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IITians working on replacing diesel engines with CNG

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<http://timesofindia.indiatimes.com/city/chennai/IITians-working-on-replacing-diesel-engines-with-CNG/articleshow/51164327.cms>



The first CNG-run train in India was launched last year between Rewari and Rohtak in Haryana.

CHENNAI: IITians working on replacing diesel-run train engines with natural or compressed natural gas may get a leg-up with 50 crore being allocated as innovation grant for startups under the railway budget. Students of IIT Madras are working on developing such engines in collaboration with private companies and startups.

"There is a lot of work going on with regard to combustion. Students are also working under the National Centre for Combustion Research located on the campus," said Prof Krishnan Balasubramaniam, dean, IC and SR, IIT-Madras. As many as 25 faculty members and nearly 70 students from across disciplines are working on aspects such as engine design, combustion, emission control, and fuel mixture among others.

The first CNG-run train in India was launched last year between Rewari and Rohtak in Haryana. Running on a dual-fuel system, the train parts were manufactured in Chennai.

"The railway minister had hinted about the railways' interest in innovation and startups during his recent visit to the institute. We believe this is the right step ahead as startups can help take an idea to the next step of creating a prototype," said Krishnan.

IIT-Madras houses a majority of core engineering startups that could help drive innovation. Having signed an MoU with the railway ministry, the institute will be setting up a dedicated centre for railway research by March end. There are talks to include the CNG engine project as part of the research work at the centre.

IIT-Madras Incubation Centre CEO Tamaswati Ghosh said the 50 crore grant was motivating. "With India's first railway auto hub to come up in Chennai, and with focus on cutting-edge technologies to enhance railway infrastructure, we look forward to a greater association on innovation," she said.

Start-ups on a hiring spree in IITs and IIMs

<http://www.businesstoday.in/current/corporate/start-ups-on-a-hiring-sprees-in-iits-and-iims/story/229616.html>

'Start-ups' has been the buzzword at the IIMs and IITs since the last two placement seasons. Though Google and Facebook are known to offer the highest pay packages, and companies such as Accenture and Amazon hire the most, start-ups, too, are making their presence felt in these institutes.

At IIM-Calcutta, which recently completed its placement process for the 2014-16 batch, over 20 per cent of the offers made during the season were from e-commerce and web-based start-ups such as Amazon, Snapdeal, Flipkart, Paytm, Ola Cabs, Uber and RedBus.

A look at IIM-A's placement report for 2015 suggests that Flipkart, Ola Cabs, Quikr, Snapdeal and Uber were among the top recruiters during the last placement season.

The trend takes a definite shape in IIM-A's Summer Internship Placement Report, for the batch of 2015-17, which shows that Flipkart is among the top recruiters - with 10 offers - while other companies such as CarDekho, Ola Cabs, Oyo Rooms, Rocket Internet, Snapdeal and Xiaomi also appear prominently.

The IITs, too, are witnessing a considerable number of hirings from Indian start-ups. IIT Bombay, for example, estimates that 20-25 per cent of offers made during the recent placement season were from such companies. IIT-Hyderabad mentions names such as Flipkart, PayPal, Snapdeal and eDreams Edusoft as major recruiters in its placement report for the last season.

The trend, it seems, is here to stay as most start-ups plan to recruit a number of people from these institutes in the coming days.

E-commerce website Paytm, which hired around 65 people from IITs and 40 from IIMs in the last two placement seasons, plans to hire more of them to its workforce. "Paytm is on a hiring spree and wants to strengthen its business. Besides poaching talent from across industries, we are looking to hire 100+ students from IIMs," said Amit Sinha, Vice President - Business Planning and People, Paytm.

Another e-commerce start-up SyberPlace.com plans to hire around 100 people from both these institutes, during the current placement season. The company had hired a total of 30 people from the IITs and five from the IIMs during the last two seasons. According to Urvesh Goel, Founder, SyberPlace.com, "IITians are entrepreneurial and stronger on ideation, while people from IIMs are more organised and structured. They are better networked and strong on relationship."

