Newspaper Clips

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Trinity College Dublin and IIT Delhi collaborate to test Bamboo Frames for multi-storey housing in India

Hemali Chhapia,TNN | Jan 27, 2014, 04.06 PM IST

MUMBAI: Engineers from Trinity and the Indian Institute of Technology (IIT) Delhi have joined force to develop bamboo frames for multi-storey housing in India. The research aims to establish whether a bamboo composite could work in high rise housing in earthquake zones in India.

During the five week testing project, the team worked with Professor Roger West and Professor Ravindra Dhir from Trinity's Department of Civil Engineering. Using static and cyclic loading, the durability of the frames was measured to establish their collapse strength and stiffness. Bamboo is wel known for its tensile strength and flexibility.

A special composite of bamboo and epoxy could provide an answer to the chronic shortage of low cost renewable medium density housing. It may also satisfy the need for ductility and durability for its use a the primary structural material in earthquake zones for housing of up to four storeys. The frames, whic are heavily instrumented to monitor behaviour over time, were tested in the highly specialised interna reaction rigs in Trinity's structural test hall.

The three Indian researchers, Kapildeo Bhagat, Diwakar Bhagat and Mukul Gupta, brought with them 1.8 tonnes of bamboo test materials, including three portal frames and two beams, for testing. The project forms part of an ongoing research collaboration between Professor Suresh Bhalla of IIT Delhi and Trinity College Dublin on testing bamboo columns. Trinity signed a Memorandum of Understanding with IIT Delhi in 2011 and actively participates on collaborative research projects.

Young Indian scientists no longer hesitant to return, says Mashelkar

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Dr RA Mashelkar

NEW DELHI: Young Indian scientists — in great demand all over the world — are now more than willing to come back to their motherland, feels renowned scientist Dr RA Mashelkar who was awarded the Padma Vibhushan on Saturday.

"There is a new realization among young scientists that it is great to be in India. India was always the land of ideas. But it was the US that was the land of opportunities. Now the equation has changed. There has been a vast expansion of the Indian education and research institution system. The investments in industrial R&D are going up nonlinearly," he told HT in an interview.

Observing that fellowships like the Ramanujam fellowship were helping the scientists return to India, he said more of such were needed to attract deserving individuals.

Maintaining that many more steps were needed to be taken for India to become a global leader in research and development, he said: "The government should increase investments exponentially, the scientific institutions should be kept isolated from red tapism and risk taking in choice of problems should become a norm rather an exception."

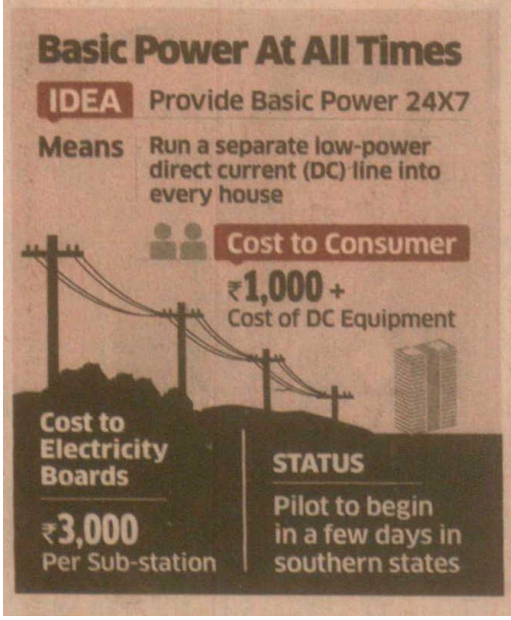
India spends 0.9 percent of its GDP in research and development, of which two thirds comes from the Indian government.

In contrast, South Korea spends 3.8 percent of its GDP in research and development, of which only 15 percent comes from the government.

This shows that India is spending more as a percent of the country's GDP. The situation is the similar in comparison to US, Europe, Japan and many others.

Power to Aam Aadmi 24X7, Without AAP!

IIT-M project to supply low-power DC may end outages



HARI PULAKKAT
CHENNAI

In a few days from now, IIT-Madras will begin a project in a few hundred houses in the southern states aimed at eliminating load-shedding forever. IIT-M has developed a method that will let electricity boards provide a small amount of uninterrupted power to every house in the country, enough to run three lights, two fans and a mobile charger. The pilot project, which would go on for a few months, is expected to generate enough data for the power ministry to take a decision on extending the programme to the rest of the country.

