

**eNewspaper Clippings**  
**July -17-19, 2010**

**TOI**

**July 17**

## **IITs find room for more, silent on how it was done**

*Akshaya Mukul / TNN*

New Delhi: After the second round of counselling, IIT has accommodated 41 of the 52 general category students whose admission was cancelled after the premier institution itself admitted that were mistakenly allotted architecture and design course even though they had not appeared for the separate aptitude test.

The Joint Admission Board (JAB) authorities are maintaining a studied silence how 41 candidates have been accommodated all of a sudden.

Has it been done by creating more seats? "Some have been given admission in engineering course, which figures in their list of preference," an IIT director says. But, he could not give a suitable explanation if seats were increased in the engineering stream. The IIT admission website, too, has no information about this.

This also raises a moot question. What happens to the 11 candidates? JAB is mum about their fate.

Architecture and design courses are taught in three IITs. Of the 86 seats in the general category, IITKharagpur and IIT-Roorkee have 25 and 40 in architecture, respectively, while IIT-Guwahati has 21 in design.

JAB sources said all these seats got filled in the first round of admission. Erroneously, 52 candidates were offered admission to these courses, which were cancelled later.



WERE QUOTAS FLOUTED?

**July 18**

## **IIT goof leaves girl languishing**

*Akshaya Mukul / TNN*

New Delhi: With a rank of 5,235 in All India Engineering Entrance Examination and 6767 in IIT JEE, Nidhi Singla of Gurgaon should be on top of the world. But she is nowhere, thanks to IIT Joint Admission Board that first cancelled an offer of admission to her along with 51 others and later did not accommodate her in a revised list.

Only 41 of the 52 have been given admission. Nidhi is among the remaining 11. Even among the 41 who have been accommodated, some have got admission in Indian Institute of Mines, Dhanbad, and not in any of the IITs. Entrance test for ISM is also conducted through JEE.

Nidhi, however, does not have anything. Having cleared IIT, she did not go for AIEEE. In the first round of AIEEE counselling, she was offered electronics & communication in NIT, Kurukshetra. Every candidate had to pay Rs 35,000 to block the seat. But with IIT, Roorkee having already offered her architecture, Nidhi did not deposit the fee.

"There was no reason for us to go for AIEEE. We got a bank draft of Rs 40,000 ready for IIT. A day before the fee was to be paid, a call came that the offer of admission had been withdrawn. By then the date for payment for NIT was also over," said Binny Singla, Nidhi's cousin.

**High & Dry**

IIT-Joint Admission Board first cancelled admission offer to 52 candidates

Only 41 of 52 have now been given admission

Even among 41 who have been accommodated, some have got admission to ISM, Dhanbad, and not in any IIT

Some like Nidhi, however, do not have any offer

**July 19**

## **ENGINEERING A PARADIGM SHIFT**

*THE SUBSETS OF CIVIL ENGINEERING ARE EXPERIENCING A CHANGE DUE TO THE RISING DEMAND FOR SOPHISTICATED AND SOCIALLY RESPONSIBLE CIVIC INFRASTRUCTURE.*

*PROYASHI BARUA REPORTS*

*COMMONWEALTH GAMES 2010 HAS CREATED A GREATER INFRASTRUCTURAL DEMAND IN OUR BURGEONING CAPITAL. EDUCATION TIMES DISCUSSES HOW CIVIL ENGINEERING IS CEMENTING ITS PLACE IN THE JOB MARKET*

Civil engineering is the backbone of any civilisation. Civil engineers plan, design and supervise the construction of facilities essential in modern life. Hence civil engineering is synonymous with the term 'infrastructural engineering' and it would not be an exaggeration to say that the level of infrastructural sophistication of any country resonates with the technical acumen and skills of its civil engineers. Given the close and almost inseparable proximity of this discipline with society it has managed to exude the multiple cross-currents of social, economic and political thought that prevailed in a particular society at a given time.

India has her own unique legacy with civil engineering. "Few people know that the term 'civil engineering' came into being because this branch had to be distinguished or separated from military engineering," says Sanjay Dhande, director, IIT Kanpur. "The earliest assignments of civil engineers revolved around engineering guns and ammunition. But as the towns and cities of India started developing and more and more people started living in concrete shelters this branch of engineering acquired its own identity and focus," he adds.

Civil engineering today has five major subsets or branches: "Structural engineering, geotechnical engineering, water resources engineering, environmental engineering and transportation engineering are broadly these subsets," informs AK Gosain, head, department of civil engineering, IIT Delhi. Since its inception this branch of engineering has perhaps addressed the maximum number of challenges. These challenges are ingrained in mankind's quest for modernity, self identity and increased safety and convenience — all of which are perennial and continuously changing. "Today the challenges are focused on ecology preservation, environmental sustainability, economic viability and inclusive social growth. Hence the five subsets are deepening their cross linkages with allied domains like geophysics, architecture, urban planning, materials science etc. In other words civil engineering is becoming increasingly interdisciplinary today," says Gosain.