The compensation offered by most of these start-ups is in the range of Rs 10-23 lakh per annum for IITs and Rs 15-60 lakh per annum for IIMs.

"We have rolled out requirements for multiple profiles in IITs, ranging from developers to tech architects. For the best tech resources, we pay Rs 23 lakh or more. Also, we offer ESOPs (employee stock ownership plan) to our tech resources," informed Mayank Bhangadia, co-founder of fashion social network Roposo. The company, whose all three co-founders are from IIT-Delhi, has a similar pay package for IIM candidates and offers ESOPs to them, too. It plans to hire 20 IITians and 10-12 IIM graduates in the upcoming placement season.

Online jewellery shopping store Bluestone also offers a similar package of Rs 15-23 lakh to both IITians and IIMites, and targets about 20-25 employees from these institutes during the next season.

GLOBAL MISSION

Indian scientist selected to explore Earth's mantle

Mou Chakraborty

■ mou.chakraborty@hindustantimes.com

KOLKATA: A Bengali scientist was part of a team of geologists from all over the world trying to explore Earth's mantle. The mantle, a Holy Grail for geologists, can answer questions related to the evolution of the planet and the origin of life.

Biswajit Ghosh, a faculty member at Calcutta University's geology department, grew up dreaming to unearth what lay underneath. He was the only Indian in the team of 25 scientists from countries including France, Italy, USA, Great Britain, Sweden, Japan and China selected for exploration.

The mission to drill to the mantle is a project of the International Ocean Discovery Program (IODP) — many nations have donated



■ Biswajit Ghosh

money for the mission.

"Being part of the Jules Verne-sque mission to drill to the mantle of the Earth with sophisticated equipment and unlock our planet's secrets was a dream come true. We were on board a highly sophisticated ship that did the drilling and we analysed the samples on board," said 45-year-old Ghosh.

"I hail from Sonarpur and studied in a local Bengali-

medium school. This is what I wanted to do all my life. In fact, this is a dream come true for any geologist. The mission started on November 30 last year and these 60 days will remain the best days of my life," he said.

The deep-sea drilling project under IODP is being undertaken in three legs. In each leg, scientists will drill about 2.5 kilometres of the ocean crust with an aim of reaching the mantle.

Ghosh returned to Kolkata after the first leg. "I was onboard as an igneous petrologist studying the igneous rocks formed from the magma from the earth's core. The samples from the expedition have reached Japan. I will be going their next month and study the samples further for a year. After that, there will be a review meeting of the 25

scientists next year in Sicily, where the findings will be discussed," he said.

"The drilling took place on the southern hemisphere on the south-east side of the southern tip of Madagascar. The spot named Atlantis Bank was chosen after decades of research confirming that the ocean crust here was the thinnest. This would help us reach the mantle quickly," Ghosh said.

"We were onboard Joides Resolution, a highly sophisticated floating lab. One of the main objectives of the mission for me was to study the way the transition of the ocean crust takes place from the mantle. It involves studying seismic waves and can help predict changes in tectonic plates and predict volcanic activity more accurately," Ghosh explained.

आइआइटी रूड़की करेगा

एनएमएसएचई प्रोजेक्ट पर कार्य

एजेंसी ■ रूड़की

रूड़की स्थित राष्ट्रीय जलविज्ञान संस्थान नेशनल मिशन फॉर सस्टेनिंग द हिमालयन ईको सिस्टम (एनएमएसएचई) प्रोजेक्ट पर कार्य करेगा। यह जिम्मेदारी विज्ञान एवं प्रौद्योगिक विभाग ने संस्थान को सौंपी है।

संस्थान के निदेशक राजदेव सिंह के अनुसार जलवायु परिवर्तन की समस्या विश्व के लिए चुनौती बन गई है। इसका वातारण और जल स्रोतो पर प्रतिकूल असर पड़ रहा है। इस प्रोजेक्ट के अंतर्गत संस्थान हिमालय में उपलब्ध वर्तमान जल स्रोतो और भविष्य में उन पर जलवायु परिवर्तन के प्रभाव, पानी का प्राकृतिक भंडारण, स्नो फॉल के पैटर्न, पहाड़ों में स्प्रिंग के सूखने की

