demonstrated in an academic and research environment but, more importantly, what will translate in terms of meaningful patient progress as well," Bailey said.

An IITian's response to Justice Katju's remarks, "IITians are selfish, have no genuine love for India"

Patriotism an IITian's way

<http://udaipurkiran.com/an-iitians-response-to-justice-katjus-remarks-iitians-are-selfish-have-no-genuine-love-for-india/>

Let me tell you a small story. There was a country called "B". Every year its citizens organized a cut-throat competition to select its most brilliant crop of adolescents. Out of every 2000 of the age 17, only one could get selected. Some bad apples managed to get in, while some brilliant ones forewent the competition. Nonetheless, with the selections done, this elite youth group was trained for four years, preparing them for the future. Thereafter, they were let out in the world to contribute. About one fifth, moved out of their country every year for (considering the past few decades) and the others stayed back.

Every single rupee spent on this selected group has resulted in 15 rupees contribution to the economy. Everyone, on average has managed to create a job for a hundred compatriots. Have we then wasted our resources on their subsidized training? The value of an IITian, or for that matter any engineer, is not in the type of job they select right after college. It is in the value they would create for the Indian economy throughout their life. To begin with IITians are mostly all from middle class families; some from poor backgrounds. Half of the

seats are reserved for traditionally backward communities. Through their qualification, the entire group of about 10000 has proved they should be receiving the best training of the land.

The four years are miniscule compared to the 50 year careers ahead. Moreover, their parents fund most of their school education, a significant part of their Engineering education and for some even the post-graduation. The government subsidizes only 4 very costly years out of the 18-20 years. The wards of the rich aren't going to IITs, for it is not worthy of their time. Probably they don't even want to work so hard at a young age.

These graduates will have interesting and diverse work profiles, a lot of which will have nothing to do with their initial training. Yet they are humble enough to acknowledge that IIT really helped them. Who says they are not patriots. Definition of patriotism itself keeps evolving with circumstances, along a basic core. If fighting on the borders or serving the government defined patriotism, then Gandhiji and Subhash Chandra Bose would also lag behind.

Patriotism means working for your nation, for your compatriots, making sure they have a peaceful and prosperous lives. IITians as a group, are adding to it every day. Some as entrepreneurs, others as venture capitalists; some as social entrepreneurs, others as politicians; some as innovators, others as business heads; some as writers and artists, others as institution builders. They are sending back remittances and carrying the flag of our nation high in technology and medicine in globally renowned institutions.

Demeaning NRIs has also been easy for many of us. Till a few years ago, we were calling our NRIs selfish. Now with the remittances and increased stature of India in developed nations, we are all gung ho about them and are proud of them. They are not the most educated as we think. Most of our NRIs are earning well, but rarely with an IIT or Ivy League degree. Most live in the middle-east countries. For every Silicon Valley NRI technologist, there are more than ten NRIs who don't even know what Silicon Valley means. The rich among them are mostly businessmen, and only a few are IITians. Canada is full of Punjabis, Middle East is full of Keralites and the USA full of Gujaratis, regions hardly known for producing IIT aspirants. And they are not dictating lifestyles and opinions to us living in India.

I hope Mr. Katju realizes how wrong he is on so many levels in his flashy statement, based on not reality but perception.

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