Civil engineers have a profusion of avenues from where they can start their careers. "As a matter of fact of all the different fields of engineering, civil engineering jobs in India are faring better mainly due to the demands of improvement in the overall infrastructure of the country. Some of the obvious avenues span the public works departments of all state governments, real estate and construction companies, transport manufacturing firms and urban development and town planning agencies. In addition to these traditional domains, they can explore career opportunities, especially as autonomous consultants, in various other fields where civil engineering has an interdisciplinary connect like for instance in the hydraulic industry and materials science industry," shares Gosain. "They also can join the lucrative Indian Engineering Services conducted by Union Public Service Commission and explore careers in research and teaching," he adds.

Civil engineering jobs particularly in India start on a low responsibility note. "The tasks become more and more responsible as we gather experience and demonstrate proficiency. Moreover, most civil engineers especially during the initial phases of their career are required to work in teams or in synchronisation with a lot of other engineers. This translates to an advantage as the possibility of errors in the early stages are contained and we move on to more responsible roles with a sense of self assuredness," says Ankur Neogy, a civil engineer working with IOC (Indian Oil Corporation).

Civil engineers can always add on further qualifications. "But one primary requirement for all who aspire to be civil engineers is that they should have a strong background in mathematics and physical sciences," says Dhande.

Talking about some of the challenges faced by civil engineers in developing countries Dhande says, "Today countries like ours mirror asymmetrical development in terms of civic amenities. While the metropolitan cities are brimming in terms of both technological and design sophistication as far as these amenities are concerned the far flung rural and semi urban districts are disconcerting reminders of bygone eras. This is where the real

renaissance or paradigm shift in civil engineering has to come.”

According to Dhande civil engineers should innovate on their knowledge base to propose practical yet simple and economical solutions that can transform the civic amenities landscape of rural and semi urban India. “This is one of the pillars where the foundations of inclusive growth can rest,” he observes. “They need to be engaged in creating infrastructure that checks social and regional imbalances.” he sums up.



ET

July 18

GUEST EDITOR

## Science must serve aam aadmi

THIRTY four years ago, after my graduation from IIM-Bangalore, I decided to continue with my career in space science and technology. Space, the last frontier for the human race, encompasses the study of our expanding universe starting from about 100 km above the earth surface called the Karman line, to interplanetary, inter-stellar and inter-galactic space and beyond.

The national vision articulated by our first PM Pandit Jawaharlal Nehru instilled confidence: “It is science alone that can solve the problems of hunger and poverty... The future belongs to science and to those who make friends with science.” The founding father of Indian Space programme, Dr Vikram Sarabhai, envisioned a meaningful role for space science and technology in finding solutions to the real problems of common man and society as a whole. His illustrious successors and the entire ISRO family shared this vision; strived to fulfill it, and enrich it further, concomitant with the emerging national needs and evolution of internal strength.

Today, India is the role model to the world in space applications, one of the six in the world with capability to

build satellites and launch them from its own soil; one of the four that demonstrated capability for re-entry of spacecraft; and presumably the first to orbit 10 satellites in one single mission as well as the facilitator for a major discovery of water molecules and water ice on the lunar surface. All of this has been done with a budget as low as 3% of NASA expenditure on space programmes.

It has been a satisfying experience of catalysing and facilitating the emergence of a space industry ranging from large public sector to small and medium enterprises who work in tandem with us in our pursuit for a self-reliant space programme, a strategic imperative in a discipline where knowledge and expertise are closely guarded due to geopolitical compulsions. The Indian Space Programme is now on the threshold of a transition into developing newer capabilities, perspectives and direction for ensuring enhanced significance in the national scene and gaining international leadership in selected areas.

Here, I must stress that a space agency like ours needs to take the responsibilities to service the user community, engage them and help them to upgrade into new technologies and processes streamlined into their value chain. Public accountability has a major influence on our operations.

Space should become the bedrock on which the national systems for societal and other national imperatives are built up. Space should emerge as: i) a catalyst for breeding self-reliance in critical technologies; ii) a facilitator for the creation of national wealth; iii) an enabler for gaining global leadership and; iv) finally, for improving the quality of life across all sections.

Space-based application should become part of the value chain of the user community who should internalise them. The priority would be to contribute towards the national endeavours in flood and water security, weather and climate, environment and ecosystem, education and healthcare, rural communication, infrastructure development, disaster management support and related national imperatives. Creating, sustaining and managing of operational space assets would become a key area of operation with Indian industry emerging as a risk-sharing partner for the production of launch vehicles, satellites and ground equipment.

