



## MONTHLY NEWS CLIPS

**1-30 September, 2019**

### **IIT-Delhi director V Ramgopal Rao backs fee hike call**

**September 30, 2019** <http://www.newindianexpress.com/cities/delhi/2019/sep/30/iit-delhi-director-v-ramgopal-rao-backs-fee-hike-call-2041134.html>

The Council resolution also says that all needy students will be given fee concessions and scholarships similar to B.Tech students, said IIT Delhi Director V Ramgopal Rao.



The fee hike will be implemented over a period of three years and all scholarships and fee waivers, which are being given to B.Tech students will be extended to M.Tech students as well.

IIT Delhi Director V Ramgopal Rao on Sunday said that he personally supports the IIT Council decision on fee hike for IIT- M.Tech programmes for nine reasons, including the need to align with market requirements.

The fee hike will be implemented over a period of three years and all scholarships and fee waivers, which are being given to B.Tech students (including those belonging to economically backward sections) will be extended to M.Tech students as well.

“This is a decision taken by the Council based on a committee report. I was not a member of the committee,” he said in a Facebook post.

“...In all top universities abroad, while doing Ph.D, many students get a masters degree along the way. This is how masters programmes have changed all over the world in the last decade,” he said.

He further said that students of the M.Tech programmes in IITs don't go there to become

academicians.

“Those who wish to become one, can directly register for a Ph.D. All IITs allow a direct admission into Ph.D (with a high stipend and almost zero tuition fee) without M.Tech as a requirement, including the PMRF,” he explained.

He also said that IITs need to align their M.Tech programmes to suit market requirements. He added, “If students are willing to pay `20 lakhs for an MBA degree at an IIM, they can surely pay Rs 4 lakhs for a masters degree at IITs...since IITs now need to attract high fee paying students.”

The Council resolution also says that all needy students will be given fee concessions and scholarships similar to B.Tech students, he said.

### **JNU inks MoU for cooperation in research with IIT-Delhi**

**September 30, 2019** <https://telanganatoday.com/jnu-inks-mou-for-cooperation-in-research-with-iit-delhi>

This collaboration will facilitate access to each other's libraries and central research facilities to intensify joint research projects and other related academic activities.

The Jawaharlal Nehru University has recently inked an agreement with IIT-Delhi for cooperation in research, education and technology developments in science and other disciplines.

In a statement, the JNU said the Memorandum of Understanding (MoU) will not only bring the two institutes together but will enormously benefit teaching, research and technology development of social and national importance.

“The main objectives of signing this MoU between the two premier institutions are to recognise each other's strengths and co-operate in research, education and technology developments in the disciplines of science, engineering, management and social sciences,” the varsity said.

This collaboration between JNU and IIT-Delhi will also facilitate access to each other's libraries and central research facilities to intensify joint research projects and other related academic activities, it added.

The JNU administration is committed to working together with IIT-D in establishing joint ventures with special emphasis on disaster research and a comprehensive study of North Eastern regions of India, it said.

JNU Vice-Chancellor M Jagadesh Kumar underlined the need to broaden the scope for research and teaching through such collaborative efforts.

He emphasised that JNU has already established the Special Centre for North Eastern Studies and a Special Centre for Disaster Research. Research in these areas will generate much input for policies and governmental programmes, he said.

## Ramesh Pokhriyal Nishank chairs the 53rd Meeting of the Council of IITs

September 27, 2019 <https://www.5dariyanews.com/news/274065-Ramesh-Pokhriyal-Nishank-chairs-the-53rd-Meeting-of-the-Council-of-IITs>



Union HRD Minister Ramesh Pokhriyal 'Nishank' chaired the 53rd Meeting of the Council of Indian Institutes of Technology (IITs) at IIT Delhi today. Minister of State for HRD Sanjay Shamrao Dhotre was also present on the occasion.

### The following major decisions have been taken: -

Every IIT will work on improving their research excellence and through that their national and international rankings. For this, each IIT will come up with their action plan.

For promoting IITs as global education destinations, foreign students - including the OCI card holders with foreign passport & have studied abroad - would be provided direct entry to appear in the JEE Advanced examinations. Further, IITs would prepare a scheme for providing scholarships for the bright foreign students to study in IITs. They would also explore the possibility of offering online programmes to students both in India and abroad. The process of recruiting foreign faculty would be continued by liberalising the current regulatory processes.

A major drive will be launched for improving the hostel facilities and rebuilding the dilapidated hostels. Separate funding for this would be earmarked under HEFA. Further, where possible, the PPP model would be implemented which would be started by IIT Delhi.

In order to promote excellence in the IITs, all new appointments would be through tenure track system, under which IITs will have more flexibility in recruitment without insisting for necessary three years? post-PhD experience. The performance of such faculty members will be reviewed by an

Internal Review Committee after three years, and by an External Review Committee after fifth year based on which the decision for their retention or promotion to the next higher grade will be decided. It was also decided that the first and second generation IITs will not engage faculty members from third generation IITs before they complete a minimum of two years.

The Council approved, in principle, recommendations of the three Member Committee constituted for suggesting reforms in M.Tech system. The Committee has, inter-alia, recommended uniform fee structure for M.Tech programme in all IITs, and for charging the same fee for M Tech as in B Tech programmes. Institutions are encouraged to move towards sponsored students or even sponsored programmes as per requirement of industry.

Academically weak students, who are not able to secure the required credits for promotion to the next semester may be allowed an exit option with a degree programme after second semester, rather than being forced out of the programme. Individual IITs will decide modalities for this.

In order to ensure that students passing out from IITs do not face any difficulty in foreign countries with regard to their degrees not being accredited by the designated authority, the Council decided that external peer review of IITs will be done by an External Review Committee in the format prescribed by the NBA and based on the review by the Committee, accreditation will be given by NBA.

Continuation of the weaker section scholarships for slow paced students for one additional year beyond the regular term of four years.

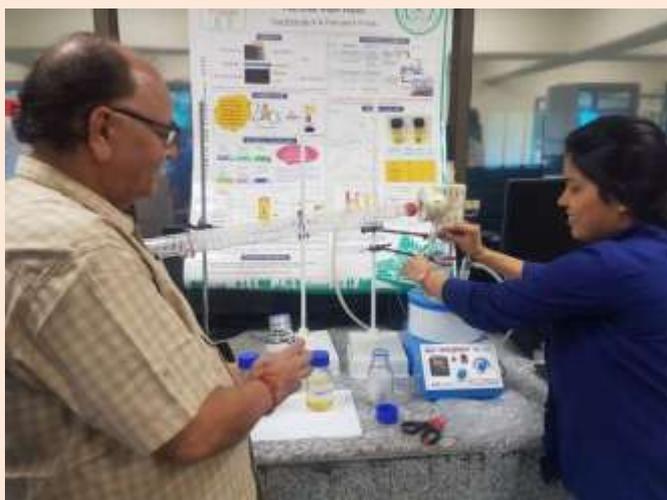
Each IIT will identify their thrust areas for specialization and communicate the same to MHRD within a month. In these areas, they have to set up nation-best research facilities.

The HRD Minister launched a common IIT/IISc admission portal developed by IIT Bombay for international applicants interested in pursuing postgraduate studies.