It is based on a disarmingly simple idea: run a low-power direct current (DC) line from every sub-station into houses. This will feed into a separate meter, and then on to a set of lights and fans, or other low-power devices such as chargers or TVs. The rest of the house is run on regular alternating current (AC) power that is metered separately. The 100 watts of power fed into these DC lines is so low the electricity boards will never need to shut this down, except to repair technical faults. Blackouts are thus eliminated at one stroke, or converted to what IIT-M calls 'brownouts'. As a side effect, it could also eliminate the need for inverters. The project is the brainchild of IIT-M Director Bhaskar Ramamurti and electrical engineering professor Ashok Jhunjhunwala.

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IIT-M had involved the Central human resources and power ministries, the four electricity boards in south India, and some DC equipment manufacturers. IIT-M has signed a memorandum of understanding (MoU) with Tamil Nadu, Karnataka, Andhra Pradesh and Kerala. The Centre has formed a committee to oversee the project, headed by the former Atomic Energy Commission chairman Anil Kakodkar. Says Ramamurti: "It is a simple idea but it required some thought and engineering."

Consumers who opt for this scheme will have to spend around Rs 1,000 for a device at home, apart from buying LED bulbs and fans that run on DC power. Jhunjhunwala and his team will meet consumers in Tamil Nadu and Karnataka this week. If they decide to buy into this idea, and agree to spend the money to take part in the project, the IIT-M technical team will start rewiring their houses and tweaking the transformers that feed into them. "It is a critical pilot project," says former power secretary P Umashankar. "I see this as a game-changer for the country." In fact, it was Umashankar who seeded the idea in the minds of the IIT-M professors. Just before retiring, he had attended a conference organised by IIT-M. They had then shown him their work on DC power and solar energy, and told him how it would improve energy efficiency in the country. "Umashankar told us that it will not solve our fundamental problem of blackouts," says Jhunjhunwala. "It will also not create a pull factor for solar energy in the country." The IIT-M team went back to the drawing board and thought about the problem. They then had their Eureka moment: why not separate the DC power from the main AC circuit?

Jhunjhunwala and Ramamurti were telecommunications engineers, so they asked their power systems colleagues whether it was possible to run DC and AC power together in the transformers. They answered in the negative, but soon enough, came up with a solution: run a low voltage AC line out of the transformer and then convert it into DC. Inside the home, the voltage is scaled down to 48 volts, which will then run lights and fans. "The idea was stunningly elegant," says Venkat Rajaraman, CEO of Solarsis India, which makes devices for houses and sub-stations.

Apart from Solarsis, two other companies joined the project. One was LED company Intelizon, which made special lamps that converted low-power DC into the even lower levels used in LED lights. The other was Crompton Greaves, which made DC fans. At present, DC fans cost twice as much as AC fans, but the cost is expected to come down to the same level once volumes pick up. IIT-M wired some rooms in its own campus and tested the idea. The plan is to test it in a few hundred houses in one locality in each state.

The elegance of the project flows from the multiple benefits of DC power. It is known to be more efficient than AC power, but the latter became the standard due to transmission efficiencies. Currently, many home appliances run on DC power, such as LED lights, after conversion. So do TVs. Mobile chargers also operate on DC power. Inverters convert AC into DC and then back again. All this means wasted energy. Efficiencies improve if DC can be used directly in devices. This was Jhunjhunwala's original idea presented to Umashankar. With the advent of solar power, there is a renewed push globally for DC power being used directly.

Over a period of time, the IIT-M solution could create demand for solar energy. Currently, solutions exist to run entire houses — barring air-conditioning — on solar energy. But they cost around Rs 1 lakh. The IIT-M technology could augment DC power and run most home equipment at one-fourth that cost. Consumers can then adopt solar energy incrementally, avoiding large one-time investments. "We have now created the pull-factor for solar that Umashankar told was missing in the first place," says Jhunjhunwala. The efficiency of the system is such that even large complexes can consider supplementing basic DC with solar power, and reduce dependence on expensive diesel generators. In the long run, this system can even run alongside the smart meters being considered now. "I think the idea is very sound and can coexist with smart meters," says Kakodkar. The future of the project now depends on consumers: will they pay a few thousand rupees extra in return for uninterrupted power?