Newer capabilities should be developed toward low-cost access to space, contribute to answering fundamental scientific quests, scientific exploration of earth as a total system, moon, Mars and beyond in solar system, the human space flight programme, eventually leading to human presence in solar system ensuring synergy of national capabilities and international cooperation.

#### **Carrying ISRO saga forward**

ADVANCED research should be undertaken in tandem with academia on cutting-edge technologies targeting to make India a technology leader in niche areas. The ISRO saga needs to be carried forward ensuring higher level of excellence and deeper relevance to the society. It has been a great opportunity for one to be part of the ISRO family.



Space should become the bedrock on which national systems for societal & other national imperatives are built up  
**K RADHAKRISHNAN**  
**CHAIRMAN, ISRO**

# Studs put a lightbug into orbit

*Anirvan Ghosh*

EARLIER this year, at IIT Kanpur's golden jubilee celebrations, the President of India handed over a nano satellite to ISRO. A group of students had proved that they can go one up on India's premier space agency by designing 'Jugnu' at the cheapest price ever—and it was done by students in their early twenties.

Last week was a time to celebrate for ISRO, as they launched the PSLV with five satellites. It was an even more joyous occasion for the makers of StudSat, a tiny satellite that was built by 35 students, mostly in B.Tech courses belonging to four engineering colleges in Bangalore and three in Hyderabad. StudSat was put in orbit by the PSLV-C15 from Sriharikota, and that brought to culmination a programme that stretched over three years. The satellite weighed just 1 kg, and has a camera which can take pictures of the earth from space, helping in weather prediction.

This satellite, and the development of Jugnu, marks a milestone in the development of small satellites in India. While Jugnu weighed just 3 kilos (hence the name 'nano satellite') it is quite a heavyweight in terms of features—it is fitted with a new infra-red imaging camera and a GPS system, both developed in IIT Kanpur. A nano satellite is one that weights less than, or equal to, 10 kg.

Other institutes have got in the act as well. A 3.5-kg satellite called Pradhan is being built by students of IIT-Mumbai. Two more satellites, each weighing less than 10 kg, are being assembled by students of SRM University and Sathyabhama University, both in Chennai.

The story of the StudSat is interesting. It evolved from an informal talk that D Raghava Murthy, project director, small satellites projects, ISRO Satellite Centre, Bangalore, had with a bunch of college students in Bangalore. The project's goal is to provide hands-on experience in the design and fabrication of space technology, while working towards costeffective future space missions. Afterwards, a group of around 10 went up to him and wondered if ISRO could help them make a satellite.

"I thought, why not?" says Raghava Murthy. StudSat became part of ISRO's programme to help colleges and universities space technology and learn how to build, nano and pico satellites. A team of 35 then worked under his guidance and that of their respective faculties across seven colleges to finally build this satellite. Before the launch, the team won the Hans Von Muldau Award for the best team project awarded by International Astronautical Federation, showing that India is a pivotal player in coming up with small satellites.

Now, after the launch, and after IIT Kanpur's Jugnu, he now describes the heightened interest, as happens after a successful launch, as a "contagion which has now caught on in other cities and colleges."

In Vellore Institute of Technology University (VITU), Vellore, the students have just designed the TubeSat, which is a pico-satellite, weighing less than 1 kg. This comes after a payload designed by them blasted off into space in ISRO's latest PSLV launch. The students worked with members of the Vikram Sarabhai Space Center of the Indian Space Research Organization (ISRO) to develop part of the payload that would launch with their RH 200 advanced sounding rocket.

In this compressed space, the satellite can carry a small payload, like a camera, that can capture photographs from space, much like the StudSat. "The satellite will be a basic one, but the very fact that we students can make it by ourselves is a big thing," says Ami Sampath, a final year B.Tech. student at VITU who is part of the team making the satellite. ISRO's Murthy says that the satellite design is impressive, and now ISRO will help make the satellite.

The enthusiasm among young people is such that SEDS has around 1,200 members in India. SEDS is an acronym for Students for Exploration and Development of Space. "We now have seven chapters across India," says Kalyan Chandra, who heads one of the chapters at VITU Vellore. He says that the main initiative is to generate and stimulate Interest amongst its members in space sciences and promotion of hobbies of astronomy, astrophysics and star gazing.

But it does a more important role as well. In a country where, as Sampath laments, there is hardly any aerospace engineering programmes save at a few elite insititutions (IIT Kanpur has it), SEDS tries to provide career opportunities for people who want to specialise in space technologies for students from various disciplines of engineering.

Some of them were part of the StudSat. Some more were part of the payload that also went up with the latest PSLV launch. Other satellites being developed in the IITs, VITU and other places are getting final touches before they blast off. Clearly for these students, the sky is the limit.