### **IIT Delhi successfully produces diesel from single-use plastic**

**September 27, 2019** <https://www.indiatvnews.com/science/iit-delhi-single-use-plastic-diesel-environment-552564>

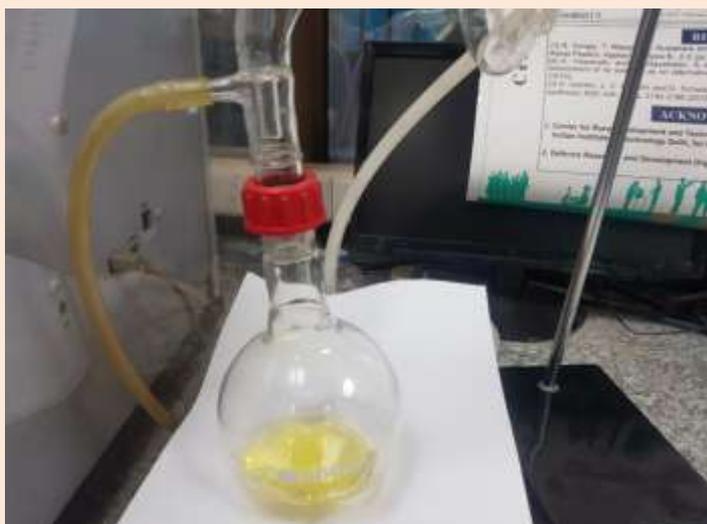
Amid Prime Minister Narendra Modi's mission to eradicate plastic use, Nagpur's Uma Diwedi has successfully converted single-use plastics and other such junks into diesel.



IIT Delhi successfully prepares diesel from single-use plastic  
Amid Prime Minister Narendra Modi's mission to eradicate plastic use, Nagpur's Uma Diwedi has successfully converted single-use plastics and other such junks into diesel.  
The research team of IIT Delhi's Chemical and engineering department after tremendous efforts is successful in producing diesel from single-use plastics.

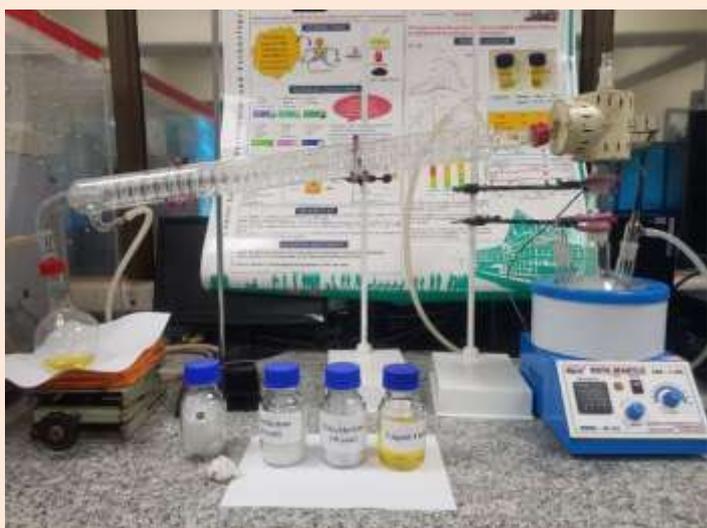


IIT Delhi successfully produces diesel from single-use plastic  
Currently, the team is able to produce 750 ml of diesel from 1 kg non-biodegradable garbage.



IIT Delhi successfully produces diesel from single-use plastic

This research was done and funded under the 'Make in India' project of IIT Delhi and Defence Research and Development Organisation (DRDO). The team has been funded with Rs. 35 lacs for the project.



IIT Delhi successfully produces diesel from single-use plastic

As the current price for a litre of diesel is Rs. 65, this scientifically produced diesel will cost around Rs. 45. This research team guided by Professor KK Pant and S N Naya, also claims that now they will try to produce petrol with the same process.

### **IIT Delhi crowdsources money from alumni donors to establish Chair in name of distinguished faculty member**

**September 27, 2019** <https://indiaeducationdiary.in/iit-delhi-crowdsources-money-from-alumni-donors-to-establish-chair-in-name-of-distinguished-faculty-member/>

IIT Delhi has crowdsourced money from alumni donors to establish a Chair in the name of distinguished faculty member Prof Anshul Kumar.

In recognition of Prof. Anshul Kumar's distinguished service to IIT Delhi, over 50 alumni donors came together in 2018-19 to fund the Prof. Anshul Kumar Chair in the areas of Computer Architecture and Electronic Design Automation.

Prof. Anshul Kumar, who retired on 31st July 2018 after serving the Institute for 44+ years, joined IIT Delhi as an undergraduate in 1969. After his B. Tech (1974, President's Gold Medal) he joined IIT Delhi as a Project Scientist while simultaneously working for his PhD. Later, in 1983 he joined IIT Delhi as a faculty member.

Speaking about the Prof. Anshul Kumar Chair, Prof. V Ramgopal Rao, Director, IIT Delhi said, "The establishment of this chair is a tribute to Prof Anshul Kumar's long and dedicated service to the students of IIT Delhi and to the institution. I am glad that our alumni have come together to ensure that the legacy of one of their great teachers goes on to inspire faculty into the future."

Prof. Anshul Kumar has played a key role in the establishment and growth of the Computer Science and Engineering (CSE) department in IIT Delhi as well as in the growth of VLSI Design/EDA in India. He is currently a Professor Emeritus in the CSE department, and continues to play an active role in research and teaching.

Prof. M. Balakrishnan (CSE dept., IITD), a close collaborator of Prof. Anshul Kumar, was instrumental in organizing the crowdsourcing effort.

"Our alumni have a lot of affection and respect for their teachers. They acknowledge the role of the faculty in helping them achieve their career goals. Besides, the success of our fundraising efforts shows that IIT Delhi alumni are keen to become active stakeholders in the development of the institution into a world-leader," Prof Balakrishnan said.

### **IIT-D declares winners of Alumni Award 2019**

**September 26, 2019** <https://www.thehindu.com/news/cities/Delhi/iit-d-declares-winners-of-alumni-award-2019/article29513296.ece>

Indian Institute of Technology, Delhi, on Wednesday announced that it will be presenting its Distinguished Alumni Award 2019, to Srinivasan Keshav, Professor at Cheriton School of Computer Science at the University of Waterloo, Mohit Aron, founder and CEO of Cohesity and Binny Bansal, co-founder, Flipkart. The award will be presented at the 50th convocation ceremony of IIT, Delhi, on November 2.

The award will be presented to Arun Duggal, chairman of ICRA Ltd., Mangalore Chemicals and Fertilizers Limited and International Asset Reconstruction Company and Amarjit Singh Bakshi, chairman and managing director of the Bakshi Group a Delhi-based business conglomerate and a first-generation entrepreneur.

Announcing the awards, IIT-D director V. Ramgopal Rao said the institute has has over 50,000 alumni right now and many of them have done exceedingly well in their chosen professions and brought a

glory to the institute and the country. “This year’s Distinguished Alumni awardees are also in a way representing the rich tradition of entrepreneurship that exists among IIT Delhi alumni. Over 50% of the Indian or Indian-origin Unicorn founders are graduates of IIT Delhi. The institute celebrates the achievements of its alumni by giving these awards,” Mr. Rao said.

Distinguished Alumni and Distinguished Alumni Service Awards, the institute said is an acknowledgement on the institute’s part of the significant contributions made by its alumni in nation building.

## **Plant based protein innovation: IIT-Delhi’s ‘mock eggs’ with moong dal as main ingredient**

**September 24, 2019** <https://www.financialexpress.com/lifestyle/health/plant-based-protein-innovation-iit-delhis-mock-eggs-with-moong-dal-as-main-ingredient/1716026/>

IIT Delhi's researchers unveiled their 'mock egg' with moong dal as its main ingredient but it actually comprises of five different types of dal.



IIT Delhi’s research community brought forward a commendable number of prototypes to industry leaders.

Are you a foodie who loves to experiment with healthy food alternatives? Do you find yourself discussing and researching on plant based diet benefits? Then, how about tasting a scrambled egg that is made from plant-based products, instead of eggs? On Industry Day, IIT Delhi’s researchers unveiled their ‘mock egg’ with moong dal as its main ingredient but it actually comprises of five different types of dal. Yes, we are referring to a plant based protein indeed! The ‘mock egg’ tastes exactly like an egg, has the same nutrient value and best of all, it is priced just like a brown egg!