Tissue biobank at IIT-Madras to boost cancer treatment

CHENNAI, DHNS: Cancer treatment is likely to get a boost with Indian Institute of Technology-Madras (IIT-M) proposing to establish a cancer tissue biobank, a unique, first of its kind community-based tissue bank.

The biobank is a joint venture between the Department of Science and Technology and IIT-M. The initial focus of the bio-repository would be on collecting and storing various cancer tissues for advance research purposes.

Professor Mahalingam of the Department of Biotechnology, IIT, who is spearheading the proposal, told *Deccan Herald* that a tissue biobank consortium provides a coordinated and integrated program that collects and distributes tissue samples to support cancer research. He said the Science and Technology Ministry has allocated Rs 28 crore to establish the bank, which is coming up on the IIT campus. "Full-fledged operations of the tissue biobank will begin in the next couple of years with IIT-M also spending Rs 3 crore," he added.

Claiming that the proposed biobank would be the first of its kind in the country, Mahalingam said tissues would be collected from patients after surgeries.

Mail Today ND 28/01/2014 P-24

NEWS ALERTS

JAMIA STUDENTS WIN DRAG RACE

Engineering students from Jamia Milia Islamia has won this year's 'Drag Race,' a competition in which specially prepared automobiles or motorcycles compete, held at the Indian Institute of Technology (IIT) Delhi, recently. The event was a part of the global engineering network ASME's Human Powered Vehicle Challenge (HPVC) contest, which also featured categories such as 'Endurance Race' and 'Design Event.'

The objective of the races was to provide students with an opportunity to demonstrate the speed and reliability of their vehicles. "Project opportunities, like HPVC, motivate engineering students to develop important skills not commonly taught in the classroom," said Michael Moorhead, Chief, ASME HPVC. The event saw participation from teams across the country including IITs, and NITs.

Govt looks at engineering college to test power meters

GEETA GUPTA
NEW DELHI, JANUARY 27

TO RESOLVE complaints of "faulty" meters in the capital, the Aam Aadmi Party government plans to rope in Delhi College of Engineering (now Delhi Technological University) as a third party to check such meters. The move comes after Chief Minister Arvind Kejriwal had announced a new meter-testing drive earlier this month.

According to the announcement made by Kejriwal, the drive is likely to be launched next month. It would involve checking 10,000 "fast" meters, selected randomly, to assess if they are defective.

After the check if majority of the complaints pertaining to faulty meters are proved right, the government will decide on measures to correct the meters. The government can also initiate action against the power distribution companies in that case.

Sources said a proposal to appoint a third-party independent agency for checking meters needs to be approved by the Delhi Electricity Regulatory Authority (DERC).

The meter-checking drive was announced after Kejriwal claimed that there were several complaints of meters running 'fast' and a public demand to check meters that have allegedly led to inflated bills. Power department officials said the consumers have time till January 31 to get their complaints lodged.

CHIEF MINISTER had announced a meter-testing drive earlier this month. The drive, likely to be launched next month, would involve checking 10,000 "fast" meters, selected randomly, to assess if they are defective

If approved, Delhi College of Engineering will aid the government in testing of meters. ARCHIVE

"In view of consumer complaints on fast running meters and inflated bills, the Department of Power has decided to randomly carry out third-party independent meter-testing for the domestic electricity consumers in Delhi. The service will be provided free of cost to the consumers," Secretary (Power) Puneet Goel said.

The DERC had in its last tariff order called for a meter-testing drive, and allotted Rs 50 lakh to the public grievance cell for the same. The government is looking at the possibility of utilising these funds for the current drive.

"The DERC funds can be used for this drive and any additional expenditure will be borne by the state government, not the consumers," a senior official said.

To get a meter tested, a consumer is required to submit an application with their contact details and a copy of the recent power bill at any Deputy Commissioner's office, irrespective of jurisdiction.

"Of all the applications received, 10,000 meters will be randomly selected for checking by an independent agency. Based on the results, action will be taken by Department of Power," Goel said.

A official said the government had approached several engineering colleges, including IIT-Delhi and Netaji Subhash Institute of Technology.