# IIT ADMITS 41 STUDENTS DENIED SEATS EARLIER

**Charu Sudan Kasturi**

■ [letters@hindustantimes.com](mailto:letters@hindustantimes.com)

**NEW DELHI:** The admissions panel of the Indian Institutes of Technology on Friday offered seats to 41 out of 52 students who missed opportunities at other institutions because the premier engineering schools “wrongly” invited them for admissions.

The 41 students have been offered admission purely on the merit of their performance in the IIT Joint Entrance Exam, and will receive seats left vacant after the first round of admissions counseling at the institutes.

But the institutes clarified they would not entertain concerns from the remaining 11 students who may have missed seats because they were misled by the IITs. They also retained the opacity in admissions that prevents these 11 students from verifying how far they stood from earning seats.

“I have done my job. We have said all we had to say about this case,” Professor D. Srinivasan, co-chairman of the Joint Implementation Committee of the IIT-JEE told *HT*.

Some of the 41 students offered seats will be admitted to institutions like the IIT, Banaras Hindu University and the Indian School of Mines.

The IITs had issued letters to these 52 students on June 28 informing them that they earned seats after the first round of counseling based on their scores and an add-on test.

But ten days later, the IITs declared they had erred in issuing letters to these students — who had actually not qualified.

The delay proved critical — the students did not take seats offered during the counseling for the All India Engineering Entrance Examination, which ended on July 2.

**HindustanTimes**

**Title : IIT ADMITS 41 STUDENTS DENIED SEATS EARLIER**

**Author : Charu Sudan Kasturi [letters@hindustantimes.com](mailto:letters@hindustantimes.com)**

**Location : NEW DELHI:**

**Article Date : 07/17/2010**

After Ashna Taya, one of the 52 students, questioned the decision, the HRD ministry asked the IITs for a report on the case.

**Hindustan Times**

**Title : OCEAN OF IDEAS - After Re symbol, IITian wants to design jewellery from junk**

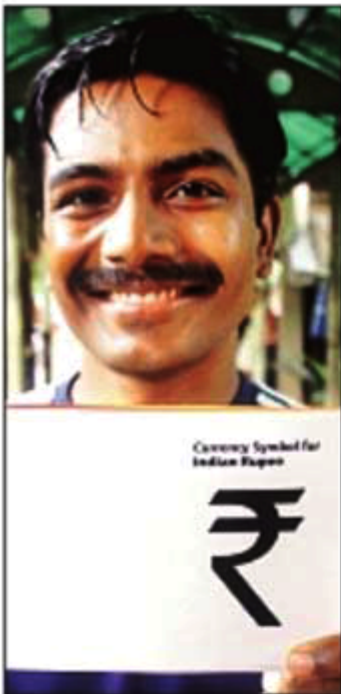
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**Location : GUWAHATI:**

**Article Date : 07/17/2010**

## OCEAN OF IDEAS

# After Re symbol, IITian wants to design jewellery from junk



■ **D. Udaya Kumar displays the new rupee symbol designed by him in Mumbai.** PTI PHOTO

**HUNT FOR SYMBOLISM IN TAMIL LETTERS LED HIM TO ROMAN & DEVANAGARI SCRIPTS AND TO THE RUPEE SYMBOL**

**Rahul Karmakar**

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**GUWAHATI:** He's obsessed with the ocean, and is now making waves.

"When you have lived in a coastal city (Chennai) and spent quality time in another (Mumbai), you cannot but fall in love with the ocean," Dharmalingam Udaya Kumar (31), who designed the symbol that is slated to put the Indian rupee in league with \$, €, £ and ¥, told *HT*.

Winning the contest for designing the rupee symbol made him reschedule his trip to this city; he will now join IIT-Guwahati as an assistant professor in the department of design on Monday.

Udaya's fascination with the seas is apparent from Waterworld, the model of a futuristic floating city he designed for the Arabian seacoast to ease Mumbai's urban congestion.

The concept fuelled his architectural thesis — he is a bachelor of architecture from Anna University besides a master of design from Industrial Design

Centre, IIT Bombay.

But this IITian is also fascinated by the literary ocean called Tamil. "I was into art from an early age, and was particularly fond of the Tamil alphabets. Subsequently, I worked on Tamil manuscripts and typefaces, and what I have done for my mother tongue is a drop in the ocean."

That drop was Parasakthi, a standard, simple and clean Tamil typeface with uniform stroke thickness that he designed.

The hunt for symbolism in Tamil letters led Udaya to Roman and Devanagari scripts. That helped him come up with the rupee symbol — with horizontal strokes representing the tricolour — to represent India's growing economy and its currency.

Udaya hopes his stint at IIT-Guwahati will help him make a mark in designing jewellery and accessories from junk material, a pet passion. "Whether or not I succeed, I will always be known as the person behind the rupee symbol," he said.