### **Is a plant based diet healthier?**

A research team led by Professor Kavya Dashora, Center for Rural Development and Technology led the initiative towards creating plant-based meats to replace high protein food. Spanning six months, the research team has been on the project and it has been funded by Four Pursuits Ventures, an industry partner, looking to provide healthy options to vegetarians, weight-conscious and fitness-oriented consumers.

While the European market is already opening up to plant-based initiatives and has witnessed considerable interest, the same is not the case in India, where a traditional and conventional food preference is prevalent across states, particularly those that are known for consumption of non-vegetarian food options.

According to Professor Dashora, the research aims to offer low-cost, locally grown product that tastes like a mock egg in texture, nutrient profile and texture but it is actually made using a non-soy raw material. Further, this initiative also aims to support the Make in India initiative, whereby the raw material will be purchased from the local farmer to provide his farm-based income.

On Industry Day 2019, IIT Delhi's research community brought forward a commendable number of prototypes to industry leaders. Five thematic sessions were held along with a session on "Women in Science", comprising of over 500 industry experts and 100 IIT Delhi faculty members.

### **Modi govt rankings better than London-based QS & Times lists, IIT-Delhi study finds**

**September 24, 2019** <https://theprint.in/india/education/modi-govt-rankings-better-than-london-based-qs-times-lists-iit-delhi-study-finds/295611/>

QS and Times Higher Education are prominent education surveys where Indian institutes such as the top IITs and IISc have failed to make a mark.

The Modi government's ranking system for higher educational institutes is far more accurate and transparent than the surveys conducted by QS (Quacquarelli Symonds) and Times Higher Education (THE), an IIT-Delhi study has concluded.

QS and THE, both of which are based in London, are two of the most prominent higher-education surveys in the world. But even the most celebrated Indian institutes — including the IITs and the Indian Institute of Science (IISc) — have consistently failed to crack the top 100 in these lists, with western institutions such as Oxford University and MIT continuing to hold the top positions.

The Modi government's National Institutional Ranking Framework (NIRF) was launched in 2015 to rank educational institutes. It is part of a larger push by the administration to develop "institutes of eminence" that are recognised alongside the world's finest.

"We compared the three ranking systems and found that NIRF is the most accurate one," a professor from IIT-Delhi who deals with rankings told ThePrint. "We have also shared this study with the HRD ministry."

#### **How the rankings are calculated**

Findings of the IIT-Delhi study come days after some premier IITs expressed resentment about their dismal rankings in the THE survey.

The researchers behind the study have primarily taken exception to the methodology employed by THE and QS.

QS accords the greatest weight to an institute's academic reputation (40 per cent), which is determined on the basis of an exhaustive survey, while keeping 20 per cent each for faculty/student ratio and citations per faculty member, 10 per cent for reputation among employers, and 5 per cent each for international faculty ratio and international student ratio.

THE gives 30 per cent each to research, citations and teaching, with the rest covered by "international outlook" (7.5 per cent) — the number of foreign students and staff, and overseas collaboration — and industry income, or research income earned from industry (2.5 per cent).

NIRF, meanwhile, gives 30 per cent to teaching, learning and resources, another 30 to research and professional practice, 20 per cent to graduation outcomes, 10 per cent to outreach and inclusivity, and another 10 per cent to perception.

"THE might look like its very objective but it's actually not," said the aforementioned IIT-Delhi professor. "For example, when they count citations, sometimes it is on the basis of just one faculty member who has had 99 per cent of the citations... the institute still gets a good rank," the professor added.

"IIT-Ropar is a new institute and we know how it has been doing in terms of research, but this year it got ranked above us in THE," the professor said. "Similarly, sometimes there are institutes that are ranked very high one year and the next year they disappear without any reason."

The same professor said the methodology was less than transparent. "They count citations and research but we have no idea how they take these into account while calculating the ranks."

QS, meanwhile, is much more objective despite using the survey-based criterion as their primary yardstick, the professor said.

According to the faculty member, QS consults each institute on whom to approach for feedback.

### **NIRF methodology**

The NIRF is based on formulae for calculating scores under different parameters. These formulae can be accessed on the official NIRF website, allowing each institute to calculate their score independently as well. QS and THE have not spelt out any formula on their websites.

"We have developed a formula-based method to score institutions and everything is available in the public domain," said a senior HRD ministry official who deals with rankings. "We use scientific formulae to calculate scores for each of the parameters and none of the institutions has challenged our methods so far."

In the 2018 NIRF, IISc, Jawaharlal Nehru University and Banaras Hindu University were ranked the top three.

### **IIT Delhi team to analyse impact of odd-even scheme**

**September 22, 2019** <https://www.hindustantimes.com/education/iit-delhi-team-to-analyse-impact-of-odd-even-scheme/story-a91Lo2czYTLNjWmSDKPJ.html>

**The monitoring will be done from October 15 to November 15 to study the effectiveness of the car-rationing scheme in improving air quality.**

A team from the Indian Institute of Technology (IIT) here will be analysing the impact of the odd-even scheme, which will be rolled out from November 4 in Delhi, using real-time pollution monitoring devices invented by students.

The monitoring will be done from October 15 to November 15 to study the effectiveness of the car-rationing scheme in improving air quality.

The six-member team has invented sensor-based pollution monitoring devices called “Eziomotiv” which has been patented and has received ICAD certification too.

“The devices will be placed atop around 250 buses running in the national capital to gauge air quality. The devices will help calculate Particulate Matter (PM), heat, temperature and humidity across different terrains, traffic movement, weather and times of the day. We have tied up with the Delhi Integrated Multi-Modal Transit System (DIMTS) for the purpose,” Pooja Singh from IIT Delhi’s incubation unit told PTI.

“Each bus makes 16 trips daily, covering different routes with each of them being around 30 to 40 kms long. The devices have camera and are GPS enabled so we can also track the vehicle’s movements,” she added.

The study will be conducted in two phases--pre odd-even and odd-even.

“To analyse whether the scheme was impactful or not we also need data of preceding days to compare with. Hence, it will be done in two phases and we will analyse whether the quality improved or not during odd-even and if yes by how much percentage,” she added.

The devices that will be used have been invented at IIT through the incubated start up ‘Aerogram’. The IIT’s Centre of Excellence for Research on Clean Air, had provided the initial funding for the project. Other members of the team include--Manoj Sahukar, Faheem Ashraf, Sahil Siwach, Bhaskar Dutt and Surbhi Kumari.

“We have done a pilot study already using cars,” Singh said.

The team had earlier developed “EzioStat” static pollution monitoring devices installed at various places in IIT Delhi campus to measure PM levels.

Delhi Chief Minister Arvind Kejriwal had earlier this month announced introduction of the third edition of the odd-even plan. Under the scheme, odd and even-numbered vehicles will ply on alternate days from November 4 to 15.

An earlier study by IIT-Delhi researchers in 2016 had found that the rationing of vehicles on Delhi’s roads reduced air pollution by only 2-3 per cent when the scheme was introduced for the first time. However, the same methodology and devices were not used for the study.

## **IIT Delhi launches entrepreneurship scheme for faculty**

**September 20, 2019** <https://timesofindia.indiatimes.com/home/education/news/iit-delhi-launches-entrepreneurship-scheme-for-faculty/articleshow/71216639.cms>



### **The faculty members will get three years of leave to build their startups**

IIT Delhi students and alumni, who founded 543 startups and raised USD 13.3 billion investments for it, in the last five years are now moving towards launching an entrepreneurship scheme to actively engage faculty in developing startups. Until now, most of the faculty were involved with mentoring students or holding positions in the governing bodies of the students' startups. Now, they will work towards building their own enterprises.