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'5 Indian think tanks in world's top 150'

Akshaya Mukul/TNN

New Delhi: Five Indian think tanks have made it to the list of top 150 worldwide. At rank 50 is Centre for Civil Society (CCS), at 102 is Institute for Defence Studies and Analyses (IDSA), at 107 is The Energy and Resources Institute (TERI) followed by Observer Research Foundation (ORF) at 114 and Development Alternatives (DA) at 140.

According to a survey conducted by Think Tanks and Civil Societies Program of University of Pennsylvania, Brookings Institution was ranked the top think tank in the world followed by Chatham House (UK), Carnegie Endowment and International Studies (US), Center for Strategic and International Studies (US) and Stockholm International Peace Research Institute (Sweden).

The survey also showed that the US had 1,828 think tanks, the highest in the world. China came second with 426, UK had 287 and India was fourth with 268. The survey had invited 6,826 think tanks from 182 countries to participate. In the ranking process, 1,947 individuals and 120 countries participated.

A survey showed that the US had 1,828 think tanks, the highest in the world. India was fourth with 268 think tanks

Indian think tanks fared better among the top 45 in China, India, Japan and South Korea. There were 14 Indian think tanks on this list, 12 from Japan, 10 from China and nine from South Korea. Apart from CCS, IDSA, TERI, ORF and DA, the other Indian ones on the list were Centre for Policy Research (CPR), Institute of Peace and Conflict Studies (IPCS), Centre for Study of Developing Societies (CSDS), Center for Study of Science Technology and Policy (CSSTP), National Council of Applied Economic Research (NCAER), Institute of Economic Growth (IEG), United Service Institution of India, Delhi Policy Group and Liberty Institute.

Among the top 65 defence think tanks, there were three Indian entities — IDSA at 38, Centre for Land Warfare Studies at 48 and ORF at 52. Not a single Indian entity made it to the top 80 think tanks on economy or the top 50 on education. TERI was ranked eighth among the top 20 in energy. In the top 70 think tanks on environment, Centre for Science and Environment was ranked 19th followed by Ashoka Trust for Research in Ecology at 20th.

We're trying to break into world's top 200 universities: PU V-C

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CHANDIGARH: Punjab University (PU) vice-chancellor (V-C) Arun Kumar Grover said the university was trying to break into the world's top 200 universities by 2016.

During the celebration of 65th Republic Day at PU, the V-C hoisted the National Flag and took salute at the ceremonial parade on the campus on Sunday. PU students, school students and the university's staff participated in the ceremonial parade. PU students, for the first time, participated in the parade. A cultural programme also held on the occasion. PU registrar AK Bhandari, controller of examinations Parvinder Singh, dean of students welfare Navdeep Goyal were present on the occasion.

The V-C said Republic Day had a special importance for PU as it was reorganised after the Republic Day. He added that President Pranab Mukherjee had

GROVER CALLED UPON PU STUDENTS, TEACHERS AND STAFF TO ACCELERATE THEIR EFFORTS TO RAISE THE RANK OF THE VARSITY

called the universities to break into the top 200 varsities of the world. "PU has already identified the areas where it is lagging behind the top universities in the world and we are working on the strategy to achieve the goal," he added. Grover called upon the university students, participants, teachers and staff to accelerate their efforts to raise the rank of PU. He said the results of the efforts being made in 2014 would be reflected in the university rankings in 2016 as the Times Higher Education considers five-year data. Earlier, Times Higher Education Ranking had ranked PU the number one university in the country.

IIT alumni set up website to help GATE aspirants prepare for online exam

Written by Anuradha Mascarenhas | Pune | January 27, 2014 10:49

With an approximate 10 lakh students set to appear for the Graduate Aptitude Test in Engineering, beginning February 2, many are unsure of their performances as the paper based test pattern has been shifted to computer based online exam.

Keeping this in mind, a number of IIT alumni and students have come forward to start an initiative to resolve this problem. www.testbook.com is an online portal, designed similar to the actual exam interface, which gives GATE aspirants an opportunity to prepare themselves both academically and technically by being acquainted with the current pattern and appearing for more than 30 time bound online tests, and overcome the fear of online examination.

Says Ashutosh Kumar, former IITian from Mumbai and co founder of the website said it is completely free and covers all the chapters pertaining to a course, All tests have been carefully designed by GATE toppers, keeping in mind the exam pattern. Practice tests of different time lengths have been provided for systematic preparation and detailed solutions have been provided to brush up and strengthen the concepts.