# IIT directors' panel report on new entry system by mo

## HRD MINISTER KAPIL SIBAL AT KHARAGPUR CONVOCATION

**SHIV SAHAY SINGH**  
KHARAGPUR | JULY 17

THE decision on an alternative examination for entry to Indian Institutes of Technology (IITs) and other engineering colleges in the country would be taken soon. HRD Minister Kapil Sibal said at IIT-Kharagpur on Saturday that a panel headed by IIT-Kharagpur Director Damodar Acharya was working on this and was expected to submit a report on the alternatives to him by the end this month.

Sibal said that he is yet to receive the draft from the panel. After the draft is ready, there will be several discussions on the proposals.

But he added that entry to institutes like the IITs should not be dependent solely on the performance of students in one examination, thereby hinting that the marks obtained in school may also be considered in future assessment systems.

The directors of the IITs who are part of the panel are of the opinion that along with doing away multiple engineering entrance examinations, more weightage should be given to marks of board examinations. The panel of IIT directors, headed by Professor Acharya, was set up in March 2010 along with the directors of IIT-Mumbai, IIT-Roorkee and IIT-Chennai to devise the new entrance system.

The last meeting of the panel was held on July 11

at IIT-Kharagpur. About 4.7 lakh students appeared in the latest IIT JEE examination in 2010 — for admission to over 10,000 seats in 15 IITs across the country.

Asked whether the ministry would take six months to finalize the new system after it receives the proposals, Sibal replied that it would not need so much time. "We do not take so long to take such important decisions. Once we get the report, we will act on it at the earliest," he said.

The minister, who was at IIT-Kharagpur on the occasion of its 56th Annual convocation said that students in the present situation are under tremendous pressure and there is a need to reduce the pressure and the dependence on coaching institutes.

"There is a crying need for examination reform. Whatever it may require, we will reduce pressure on our children at any cost," he stressed.

"Coaching institutes in the country are for the rich and the privileged. Children who are not well off cannot afford these coaching institutes. Coaching institutes are not the best way to get into best of the institutes like IITs in the country," the HRD Minister pointed out.

He added that at present students usually appear for about 20 entrance examinations and the proposed alternative can suggest a single window examination for entrance to both engineering and medical examinations in the country.

# IIT-K student death: Family writes to Nitish for CBI probe

KAUTILYA SINGH  
KANPUR, JULY 16

THE family of Indian Institute of Technology-Kanpur (IIT-K) student Rakesh Kumar Thakur, who died of a cardiac arrest in a city hospital on July 7, has written to Bihar Chief Minister Nitish Kumar, requesting him to order a CBI inquiry into the matter.

In the letter, Rakesh's father Vinay Kumar Thakur has alleged the IIT-K authorities had neglected his ill son, as they were busy preparing for the institute's convocation ceremony on July 3 — which Prime Minister Manmohan Singh had attended. Vinay said he will soon write to the Prime Minister, National Human Rights Commission and Union Human Resources Development Minister Kapil Sibal regarding the matter.

A first-year MTech student of mechanical engineering, Rakesh had joined IIT-K in 2009 and used to stay in the hostel. He had returned to Kanpur on June 27 after attending a family function at his village Subhash Kesa in Bihar's Muzaffarpur district. He fell ill the next day and was admitted to the IIT-K health centre. On July 4, he was shifted to Mahendru Psychiatric Centre in the Sarvodaya Nagar area. He died on July 7.

After his death, the IIT-K authorities told mediapersons that Rakesh was being treated for an acute psychiatric disorder before he was hospitalised

*press*: "My simple question is that if Rakesh's condition was serious, then why was he not hospitalised between June 28 and July 3?" Alleging that because of their pre-occupation with the preparations for the convocation, the IIT-K authorities did not bother about his son, Vinay said: "It was only after the convocation that they thought of shifting my son to a private hospital."

The family has lodged a complaint with the Gaighat police station in Muzaffarpur district on July 7. Since Rakesh had died in the jurisdiction of Kanpur's Kakadeo police station, the Gaighat police have transferred the complaint to Kakadeo police.

According to Rakesh's maternal uncle Shristi Kumar Thakur, there are several loopholes in the theory of the IIT-K authorities. "Rakesh was a brilliant student who did not suffer from any psychiatric disease. Also, the IIT-K never informed us about any problem," he said.

Shristi alleged that in order to avoid Rakesh's body being taken for postmortem, the IIT-K authorities had handed over the body to the family and told them to immediately leave for Muzaffarpur. After July 20, the family will visit the IIT-K and district police.

"We are yet to receive any complaint from the police or the family," said IIT-K Registrar Sanjeev S Kashalkar. The institute will order an inquiry only after Director Sanjay

and died a natural death. Vinay told *The Indian Ex-*

Govind Dhande returns from his tour of the US on July 20.