The Faculty Innovation and Research Driven Entrepreneurship (FIRE) scheme will provide financial, academic and infrastructural support to the faculty to innovate solutions for societal problems. The Institute has invited startup proposals and the shortlisted ideas will receive a grant worth Rs 50 lakh.

The faculty members will get one year of paid leave and two years of unpaid leave to focus on developing a startup. The scheme is open to all domains, as the focus of the startup should be to solve the local problems.

V Ramgopal Rao, director, IIT Delhi, says that institutes' research output is increasing with more and more patents being filed, but there is a need to relook at the relevance and delivery model of the researches. "Startups are a way to take solutions to the society and the scheme is a part of our focus on investments in early-stage startups. Researches must translate into products for the public. We are hopeful that once faculty is engaged in developing startups, the enthusiasm and learning will trickle down to PhD students followed by graduate and undergraduate students," he adds.

Rao calls for accelerating the collaboration process between the stakeholders to transform the research ecosystem. He adds, "Limited awareness among the students regarding funding

opportunities is a key factor. It is becoming imperative for research institutes to connect with the industry, government and funding agencies to foster relevant and application-based researches."

### **IIT Delhi to showcase innovative fruits of collaboration with industry**

**September 19, 2019** <http://www.newindianexpress.com/cities/delhi/2019/sep/19/iit-delhi-to-showcase-innovative-fruits-of-collaboration-with-industry-2035909.html>

At the Industry Day slated to be held at the institution on September 21, this product will be showcased along with about 200 other innovative ready or semi-ready product prototypes and posters.



An indigenously developed drone that will be showcased during Industry Day on September 21 at IIT Delhi along with other products.

As a substitute for egg protein, students at IIT Delhi have found a way to cook scrambled egg based on plant protein, which has the potential to address protein deficiency nutrition among a large section of the population that avoids consuming meat or eggs.

At the Industry Day slated to be held at the institution on September 21, this product will be showcased along with about 200 other innovative ready or semi-ready product prototypes and posters.

The other research products that have emerged from the institute's collaboration with people from various industries include a bulletproof jacket 22 per cent lighter than existing ones; a waterless shampoo, and a waterless body wash that would not require the use of water and could prove useful for astronauts and soldiers.

The Industry Day is the flagship event of IIT Delhi that aims to harness and promote the power of industry-academia collaboration, kindle ideas for cogent partnerships and showcase cutting-edge research by researchers at IIT Delhi.

V K Paul, Member, NITI Aayog will be the chief guest at its third edition. The five themes for Industry Day this year are Clean Energy for Sustainable Economy and Environment, Sustainable Medical Technologies, Emerging Nano and Advanced Materials, Sustainable Environment, and Make in India.

'Research Café' sessions have also been planned on the sidelines of this year's event to facilitate interaction between IIT research scholars and industry officials.

Another special feature will be a session on 'Women in Science' that will discuss the need for gender parity in various science disciplines.

IIT D Director V Ramagopal Rao said, "to become an economic powerhouse, we, as a nation, should work on our challenges and build on our strengths."

"Industry-driven research will also focus on creating jobs for our youth, and achieve our ambition of \$5 trillion Indian economy," he added.

### **Waterless bath among IIT-D's innovations on show**

**September 19, 2019** <https://www.dailypioneer.com/2019/state-editions/waterless-bath-among-iit-d---s-innovations-on-show.html>

**Now, one can imagine having a hygienic, waterless bath and shampoo without using a single drop of water, a vegan scrambled egg consisting high proteins as Indian Institute of Technology-Delhi (IIT-D) is working on such innovations to help the people faced with water scarcity and to bring down the rate of animal slaughtering. Besides, the inventions such as bio-re-absorbable cardiac stent, water activated powerless heating system and a diagnostic tool for detecting cancer tissues, will be showcased at the 'Industry Day' event on Saturday.**

The scrambled egg is created based on plant protein, which has the potential to address protein deficiency nutrition among large population that does not eat meat or egg protein.

The IIT with the Defence Research and Development Organisation (DRDO) is also working on to produce bullet proof jackets for the safety of soldiers. The jacket will be made with high technology that it can resist .9mm, AK 47, rifle rounds and moreover, this jacket will be a less weighing jacket with 7kg as compared to the usual ones that weighs 10 kg.

The Industry Day 2019 is the flagship event of IIT-Delhi that aims to harness and promote the power of Industry-Academia collaboration, kindle ideas for cogent partnerships and showcase cutting edge research by the IIT-Delhi researchers.

The event which will be inaugurated by the Dr. VK Paul, Member, NITI Aayog will showcase more than 200 innovative product prototypes and posters by IIT Delhi researchers. The five themes for the third edition of Industry Day are Clean Energy for Sustainable Economy and Environment, Sustainable Medical Technologies, Emerging Nano and Advanced Materials, Sustainable Environment, and Make in India.

'Research Café' sessions have also been planned on the sidelines of this year's event to facilitate interaction between IITD research scholars and CXOs of Industry. Another special feature will be a session on 'Women in Science' that will discuss the need for gender parity in various science disciplines by women personalities from various fields.

“To become an economic powerhouse, we as a nation, should work on our challenges and build on our strengths. AI based innovation in the area of healthcare, clean energy solutions to propel sustainability and efficient waste management solutions will be at the forefront of collaboration to deal with our current challenges. Industry driven research will also focus on creating jobs for our youth, and achieve our ambition of \$5 trillion Indian economy. IIT Delhi’s Centres of Excellence are working with multiple Industrial partners towards this national vision,” said Professor V Ramagopal Rao, Director of IIT-Delhi.

Professor Rao, also added that the IIT is the top technological institute in the country that promote start-up and have about 150 start-up projects.

After Sonipat, Science and technological park will also be set up in IIT- Delhi campus and Jhajjar to promote science and technology.

On Industry day, a live demo of some research-based products such as State-of-the-art research work on Personal Body Armour, UAV (Aerial Vehicle) and RoV (Underwater Vehicle), Waterless shampoo, waterless body and others. The event will also highlight the role of the two newly formed Centres of Excellence dedicated to the cause of sustainability including Centre for Automotive Research and Tribology (CART) for the promotion of interdisciplinary research in electric vehicle and related areas and ‘Waste to Wealth Technologies’ wherein the long-term goal is to create circular economic models for waste management.

### **Panel on women in science at IIT Industry Day**

**September 19, 2019** <https://indianexpress.com/article/education/panel-on-women-in-science-at-iit-industry-day-6008135/>

**The event will showcase more than 200 innovative product prototypes by IIT Delhi researchers.**

IIT Delhi, which will hold its annual third Industry Day on September 21, has added a special theme to its panel discussions this year on ‘Women in Science’. Around 500 executives from 150 companies are expected to attend the event.

“A lack of role models is why you don’t see women in many fields of business. Through this platform, we hope to bring speakers successful in their fields to inspire women students,” said Professor Neetu Singh from the Centre of Biomedical Engineering.

The event will showcase more than 200 innovative product prototypes by IIT Delhi researchers. Among these is a bulletproof vest lighter than the ones made by DRDO. “DRDO’s best bulletproof vest now weighs 10.5 kg. We are working towards making it lighter by 30%, and have succeeded in doing so by 22%,” said Hemant Chauhan of the Department of Mechanical Engineering, who is working on the project. Other projects on display will include scrambled eggs based on plant protein and waterless shampoo and body bath.