वजह आदि विषयों पर अध्ययन किया जाएगा।

जलवायु परिवर्तन की समस्या विश्वभर में एक गंभीर समस्या बन गई है, जिससे जहां वायुमंडल के तापमान में लगातार बढ़ोत्तरी हो रही है वही हिमनदों पर भी इसका प्रतिकूल असर पड़ रहा है। ऐसे में विज्ञान एवं प्रौद्योगिक विभाग की ओर से नेशनल मिशन फॉर सस्टेनिंग द हिमालयन ईको सिस्टम पर कार्य किया जाएगा। विज्ञान एवं प्रौद्योगिक विभाग ने जल विज्ञान संस्थान रूड़की सहित देश में विभिन्न शिक्षण संस्थानों, विश्व विद्यालयों, वैज्ञानिक संस्थानों के अलावा जल क्षेत्र से जुड़े अन्य संस्थानों को अलग-अलग विषयों पर अध्ययन एवं शोध कार्य का दायित्वों सौंपा गया है।

Campus heads, IIT to IIMs, reaction to JNU row is: Caution, silence

<http://indianexpress.com/article/india/india-news-india/campus-heads-iit-to-iims-reaction-to-jnu-row-is-caution-silence/>

Even as the controversy snowballs into a political free-for-all, surprisingly, it hasn't evoked a response from top educational institutions of the country.

Written by [Ritika Chopra](#)

Here is what each had to say when asked for their reaction to Kumar's arrest and the charge that the police have overreached by slapping sedition charge:

M Jagadesh Kumar, Vice-Chancellor, JNU

"I cannot comment on what happens outside the purview of the university. I can only say that our internal probe committee will examine the video and audio footage and has time till February 25 to submit its findings."

Prof S Parasuraman, Director, TISS, Mumbai

"The nation's interest is of utmost importance and we cannot compromise on that. I'm not sure how this (JNU incident) happened and if the slogans were raised by students or outsiders who entered the university campus. This should be investigated.

If such slogans were indeed used by the students then it's important that they are identified, isolated and counseled rather than slapping sedition charges against them. Invoking the sedition law will not leave any hope for constructive dialogue. It will only divide the campus further.

Moreover, the government and political parties should help create a conducive environment on campus and not exacerbate the situation. Politicising this incident is not going to help."

Dr M C Misra, Director, AIIMS, Delhi

"India is a soft state and hasn't been dealing with illegal activities as firmly as it should. This is why people are encouraged to say whatever they want. If you see the video footage, it's repulsive. What are we doing? We have taken the freedom of speech too far.

Those shouting anti-India slogans are trying to make a hero out of Afzal Guru. This, in my opinion, is worse than sedition. Those elements should be identified and dealt with firmly. I would have said this even if my daughter was in that group shouting slogans. Which country outside of India will allow this?"

Prof Talat Ahmed, V-C, Jamia Millia Islamia, Delhi

"Raising anti-country slogans is worrying and should be condemned. But I don't want to comment on the student's arrest as the police may have a case to take such action. Kisi ne apni samajh se complaint file ki hai (someone thought it was okay to lodge a police complaint), how can I say whether the arrest was wrong or right?"

Prof R Venkata Rao, V-C, National Law School of India University, Bangalore

“Raising anti-national slogans ought not to be tolerated. There is a difference between peaceful protest march and raising anti-national slogans. While a peaceful protest march may come within the internal matters of the university, raising anti-national slogans is definitely not an internal matter.

If it is just a peaceful protest march, it needs to be tolerated and sedition charges are uncalled for. However, if there is clear and palpable evidence that anti-national slogans have been raised, then law must take its own course. In a liberal democracy, knee-jerk reactions should be avoided as far as possible. It should be noted that sedition has become an arcane offence. It is an irony that it still finds a place in our statute books, though it was abolished in Britain in 2009 through the Coroners and Justice Act, 2009.”

Prof Saibal Chattopadhyay, Director, IIM-Calcutta

“I don’t want to comment on this issue as it could create further confusion. There are many political parties involved at this moment. Hopefully there will be a solution soon.”