KAUTILYA SINGH  
KANPUR, JULY 16

# IIT-K's Jugnu satellite to take off in two months

JUGNU, the nano satellite developed by the Indian Institute of Technology-Kanpur (IIT-K), will be launched in a polar orbit from Satish Dhawan Space Centre at Sriharikota in the September-October period. This was conveyed to the institute by the Indian Space Research Organisation (ISRO).

The final flight model of the 3.5-kg satellite is ready and it will be handed over to the ISRO by the end of July.

"Through video conferencing, a team from ISRO had checked the progress of the flight model on July 11," said Nalinaksh S Vyas, who led the team of 12 IIT-K teachers and 45 students that worked on the project since December 2007.

He added that the ISRO sci-

## JUGNU AT A GLANCE

**WEIGHT:** 3.5kg

**ORBIT:** Polar orbit, 700 km above Earth

**LIFESPAN:** 1 year

■ In 24 hours, it will encircle the Earth 14 to 15 times

■ It will transmit images of weather, water bodies, crops and soils to IIT-K base station.

■ Everyday, it will transmit images thrice and each transmission period will last from three to five minutes.

■ Embedded with power micro imaging system and mens-based micro electronic system to capture high resolution images.

*Jugnu is designed to withstand the harshness of space. The images transmitted by the nano satellite will help in studying weather, agriculture and water bodies*

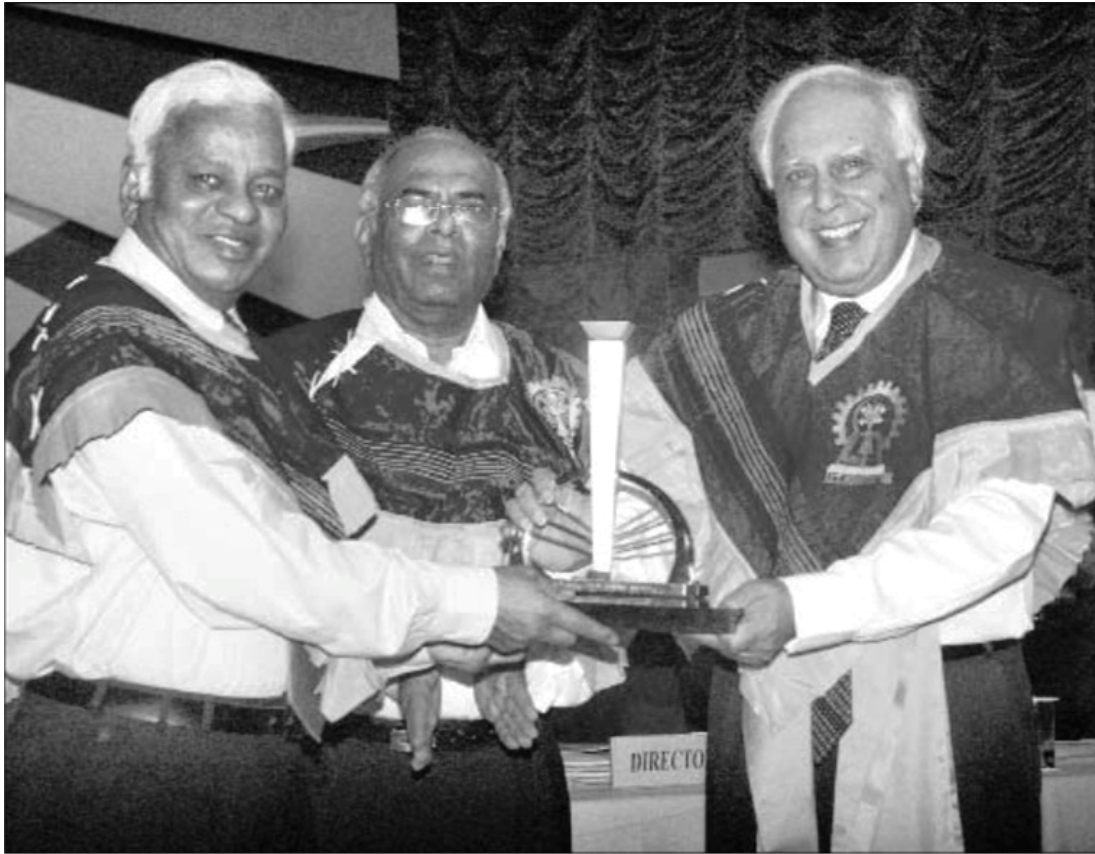
**NALINAKSH S VYAS**, Project leader and IIT-K professor

entists were satisfied with the project and its preparations.