## **Tool to detect cancer tissues among innovations to be showcased at IIT-D Industry Day event**

**September 18, 2019** [https://www.business-standard.com/article/pti-stories/tool-to-detect-cancer-tissues-among-innovations-to-be-showcased-at-iit-d-industry-day-event-119091801190\\_1.html](https://www.business-standard.com/article/pti-stories/tool-to-detect-cancer-tissues-among-innovations-to-be-showcased-at-iit-d-industry-day-event-119091801190_1.html)

A bioreabsorbable cardiac stent, water activated powerless heating system and a diagnostic tool for detecting cancer tissues are among the innovations by researchers at IIT-Delhi which will be showcased at its Industry Day event on Saturday.

The event which will showcase over 200 innovative product prototypes developed by researchers at IIT-Delhi, will be inaugurated by Niti Ayog member V K Paul.

"To become an economic powerhouse, we as a nation, should work on our challenges and build on our strengths. AI based innovation in the area of healthcare, clean energy solutions to propel sustainability and efficient waste management solutions will be at the forefront of collaboration to deal with our current challenges," IIT-Delhi Director V Ramgopal said.

"Industry driven research will also focus on creating jobs for our youth, and achieve our ambition of USD trillion Indian economy," he said.

Research Cafe sessions have also been planned on the sidelines of this year's event to facilitate interaction between IIT-D research scholars and industry representatives.

Another special feature will be a session on "Women in Science" that will discuss the need for gender parity in various science disciplines by women personalities from various fields.

## **IIT Delhi turns focus on industry-led research**

**September 17, 2019** <https://economictimes.indiatimes.com/industry/services/education/iit-delhi-turns-focus-on-industry-led-research/articleshow/71156895.cms>

**At most IITs, bulk of the research is funded by the government and government bodies.**

The Indian Institute of Technology Delhi (IITD) is focusing on more industry-led research as part of a strategic shift aimed at improving its domestic as well as global rankings "Research, especially industry-led research, would help institutes like ours improve their ranking. As a conscious effort, we are taking up more research basis the problems shared by industry," IITD director V Ramgopal Rao told ET.

At most IITs, bulk of the research is funded by the government and government bodies. This year, IITD is targeting to ramp up funding for research work to Rs 550 crore from Rs 400 crore in the previous year, as ET had reported earlier.

Research and research funding are among the parameters on which institutes are ranked globally by organisations like QS (Quacquarelli Symonds). Research is also an important measure for the

National Institutional Ranking Framework (NIRF), developed by the human resource development ministry. No Indian educational institution figures among the top 100 global universities recently ranked by QS. IIT Delhi ranks 182 in this list while in the NIRF list it ranks second among Indian engineering colleges.



“Currently we are focusing on projects across domains such as defence, auto, pharma and smart home devices,” said Rao. “In each of these cases, we have proactively engaged with industry stakeholders.”

The engagement with industry will only increase in the coming years, he said.

The shift in strategy is visible in some of the latest projects IIT Delhi has taken up. One such alliance is with the Joint Advanced Technology Centre (JATC), set up by the Defence Research and Development Organisation, wherein the duo is developing body armour designed for the minimum possible aerial density that can withstand AK 47 bullets of 7.62x39 mm with hardened steel. This will be the first indigenous hi-tech body armour.

Currently the military uses a bulletproof jacket that weighs about 10.4 kg. “IITD is targeting a weight of 7.5 kg, thereby enhancing the mobility of the wearer,” said professor Naresh Bhatnagar, IIT Delhi. The solution would be available for mass production in a year’s time, he said.

Another solution resulting from the academia-industry engagement is the partnership between IITD and TCS to conduct research on continuous manufacturing of drugs, a concept that has sparked interest among pharma companies owing to cost benefits. The lab at IITD is the only dedicated centre working on continuous manufacturing of drugs, according to Anurag Rathore, coordinator, DBT Centre of Excellence for Biopharmaceutical Technology, IIT Delhi.

“The annual cost of some of the cancer treatments can be more than Rs 25 lakh and is a roadblock for schemes like Ayushman Bharat. Moving to continuous processing is one of the few options to significantly reduce prices of these medicines by 50-90%,” said Rathore.

Another such product developed at the campus is a smart home solution by Eden Smart Homes, a startup incubated at the campus. The startup has invented a small hardware module that is installed behind the switchboards, thus making all the existing appliances mobile-enabled. These devices can then be controlled using the Eden app.

“While large companies charge Rs 4-8 lakh for automating a single 3BHK home, ESH provides a superior technology at a fraction of the cost,” said Pranjali Kacholia, founder, Eden Smart Homes.

## **JEE Advanced 2020: IIT Delhi announces JEE Advanced exam dates, adds new centre in the US**

**September 17, 2019** <https://www.indiatoday.in/education-today/notification/story/jee-advanced-2020-iit-delhi-divd-1599967-2019-09-17>

***This is for the first time that IIT JAB has decided to hold JEE Advanced 2020 for the first time in the United States.***

JEE Advanced 2020: Indian Institute of Technology-Delhi has announced the JEE Advanced 2020 exam dates and is going to organise the JEE Advanced exam in 23 IITs all over the country. The notification would be released in due course of time on the official website [jeeadv.ac.in](http://jeeadv.ac.in).

### **JEE Advanced 2020: Examination date**

The examination will be conducted on Sunday, May 17.

The IIT Joint Admission Board (JAB) has also decided to hold the JEE (Advanced) 2020 for the first time in the United States. The examination centre is being planned to set up in San Francisco.

Speaking about the decisions taken by the IIT JAB, Prof V Ramgopal Rao, Director, IIT Delhi, said, "JEE exam is now conducted in five countries worldwide and we have added USA to the list. US has benefitted significantly by the presence of a large number of IIT alumni there and there is considerable awareness in the US about IITs. Conducting JEE in the Bay area is a logical thing to do."

### **Shortlisted candidates for JEE Advanced Exam 2020**

The Board has decided to shortlist 2.50 lakh students (including all categories) from JEE (Main) 2020 to appear for JEE (Advanced) 2020.

### **What after JEE Advanced exam?**

All those applicants who qualify JEE Advanced are eligible to get admission in the IITs, NITs.

### **JEE Advanced 2019: IIT Roorkee conducting body**

In 2019, IIT Roorkee was the organising institute for JEE (Advanced) in which a total number of 161,319 candidates had appeared in both papers 1 and 2.

As many as 38,705 candidates were successful. Of the total qualified candidates, 5,356 were females.

## **IIT Delhi Seeks Big Student Friendly Move from MHRD, Says Loan Repayment Should Start After Student Finds A Job**

**September 16, 2019** <https://swarajyamag.com/insta/iit-delhi-seeks-big-student-friendly-move-from-mhrd-says-loan-repayment-should-start-after-student-finds-a-job>

The IIT Delhi administration has sought the implementation of a major student friendly measure wherein graduates would have to begin repaying their student loans only after they find a job, Indian Express has reported.

This recommendation has been sent to the HRD Ministry which is currently examining it. This suggestion is part of a larger push for autonomy by the institute and its peers.

The proposal seeks the implementation of something similar to the Higher Education Financing Agency (HEFA) which will fully or partially fund the tuition fee and then recover the amount after the student finds a job.

The proposal elucidated that many IIT graduates don't choose high paying jobs and instead choose to focus on research, entrepreneurship and public service. The current fee for a general category student in an IIT is around Rs 2 lakh per year.

The actual cost of teaching a student though stands at Rs 6 lakh per year and the institute bears the difference amount.

In many cases - especially in premium IIMs students are forced to choose a corporate career at the expense of entrepreneurship or other avenues to pay off their student loans as the two year fee stands at around Rs 24 lakh.