Graduate Aptitude Test in Engineering (GATE) is an all India examination conducted through the constitution of eight zones (7 IITs and IISc, Bangalore). The score is used for admissions to post-graduate engineering programmes in Indian higher education institutes with financial assistance provided by MHRD and other Government agencies. The score may also used by some Public sector units for employment screening purposes.

A total of 12,00,728 candidates registered for GATE 2013 and 9,84,855 candidates (82.02%) appeared for the exam, of which 1,36,699 (13.88%) qualified GATE 2013. Female candidates comprised 39.75% of the total registrants while male candidates comprised 60.25%. .

The website has a user-friendly test-taking interface designed to prepare aspirants for online examination by familiarizing them with various tools that will come handy on test day to overcome the fear of online examination and save time, says Kumar. Time devoted, and accuracy on each question and scores on all tests are compared with all others appearing for the same, and Rank, Percentile etc. are calculated on all tests. As thousands of GATE aspirants have already registered on the website, a thorough analysis is provided at various stages to track performance by comparing the result with aspirants from all over India and a portfolio is created to assess continuous improvement.

Students can also follow one another to compare their preparation and create competitive environment. “We already have 3-400 new aspirants joining the website daily,”he said.

CBI Files Impleading Petition in IIT-M Staff Recruitment Case

By D Suresh Kumar - COIMBATORE

Published: 27th January 2014 08:30 AM http://www.newindianexpress.com/states/tamil_nadu/CBI-Files-Impleading-Petition-in-IIT-M-Staff-Recruitment-Case/2014/01/27/article2022134.ece

The Central Bureau of Investigation (CBI) has filed an impleading petition in the Madras High Court stating that it was unable to proceed with its probe into alleged irregularities in past recruitment of faculty at the IIT Madras due to a stay order granted in September 2013 without its knowledge.

On July 25 last year, Justice Nagamuthu of the High Court while passing orders on a petition filed by an IIT (Madras) faculty W B Vasantha directed the CBI to enquire into the correctness and legality of the appointments made to different faculty positions in the institute from 1995 to September 26, 2000.

Acting on this direction, the CBI Anti-Corruption Bureau in Chennai had registered a case on August 28 last year against the then Chairman and Board of Governors and then Director of IIT-M under Sections 120 B (criminal conspiracy) of IPC reading with 13(1) (d) of the Prevention of Corruption Act. The IIT-M subsequently filed a petition seeking a stay on the CBI probe ordered by Justice Nagamuthu.

Significantly, the IIT Madras did not list the CBI as a respondent in the petition due to which it was not made a party to the case. On September 13, 2013, a division bench comprising then Acting Chief Justice Rajesh Kumar Agrawal and Justice M Sathyanarayanan stayed the CBI probe by an interim order. Hence the CBI represented by Additional Superintendent of Police S Jaikumar, the investigation officer in the case, has filed an impleading petition.

In his affidavit filed last week, Jaikumar submitted that the charge against the accused persons was that they had committed criminal misconduct by abusing their official position. In furtherance to a criminal conspiracy, in the matter of selection held for faculty position of Associate Professor and Professor in 1995 and 1996, they constituted selection committees which had no validity. The selection committee selected two applicants S G Kamath and A Rangan for appointment as associate professors in the Mathematics Department. Though Vasantha was eligible for the post she was not selected.

The court had, however, expanded the scope of probe to recruitments conducted up to September 2000.

Deakin University ties up with IIT Madras

T. E. Raja Simhan, Chennai, Jan 27: http://www.thehindubusinessline.com/news/deakin-university-ties-up-with-iit-madras/article5623028.ece

Deakin University, Australia, has broadened its research link in India through a new partnership with Indian Institute of Technology Madras (IITM).

Ten students undertaking higher degrees by research will collaborate on materials, engineering and manufacturing projects under a memorandum of understanding signed by Deakin Vice-Chancellor Jane den Hollander and IIT Madras Director Bhaskar Ramamurthi.

Under the MoU, five students from each institution will be enrolled in the joint PhD supervision programme. All the ten students will be based at IIT Madras.

The Deakin-enrolled students will be eligible for a three-year fee waiver, an opportunity to study in Australia for three to six months and financial assistance with international conference presentations.

Similarly, IITM-enrolled students will receive scholarships and benefits to be determined by the institution, says a joint press release.