The IIT-K team has also developed the ejection mecha-

nism, which will be used to separate Jugnu from the main satellite in the polar orbit. "After the main satellite is launched in the polar orbit, Jugnu will be separated by using this ejection mechanism," he added.

At first, the team developed a prototype of Jugnu, followed by its engineering model. It was then handed over to President Pratibha Patila when she visited the institute to attend the golden jubilee function on March 6. The President forwarded the engineering model to ISRO scientists for conducting tests.



**Kapil Sibal receives a memento from IIT-Kharagpur Board of Governors Chairman B Muthuraman on Saturday.**

PTI

## Old IITs must focus on PG & research, says Sibal

**EXPRESS NEWS SERVICE**  
KHARAGPUR, JULY 17

THE older Indian Institutes of Technologies (IITs) should focus more on post-graduate studies and research while the newer IITs should take care of undergraduate students, feels Union HRD Minister Kapil Sibal. The minister said that real wealth is created at the post-graduate and research level and creation of intellectual property is vital.

"It is not only for the IITs but for other higher educational institutes in the country too that they should focus more on PhD intake," noted Sibal.

IIT-Kharagpur Board of Governors Chairman B Muthuraman too, during his speech, stressed that the newer IITs should focus on undergraduate education while the older ones should focus more on PhD and post-graduate education. With several new IITs coming up, the number of IITs have increased to

15 at present.

At its 56th annual convocation on Saturday, IIT-Kharagpur awarded PhD degrees to 150 students. According to Institute officials, IIT-Kharagpur aims to take the total number of PhD scholars to about 30 per cent of the total number of the students enrolled.

As far as the intake of new PhD students is concerned, 228 doctoral students were enrolled at the Institute last year.

According to IIT-Kharagpur

Damodar Acharya, the institute has 109 patents from its research activities and transferred 41 technologies commercially to other enterprises.

"With a stress on research, the Institute received about 194 research projects in the year 2009-10 for a total value of Rs 141.92 crore and 129 consultancy projects worth Rs 10.12 crore. This amounted to a total of 323 projects for Rs 152.04 crore," Acharya said in his convocation address.

# IIT Guwahati holds Technothon

**EXPRESS NEWS SERVICE**  
CHANDIGARH, JULY 18

THE Indian Institute of Technology (IIT), Guwahati, opened its door to schoolchildren through its techno-management festival Techniche '10 with Technothon - The International School Championship. The prelims were held at St. Stephen's School, Chandigarh, today. The competition was open to students from Class IX to XII. More than 500 students from different schools across the region reached the spot to take the test. There were two categories for participants- Junior squad (Class IX and X) and Hauts squad (Class XI and XII). Most of the students were of the

view that the difficulty level of the tests was higher than they had expected.

Vikram Goyal, a student off IIT Guwahati and one of the organisers, said, "Known for perplexing puzzles, baffling sequences, charged atmosphere, brain-churning problems and loads of fun, Technothon'09 was a success last year. Young talents from across the country participated in the competition. With the same enthusiasm Technothon'10 is back with more surprises, exciting events ranging from Robotics to constructing structure to being a technical detective. We here strive hard to ensure that each and every bit of the participant's grey matter is used and expose the creativity and innovation."

[DNA](#)

[July 19](#)

## MIT grad gives a new meaning to blowin hot & cold

**Kranthi Kiran Vistakulas Dhama Innovations sells jackets that allow temperature control**

**G Seetharaman. Mumbai**



[Enlarge Image](#)

Its the coming together of the hearth and the air conditioner. Well, almost.

A brainchild of 29-year-old Kranthi Kiran Vistakula, the idea for Dhama Innovations was born out of something mundane, as is the case with more than a few innovations. In 2007, Vistakula was in the final year of his masters in mechanical engineering and technology policy at the hallowed Massachusetts Institute of Technology (MIT), and he was tiring of having to remove his woolens, which was necessitated by the windy, inclement clime there, every time he entered his classroom.

"So I wondered why I cant create a jacket which I can wear both inside and outside the room," he says. This led him to develop a technology called ClimaCon, short for climate control, which in turn he used to create Climagear, a battery-operated sleeveless jacket whose temperature can be altered anywhere between 20 and 40 degree celsius.

Climagear functions on the Peltier effect, a phenomenon discovered by French physicist Jean Charles Peltier in the early 19th century. The effect occurs whenever electrical current flows through two dissimilar conductors. Depending on the direction of current flow, the junction of the two conductors will either absorb or release heat.

Vistakula entered his innovation in various competitions and won much-needed greenbacks. He says, "I also got grants of about Rs 65 lakh from the Indian government and IIT-Delhi and NID (National Institute of Design), Ahmedabad, offered me incubation support."