## **IIT-Delhi developing blockchain to plug adulteration of honey**

**September 15, 2019** <https://indianexpress.com/article/education/iit-d-developing-blockchain-to-plug-adulteration-of-honey-5996211/>

**The blockchain technology records transactions at every stage where honey changes hands — right from the honey collector to the aggregator who then sells it to the processor — to make sure there is a clear record of where the product has come from.**

Kavya Dashora, assistant professor at the Center for Rural Development and Technology and the principal investigator in the project, said regular testing of each batch is not easy and is also expensive. (Express photo by Praveen Khanna)

Researchers at IIT-Delhi are working on a honey blockchain to check the problem of adulteration. The technology, researchers say, will not just help increase transparency about the various stages that a batch of honey goes through, but will also help track the origin of the product and check false claims. The project is part of an initiative where private firms fund research by students and staff at IIT.

The blockchain technology records transactions at every stage where honey changes hands — right from the honey collector to the aggregator who then sells it to the processor — to make sure there

is a clear record of where the product has come from. The import of Indian honey has been banned by several countries in the past over adulteration.

Rahul Dewan, COO Srijan Technologies Pvt Ltd which is funding the study at the institute, says India's internal quality and testing standards are not rigorous enough. "India's honey entering into UK and EU has been under the scanner for adulteration and presence of antibiotics such as 'streptomycin'... If importers and consumers around the world are able to trust the quality of the honey they are consuming, grassroot bee-keepers and bee-collectors get better rates," said Dewan.

Kavya Dashora, assistant professor at the Center for Rural Development and Technology and the principal investigator in the project, said regular testing of each batch is not easy and is also expensive. "This is a business that runs on trust. Honey either comes from the wild or from apiaries. The produce can then travel through a number of hands and this is where the chance of adulteration is highest. A blockchain ledger records transactions at every stage of the value chain. This can enable the honey industry and exporters to establish trust as consumers can be sure of the origin and the journey from production to the counter," Dashora said.

**Madhya Pradesh govt signs pact with IIT Delhi on drinking water project**  
**September 13, 2019** <https://www.outlookindia.com/newscroll/madhya-pradesh-govt-signs-pact-with-iit-delhi-on-drinking-water-project/1618410>

The Madhya Pradesh government has signed an agreement with IIT Delhi for technical and research related cooperation for drinking water project in the state, officials said on Friday.

A senior official said the Jal Nigam (water department) has discussed the modalities of sharing technology on improving sustainable sources, network design optimisation and land water conservation with the premier education institute.

"Details have also been discussed on sharing of research and knowledge on better implementation of drinking water schemes," Sanjay Kumar Shukla, Principal Secretary of the Madhya Pradesh Public Relations Department, said.

In the initial stage, the agreement has been signed for a period of two years, he said.

"The department's effort is to have a long-term agreement so that information and research could be shared and its benefits are transferred to people through implementing agencies," Shukla added.

**IIT Delhi developing technology to reuse water**  
**September 15, 2019** <https://timesofindia.indiatimes.com/city/delhi/iit-delhi-developing-technology-to-reuse-water/articleshow/71138818.cms>

While there is a paucity of water in India, and reusing of water is becoming a regular affair, Indian Institute of Technology (IIT) Delhi's Civil Engineering department has started to develop a mechanism to identify and assess Delhi water that can be reused by checking for such pathogens in them that can cause diseases and infections.

Funded by the Science and Engineering Research Board of the Department of Science and Technology (DST), the project in support of the Delhi Jal Board aims to develop a system “to understand possibility of exposure of microbial pollutants during different reuse practices,” said Arun Kumar, associate professor in the Department of Civil Engineering at IIT Delhi.

He added that this effort will lead to address knowledge gaps and issues identified during review of available information on water reuse activities and associated possible health risks.

“We want to act as a support system to DJB and other authorities and help identify problems in the water and to check if there exist any pathogens that can cause viral infection and diseases. This is because in India, people are exposed to emerging contaminants, such as pathogens from different environmental media, such as air, water, and solids,” explained Kumar.

IIT Delhi informed that in India we have information on occurrence of fecal coliforms and total coliforms, but no detailed information.

“This information is needed to develop quantitative microbial risk estimates for the Indian environment. Towards this effort, the first hurdle is to determine an appropriate methodology for detecting pathogens in environment,” Kumar added.

The research will act to find answers to how there is a correlation between environmental exposures to pathogens with resulting diseases in the Indian population.

“The trend of water reuse is increasing in India due to shortage of clean water. Efforts have been increasing to explore feasibility of using wastewater, both domestic and industrial wastewater, as gardening water, irrigation water, and finally as potable water. However, considerations of exposure risks and impacts on environment during reuse practices have not been explored. We want to provide a mechanism that someone planning to reuse water from a water body will get assessment and certification from the DJB,” said Kumar.

The project, in collaboration with Patrick Gurian of the Department of Civil Architectural and Environmental Engineering, Drexel University, USA is part of the VAJRA (Visiting Advanced Joint Research) Faculty scheme that enables NRIs and members of the overseas scientific community to participate and contribute to research and development in India.

This project will be featured by IIT-Delhi on its Industry day on September 21.

## **IIT Delhi Director Slams Times Higher Education's University Rankings**

**September 13, 2019** <https://www.republicworld.com/india-news/education/iit-delhi-director-slams-times-higher-educations-university-rankings>

### **HACK:**

- The Director of IIT Delhi, V Ramgopal Rao, in a Facebook post, has pointed out the mistakes in the 'THE' – World University Ranking' methodology
- He said, THE uses 'perception-based parameters' instead of focusing on 'Research Impact'

- Rao said that if the fundamental of a university or institution is strong, the rankings should follow them

Talking about the contribution of India's education system in the global space, the Director of Indian Institute of Technology, Delhi, V Ramgopal Rao, in a Facebook post, has pointed out the mistakes in the 'The Times Higher Education' – World University Ranking' methodology. He reiterated that it uses 'perception-based parameters' instead of focusing on 'Research Impact' which causes the Indian institutions to rank low on their list. According to Ramgopal Rao, if the 'fundamental' of a university or institution is strong, the rankings should follow them. He mentioned in his post the four reasons why he does not believe or abide by THE's ranking system and methodology.

### **The post criticizing THE's methodology**

Director Ramgopal Rao in his post also mentioned a difference between Quacquarelli Symonds rankings and The Times Higher Education rankings. He said, "That time of the year again about University rankings and, alas, the same question again: Why no Indian institution is in the top 100 according to QS (and top 300 according to THE)? Everyone becomes an expert on our institutions at this time of the year. If you care to know the facts, please read on." He then went on to give four reasons to the rhetoric question he put forth.

I am not commenting on IIT Delhi improving its ranking by about 100 places in THE rankings released today, as I believe it doesn't represent the true ranking of our institutions.

1. In three of the ranking parameters such as International students, International faculty and Faculty-student ratio, our institutions score close to Zero points. To be ranked globally, we need to internationalize our campuses.

2. Contrary to popular perception, on Research Impact scores, our top institutions indeed score very well. For example, IIT Delhi was ranked 39 in the world in 2018 on Research Impact score (total citations divided by the number of faculty) in QS ranking. We recruited a lot more faculty in the last two years, and it has gone to 50's now. Once the new faculty become productive, it should rise again.

If you rank world universities on just the "Research Impact" scores, many of our top Indian institutions (read IITs and IISc) will be in the top 100.

3. We don't score well on perception-based parameters on a global scale. Again because of the inward-looking nature of our institutions and cultural issues. This is also changing now.

4. 50% of the scores used for ranking are based on perception. QS is at least a lot more transparent with respect to how they generate perception-based scores. THE is a blackbox. Many of us have stopped caring about THE rankings.