Chaitan Vaidya, Director, School of Planning and Architecture, New Delhi

“I have no comments on this.”

Devang V Khakhar, Director, IIT Bombay

“I have no comments to make. I am not familiar with the case.”

Bhaskar Ramamurthi, Director, IIT Madras

“I have no idea. I don’t want to comment. I can’t form an opinion unless I have full details (of the case).”

The following did not respond to calls, SMSes and emails sent by The Indian Express.

Ashish Nanda, Director, IIM Ahmedabad; Sushil Vachani, Director, IIM Bangalore; Partha Pratim Chakrabarti, Director, IIT Kharagpur; Sudhish Pachauri, Acting Vice-Chancellor, Delhi University and Waman Kendra, Director, National School of Drama.

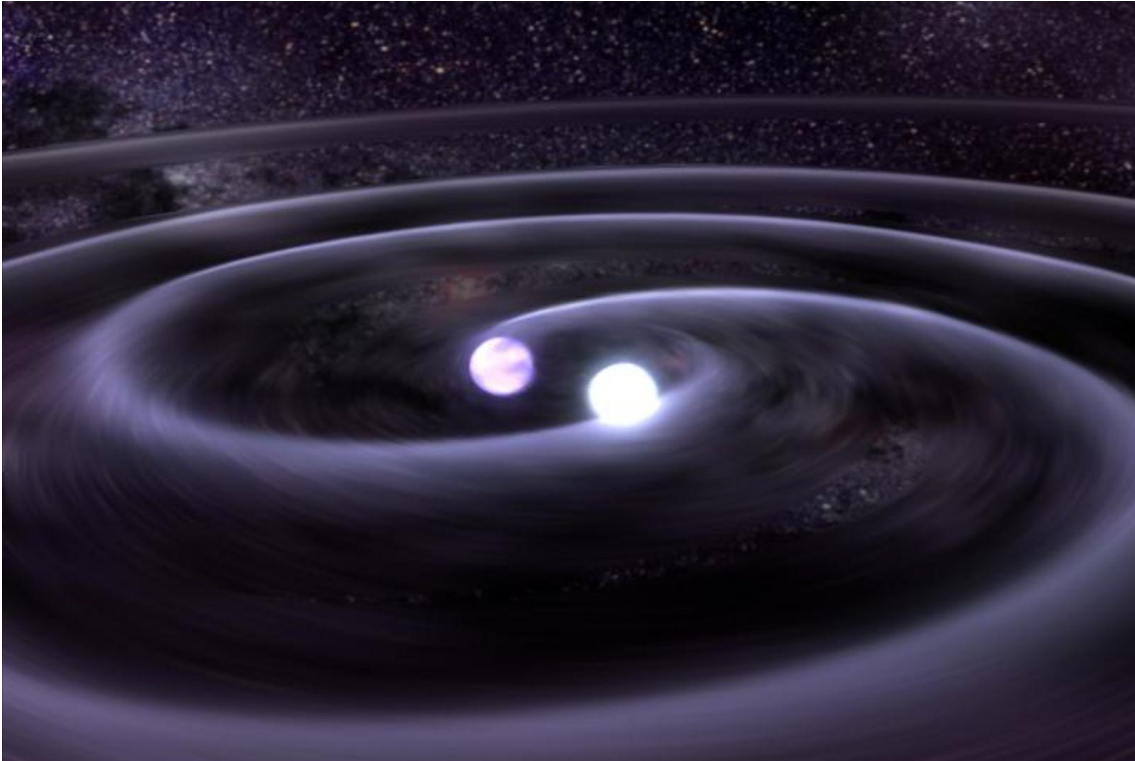
Celebrate the discovery of 'Gravitational Waves' with IIT Gandhinagar

26 February 2016

<http://www.pagalguy.com/articles/celebrate-the-discovery-of-gravitational-waves-with-iit-gand-40454052>