He chose NID, and Dhama Apparel Innovations, named after his mother Dhamayanti, saw the light of the day in January 2008. The fledgling firm has since developed helmets, shoes and anti-bleeding packs, all of which along with Climagear, Dhama plans to pitch to the defence forces. "We are doing trials with the Indian Army and will soon meet the US Navy," states Vistakula. Other than defence, Dhama is also targeting segments such as healthcare and sports. The company hopes to clock revenues of \$100 million in 5 years.

Dhama will, in two months, launch its first product in the market, a combination of hot and ice packs, whose temperature could be lowered to as much as 4 degree celsius.

“We are hopeful of completing the trials with the Indian Army in a year or so,” notes Vistakula, who says he has no time for anything but his work, even on Sundays.

Dhama received its first round of funding from Mumbai's Angels and Reliance Venture Asset Management (RVAM) of the Reliance Anil Dhirubhai Ambani group.

Harshal Shah, chief executive, RVAM, says while Dhama's technology has the potential to make it big in the defence and military space, given its affordability, it will also find enthusiastic takers in the sports and healthcare sectors.

“Kranthis product is highly scalable and aids in creating a multiplier effect; consequently high value and high returns,” he adds.

The company, whose name was recently changed to Dhama Innovations, moved out of NID 2 months ago and set up shop in Hyderabad, the city its founder belongs to.

Asked if the company needs to seek another round of funding, Vistakula says, “We have sufficient money and now we want to develop multiple technologies.”

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## Its a first: IITian, 14, wins gold at Biology Olympiad

Mihika Basu



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It is rare for a student planning to pursue his studies in the Indian Institute of Technology (IIT) to participate, or get selected for the International Biology Olympiad (IBO), let alone win a medal for the country, said the Homi Bhabha Centre for Science Education (HBCSE). This year, however, for the first time, a student joining the IIT Kanpur's physics department, has not just represented India at IBO, but also won gold for the country. Sahal Kaushik, the youngest student to have cleared the IITs Joint Entrance Examination (JEE) with an all-India rank of 33, secured gold at the 21st IBO 2010 held in Changwon, Korea. Kaushik has also represented India at the Asian Physics Olympiad for two

consecutive years, winning silver in 2009, and bronze this year.

“Students planning to join the IITs or other engineering institutes don't participate in biology Olympiads. They are averse to biology since they view it as a subject involving rote learning. Kaushik's achievement is thus rare and special,” said professor Vijay Singh, national coordinator, science Olympiads. HBCSE is the nodal centre for all science Olympiads.

Out of the 240 students from 60 countries, who participated in the competition, four were from India. However, no one from Mumbai made it to the final team. “Students from Mumbai usually don't make it to the final team. Among those that get selected, maximum are from Hyderabad, Chandigarh and Rajasthan,” said Singh. Apart from Kaushik, who is from Delhi, Apoorv Singh Yadav from Bhopal, Preet Hathi from Jodhpur and Syed Mustafa Hashmi from Hyderabad won silver medals.

## Was rupee symbol selection flawed?

Mayank Aggarwal. NEW DELHI

The new symbol for rupee has attracted controversy.

Two unsuccessful candidates who sent designs for the new symbol have claimed that the selection process was flawed. The duo — Anil Khatri and RK Singh — used RTI replies given by the finance ministry to assert their claim. Their designs did not make the final shortlist.

The union finance ministry told them in an RTI reply that 3,331 designs were put up for selection, of which five were shortlisted. The process started in February last year, and culminated earlier this week after the Union Cabinet made a selection.

The five designs were selected by a special seven-member jury comprising representatives from the Union government, the Reserve Bank of India, and the National Institute of Design and the JJ Institute of Applied Art. The choice was made in three meetings — 29-30 September and 16 November — within 17 hours. This means, the jury spent, on an average, 18.37 seconds on every design. “The reply also revealed that during the selection, jury members were not provided with brief explanations of the design. This is disturbing,” Singh said.

“While selecting, the jury did not give grades or marks. The grading was done only when the five shortlisted candidates made a final presentation on December 15, 2009,” he told DNA.

As per guidelines, the symbol should represent the historical and cultural ethos of the country. The reply also revealed that one person from the jury did not attend any of the three meetings.

“Dr T Kumar from the culture ministry was supposed to attend the meetings, but nobody knows why she didnt. Nor did she give a written explanation for her absence,” Khatri said.

The design that got selected is the brainchild of Bombay IIT postgraduate D Udaya Kumar. The symbol is a combination of the Roman R without the vertical stroke and the Devnagri letter ra. “As per guidelines, the symbol has to be in the national language script or a visual representation. But Kumars design is a combination of Devnagri and Roman script, which violates guidelines,” Khatri said.

As per guidelines, a participant is allowed to send two entries, but Kumar sent four. “The ministry confirmed they got four designs from Kumar, but considered the first two. It didnt say which came first,” Khatri said.