Director Rao also gave a brief about the makings of a great institution. He said, "In my humble opinion, institutions become great by positively impacting the ecosystem around it by imparting the highest quality education and training to the students who go through its portals. If Delhi NCR has the highest number of tech startups/Unicorns in India, IIT Delhi has played a role in it. If 14 of the 24 Unicorns created by Indians are by the alumni of one single institution IIT Delhi, IIT Delhi is surely

doing many things right. If the fundamentals are strong in any institution, the rankings will follow. I am positive and hopeful about the future. Let's not create negativity in the society by harping on some numbers, which aren't even put together with enough care and thought.”

[V.Ramgopal.Rao@ramgopal\\_rao](mailto:V.Ramgopal.Rao@ramgopal_rao)

About Rankings. If you care to know the facts about International rankings and why not a single Indian institution is in the top 100 in the world rankings, please read my post on this. Things are changing. [https://m.facebook.com/story.php?story\\_fbid=10218057669285717&id=1006344589 ...](https://m.facebook.com/story.php?story_fbid=10218057669285717&id=1006344589...)

### **THE's ranking methodology**

THE on its website publishes the methodology that it applies to rank universities every year. The rankings of 2020 will include about 1,400 universities across 92 countries. THE will be using 13 carefully calibrated performance indicators that measure an institution's performance across teaching, research, knowledge transfer and international outlook. The performance indicators, according to THE website, are grouped into five areas: Teaching (the learning environment); Research (volume, income and reputation); Citations (research influence); International outlook (staff, students and research); and Industry Income (knowledge transfer). The following table shows the share of these performance indicators.

### **Yamuna e-way operator told to implement IIT-Delhi safety report within 15 days**

**September 06, 2019** <https://www.hindustantimes.com/cities/yamuna-e-way-operator-told-to-implement-iit-delhi-safety-report-within-15-days/story-ijHoB5U2xI9yWjXxEGZtJO.html>

The Yamuna Expressway Industrial Development Authority (Yeida) Friday said it has directed the Jaypee Infratech Limited (JIL) to implement the measures suggested in a safety audit report of the Indian Institute of Technology, Delhi (IIT-Delhi) to make Yamuna Expressway safer for motorists.

The directions came after Yeida chief executive officer Arun Vir Singh conducted a detailed inspection of the 165km expressway from the Zero Point in Greater Noida to Agra.

“We have given Jaypee Infratech Limited 15 days to implement the safety measures, including the construction of exit and entry ramps at the required spots, construction of a loop and toll plaza, as well as changing the design of the road at some places,” Arun Vir Singh, Yeida CEO, said.

The JIL needs to construct entry and exit ramps at Rabupura, Bajna and Raya, etc, officials said.

The Yeida, in August 2018, had hired IIT-Delhi to conduct a safety audit of the expressway that passes through six districts of Gautam Budh Nagar, Aligarh, Mahtura, Hathras, Agra and Bulandshahr. The police in these districts keep passing the buck instead of enforcing traffic rules, officials said. The expressway was opened to the public in August 2012 and since then, more than 770 people have been killed in accidents on the access-controlled highway. As recently as on July 8, at least 30 people were killed when a bus fell off the expressway into a drain when the driver fell asleep near Agra. After that accident, chief minister Yogi Adityanath pulled up government officials,

the traffic police as well as JIL, and directed them to intensify enforcement so that motorists could be provided adequate safety on the expressway.

The eight points suggested by IIT-Delhi in are additional signage (distance bar markings) before the exit ramps, removal of lane system, installation of rumble strips at the entry and exit points, installation of crash attenuators at the exit ramps, audible shoulder marking throughout the corridor, removal of all signposts from the shoulder, shoulder guard rail to be reinstalled as per the standard specifications, and replacement of the raised median (divider) with flush medians and central guard rails

“The expressway concessionaire will have to spend ₹28.42 crore on implementing the suggestions made by IIT-Delhi in the first phase. We have directed the JIL to start implementing the suggestions immediately,” Singh said.

The JIL has started the construction work and it has been given time to finish it within the stipulated time frame, officials said.

The JIL legal advisor Ajit Kumar said, “We have placed crash barriers along a 38km stretch of the expressway from Zero Point in Greater Noida. The crash barriers on the bridges are being installed. We aim to finish the work by the end of September.”

The Yeida has also directed the JIL and the police to fine motorists, who speed on this road, beyond the prescribed limits.

“We have asked police to issue heavy penalties to 5,800 motorists, who have been caught violating traffic rules over the past three months (June, July and August),” Singh said.

Yeida officials said the inspection found that six CCTV cameras, nine video accident detecting systems, 15 automatic number plate reader speed cameras, 164 emergency call boxes and one crane were not operational on the expressway. Three nitrogen gas filling stations were also not functional on the Yamuna Expressway.

“We have directed JIL to repair all these cameras and devices immediately. If this is not done at the earliest, then we will act against the company. We have also directed JIL to repair worn out rumble strips and also install new ones wherever required,” Singh said.

## **IIT-Delhi’s School of Interdisciplinary Research to increase student strength to 100s**

**September 4, 2019** <https://news.careers360.com/iit-delhis-school-of-interdisciplinary-research-increase-student-strength-100s>

Prof V. Ramgopal Rao, Director, upbeat about IIT-Delhi’s School of Interdisciplinary Research (SIRe) says he looks forward to 'increasing the strength of students to a few hundreds to ensure cutting edge research in interdisciplinary areas and also take up research problems that have societal relevance.'

“The future of research and innovation will be at the intersection of different disciplines. Institutions need to create mechanisms for faculty and students to interact with researchers who are working

outside of their domains of expertise. This will help open up new fields of research and boost the innovation ecosystem. SIRE at IIT Delhi is doing this effectively”, said Prof. Rao on the occasion of the launch of an all-new website (<http://sire.iitd.ac.in/>)

Prof A. Ramanan, Head, SIRE said, “The school serves as an ideal platform for the growing numbers of the Centres of Excellence, MoUs and other joint degree programs with external Indian and international institutions for research into problems requiring multidisciplinary approaches. SIRE offers an opportunity to pool knowledge and skills from core disciplines and different institutions to solve intractable research and societal problems.”

The School of Interdisciplinary Research (SIRE) was founded in October 2017 as a virtual school at IIT Delhi to strengthen strategic interdisciplinary areas on fundamental and societal issues. The small strides taken so far have gathered momentum setting the vision for SIRE.

In the last two years, SIRE has enrolled 20 research scholars from diverse academic backgrounds. Most of them have sponsored projects and others have their own fellowship earned through all India tests. For supervision of their research work, SIRE has 36 faculty members from different fields and institutions. All the research scholars at SIRE are engaged in solving problems that cut across traditional domains.

### **Besides global ranking, Globalization of IIT Delhi to open new avenues: Prof. V. Ramgopal Rao**

**September 3, 2019** <https://www.devdiscourse.com/article/education/656506-besides-global-ranking-globalization-of-iit-delhi-to-open-new-avenues-prof-v-ramgopal-rao>

IIT Delhi has recently launched an initiative – Globalization of IIT Delhi – with a vision to improve its global ranking. The Director, Prof. V. Ramgopal Rao is hopeful that within five years the institute would be among the top 100 institutions of the world. Besides, it will also open several developmental avenues.

Getting admission in any Indian Institute of Technology is a dream for many. These institutes are hailed as the best in India and so attract the best brains. Every year, the multi-national companies from across the world including those in the USA and European countries come here for campus placements. Why are IITs' not among the top 100 institutions of the world? This question pains IITians and also every Indian. IIT Delhi has recently launched an initiative – Globalization of IIT Delhi. The initiative is under the mandate of Institute of Eminence (IoE) scheme of the University Grants Commission for which six institutions, three each from public and private sector, were selected in the first phase in July 2018 from 114 top institutions of India. IIT Delhi is first amongst the three public institutions, others are IIT Mumbai and Indian Institute of Science (IISc), Bengaluru.