A recent great mind-blowing achievement by some scientists and physicians has opened a new door to explore more about the universe and the Big-Bang. This may ultimately lead us to finding out the answer to the greatest question ever- "How life emerged and how did the planet earth come into existence?" Several decades ago Einstein had predicted that gravitational waves transport energy in the form of gravitational radiation. Gravitational waves are a measure of strain due to the motion of large masses that stretch space-time fabric. Space-time fabric is a way of viewing space and time as a single, interwoven continuum. Just like the way energy and mass are interchangeable forms of each other, space and time are also interrelated. These waves travel at the speed of light and cannot be stopped or blocked by anything. The gravitational waves were detected on September 14, 2015 at 5.51 am Eastern Daylight Time by both of the twin Laser Interferometer Gravitational-wave Observatory (LIGO) detectors, located in Livingston, Louisiana, and Hanford, Washington,

USA. LIGO is a Scientific Collaboration, a group of more than 1,000 scientists from universities around the US and from 14 other countries.



This discovery has not only validated Einstein's hypothesis of the existence of gravitational waves, but has also proved the existence of black holes, which was till date questionable. This is the first time that the scientists directly saw a black hole, a mass 30 times larger than that of the sun, and is undoubtedly the most intriguing object ever known to mankind. Being very faint to detect, it was quite challenging and could have been possible due to LIGO which can measure so precisely the tiny distortion in the space-time fabric.

IIT-Gn group is a part of the LIGO Scientific Collaboration that works under the aegis of Indian Initiative in Gravitational-Wave Observations (IndIGO), a consortium of scientists from nine Indian research institutes and universities who contributed to the discovery. IIT-Gn is a part of this break-through achievement in the field of science that has answered a lot of questions and opened a way to find the answers to the remaining questions about the mysterious universe. Professor Anand Sengupta of IITGN was active principal investigator of the Indian group, which was active in the IndIGO's interaction with the LIGO Scientific Collaboration (LSC).

The next question that jumps into one's mind is what actually generated these waves and how did these scientists detect it?

When two massive black holes spiral against each other, they release energy in the form of gravitational wave, which results in the merging of these two black holes into a single black hole. And at that time the power of gravitational wave is 50 times more than the combined power of all the stars in the universe. That pulse of gravitational waves lasting only for a fraction of a second expanding throughout the universe unimpeded by billions of galaxies reached the earth after 1.3 billion years. Gravitational waves alternatively squeeze and stretch the space itself and everything it passes through. The same happened to the earth but it's quite faint and invisible. In order to directly detect them, the scientists built LIGO, the most sensitive measuring device ever made. It uses device called interferometer to measure tiny displacements in space. Incredibly tiny distortions in the space can actually be measured by using this device. This tiny measurement made by LIGO is a final step to the journey that began 1.3 billion years ago in the distant universe when two black holes collided.

As the news of the revolutionary discovery of gravitational waves, or ripples in space-time, spread across the globe, IIT Gandhinagar celebrated this Eureka moment. IITGN is proud of Prof. Sengupta for being a part of this glorious and breath-taking achievement in the field of astro-physics.

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

IIT रोपड़ में 80 फीसदी स्टूडेंट्स का प्लेसमेंट

<http://aajtak.intoday.in/education/story/iit-ropar-80-percent-students-got-placement-1-856559.html>

इस साल इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी (IIT) रोपड़ का प्लेसमेंट सीजन काफी अच्छा रहा. अब तक यहां 71 स्टूडेंट्स का प्लेसमेंट हो चुका है.

प्लेसमेंट में औसत सैलरी का ऑफर 12 लाख रुपये सालाना है. पिछले सीजन के मुकाबले इस साल 10 फीसदी सैलरी ऑफर में बढ़ोतरी हुई है. यहां एमेजॉन, गूगल, महिन्द्रा एंड महिन्द्रा, टाटा मोटर्स, कोल इंडिया लिमिटेड सहित कई कंपनियां प्लेसमेंट के लिए आई थीं.

कंप्यूटर साइंस के 90 फीसदी और मकैनिकल इंजीनियरिंग के करीब 58 स्टूडेंट्स को अच्छी टेक कंपनियों में जॉब ऑफर की गई है. यहां अब तक 80 फीसदी स्टूडेंट्स का प्लेसमेंट हो चुका है.