***Siddheshwar Shukla, Associate Editor with Devdiscourse catches up with IIT Delhi Director Prof. V. Ramgopal Rao and the Dean, Alumni Affairs and International Programs, Prof. Sanjeev Sanghi for a conversation on the challenges and opportunities of the initiative. The Edited Excerpts:***

**Siddheshwar Shukla: What is the vision behind 'Globalization of IIT Delhi'?**

**Prof. V. Ramgopal Rao:** Now everybody is asking, why Indian universities and academic institutes are not among the top 100 of the world ranking. This is because, in the three out of the six parameters of global ranking criteria, we are awarded zero marks. These three are – foreign faculty, foreign students and faculty to student ratio. Unless the faculty students' ratio is 1: 4 or 1:5, it's very difficult to be in the top 50 on the global ranking.

On all these parameters, IITs are not doing well. Being the Government of India institutes, we never had the autonomy to offer faculty positions to the foreigners.

In fact, until two years ago, we even had a rule that the foreign students in IITs were charged a fee equal to the universities in the USA. As the students' strength was gradually increased, which is presently about 10,500, we are facing problems in maintaining faculty to student ratio. There are not enough eligible Ph.D. holders in India who could be hired as faculty. Therefore, if we ever want to see any of the Indian universities or institutions to be in the top 100 global rankings, we will have to open our education system for the world – encourage foreign students to get admissions and open faculty positions for foreigners.

**S. Shukla: So, is the main idea to improve the global ranking?**

**Prof. Rao:** The day we are in the top 100, India will be proud of these institutions. Secondly, worldwide several countries rank below India in terms of GDP and other social and economic criteria. The technologies developed by IIT Delhi for Indian farmers could also be used in Bangladesh, Africa or any other country.

Now, our students need to have a global outlook. The technologies may be local but the science is global. Therefore, the technology we develop for local farmers can be tailor-made or modified for the farmers of Africa, Bangladesh or any other part of the world. If the students are provided such exposure, they will develop the global outlook. Thus we will have some startups and companies with a global outlook. In this way, besides fulfilling developmental requirements of India, the IIT Delhi will play a positive role in the sustainable development of those countries.

**Prof. Sanjeev Sanghi:** Besides, in today's global era we do realize that it is good to have cultural diversity on the campus. We would like to have more foreign students because they learn about our culture and our students learn their culture when they study here. So, with that viewpoint, we would like our campuses to be more diverse.

**S. Shukla: What is the current extent of global students in IIT Delhi?**

**Prof. Sanghi:** Currently, 150 out of about 10,000 students on the campus are of non-Indian origin.

**S. Shukla:** Which countries or continents are sending maximum students to IIT Delhi?

**Prof. Sanghi:** IIT Delhi presently has students from Nepal, Sri Lanka, Bangladesh, Iran, Iraq, Afghanistan, Syria, Egypt, Ethiopia, Colombia, South Korea etc.

**S. Shukla: Which countries or continents, according to you, have the scope of sending more students to IIT Delhi?**

**Prof. Sanghi:** Besides Asian and African countries, we have good potential from South East Asia and Middle East countries. In addition to that, regions like Latin America, where we think we can get a lot of students but we have not exploited them fully. And the second region is Eastern Europe. But language is a major constraint in these two regions. Recently, we launched a student exchange program with the University of Queensland in Australia.

**S. Shukla: What are the special features of the initiative - Globalization of IIT Delhi?**

**Prof. Rao:** We are mainly looking for foreign students in the Postgraduate and Ph.D. programs. We have been able to admit seven times more foreign students in our Ph.D. programs in 2019 as compared to the previous year.

**Prof. Sanghi:** Earlier the tuition fee for foreign students was higher than their Indian counterparts. For example, the fee for Indian students in M.Tech. and Ph.D. programs respectively INR 25,000 and INR 10,000 per semester but for foreign students, it was \$US 2,000 per semester. After IIT Delhi was put under the IoE scheme, the fee for foreign students was lowered and made at par with Indian students. Besides, we have started international Ph.D. Fellowship Programs (IPFP) under which we offer 500 fellowships of about INR 28,000 per month.

**S. Shukla: IIT Delhi recently organized a summit on 'Globalization of IIT Delhi'. How much such summits are useful for this initiative?**

**Prof Rao:** We wanted to make use of the ambassadors of the embassies and consulates in India to reach out to the universities in their countries. In the summit, we invited ambassadors of many of these countries and presented our detailed project before them. This is working. I am getting messages and updates from several ambassadors. We are also working on proposals to launch joint Ph.D. supervision programs with several foreign universities. Besides, Egypt has offered us to set up a campus of IIT Delhi.

**Prof. Sanghi:** As we said, we have started many initiatives, these initiatives need to be communicated to the students around the world. They should know – there exists a place IIT Delhi where they can get an excellent education. We want to get the best students from all over the world. As an analogy, I would like to say, in our times the best students used to go to the USA. What we are trying is - to get the best foreign students in IIT Delhi who due to any constraints are not able to go to the USA. Our faculty teams are going to some of these countries, for example, a team went to Malaysia and they gave presentations at about half a dozen universities. The faculty teams were also sent to Nepal, Bangladesh and other countries as well.

**Shukla: With 'Globalization of IIT Delhi' where do you want to see the IIT Delhi in next five years?**

**Prof. Rao:** We want to make it in the top hundred institutions of the world. That is our goal but it's also a challenge because there are many things that need to happen. As about 50% of those parameters are devoted to perception - what others think about us. We are trying to reach out societies, tell them about the achievements of IIT Delhi and connect better with the societal problems.

For instance, if you go to a place and see any IIT Delhi-developed technology that solved a problem in the community. It makes a perception about us. Thus people get to know about IIT Delhi and that is how their perceptions can change over a period of time. We are doing everything possible. We want to be counted among the top hundred institutions in the world in the next five years on any parameter that you want to measure or on any kind of a perception based ranking system.

**IIT Delhi selected for Rs. 125 crore grant from Department of Science and Technology**

**September 2, 2019** <https://www.timesnownews.com/education/article/iit-delhi-selected-for-rs-125-crore-grant-from-department-of-science-and-technology/480897>

**IIT Delhi will set up a shared, professionally managed, Science and Technology infrastructure facility worth Rs 125 crore. The SATHI facility will be set up in the Sonapat campus in Haryana of IIT Delhi.**

IIT Delhi has been selected to set up a shared, professionally managed, Science and Technology infrastructure facility. A high-level Expert Committee constituted by the Department of Science and Technology (DST), Government of India, has selected the institute for this purpose. The Science facility will be made accessible to academia, start-ups, manufacturing units, industries and R&D labs.

The science facility will be known as 'Sophisticated Analytical and Technical Help Institute' or SATHI. According to a statement from IIT Delhi, the centre has been provided to the institute for its recognition of the performance in area of research and development, managerial/administrative capability, infrastructure availability and more

Department of Science and Technology will provide Rs 125 Crore mostly non-recurring grants to IIT Delhi in next three financial years starting from 2019-2020. Prof V Ramgopal Rao, Director of IIT Delhi, expressed gratitude to DST for showing faith in the capabilities of the institute. Rao said that the Institute is honoured to this responsibility for the benefit of the country. He added that the facilities being created as part of this activity will be made available to the researchers on a round the clock basis with minimum downtime.

The SATHI facility is being set up with the aim to provide professionally managed services with efficiency, accessibility and transparency of highest order under one roof to serve the demands of industry, start-ups and academia. The facility will be set up in the Sonapat campus, Haryana of IIT Delhi. SATHI facility will be equipped with major analytical instrument and advanced manufacturing tools which are usually unavailable at institutes or organizations.