IISc to felicitate VK Aatre


The Indian Institute of Science (IISc) Alumni Association in Bengaluru will be felicitating three of Institute's alumni who were honoured with Padma Awards this year. Dr VK Aatre, Former Chief of Defence Research and Development Organisation (DRDO), Former Advisor to the Defence Minister, Dr H R Nagendra, President, Vivekananda Yoga Anusandhana Samsthana, Bengaluru, Dr Dipankar Chaterjee, Professor, Molecular and Biophysics Unit, IISc will be felicitated by Prof Anurag Kumar, Director, IISc on Friday, February 26 at the Faculty Hall, IISc.
India’s pollution levels beat China’s: study

Greenpeace analysed NASA’s satellite data on particulate matter from 2003 to 2015 in India and China

The average Indian was exposed to more particulate matter than the average Chinese citizen in 2015 — the first time that has happened in the 21st century — according to a report released here on Monday.

Greenpeace analysed NASA’s satellite data on particulate matter from 2003 to 2015 in India and China, and found that pollution levels in China peaked in 2011 and then started to gradually reduce, India, however, saw a spike over the past decade, the last year being the worst on record. The study looked at the aerosol optical depth (AOD), which is the amount of fine solid particles and liquid droplets in air. After a public outcry, China implemented a national air pollution action plan in 2013, that included stricter emission norms for coal-based power plants and industries, and greater enforcement of standards. The results of these measures show in the satellite data — there is a slight reduction in pollution in Central and Eastern China.

The levels in India have increased over the years, with north India being the most polluted part of the country. The biggest jump was seen in West Bengal, Bihar, Uttar Pradesh and the National Capital Region. With a population-weighted analysis, the report found that the average citizen in India was exposed to more pollution in 2015 than his or her Chinese counterpart.

The report said that the AOD levels in Indian cities — Patna, Kolkata, New Delhi, Gorakhpur, Kanpur and Varanasi — all went up from 2005 to 2015. But not all of the highly-polluted big cities are covered by the air pollution monitoring network. There are 89 cities with a population of more than five lakhs, but only 17 have continuous air quality monitoring systems. The National Air Quality Index covers 23 cities with 39 stations, as opposed to 1,500 monitoring stations in China. Among the most polluted cities that lack continuous monitoring data are Durgapur, Gorakhpur, Asansol, Shillong, Bareilly and Ludhiana.

Meanwhile, China’s actions led to a 17 per cent reduction in PM2.5 from 2010 to 2015, while India saw a 15 per cent increase over the same period. In comparison, the United States saw a 15 per cent decrease.

Comparing the situation in India and China, Greenpeace East Asia air pollution specialist Lauri Myllyvirta said: “China is an example of how determined policies and tougher enforcement can turn the tide on air pollution to people’s benefit.”

Mr. Myllyvirta, one of the authors of the report, said India too needed to adopt strict and time-bound measures. Suril Dahiya, a campaigner with Greenpeace India, said India should set a deadline for meeting air quality standards.
IISc develops Hepatitis C vaccine


Their research was funded by the Indo-Australian Biotechnology Fund (IABF), department of biotechnology, Government of India.

A research team at the Indian Institute of Science at Bengaluru has developed a Hepatitis C vaccine. A report in a leading daily states that Professor Saumitra Das and his team from IISc have developed a vaccine for HCV genotype 3a. Their research was funded by the Indo-Australian Biotechnology Fund (IABF), department of biotechnology, Government of India.

According to the daily, the scientists at IISc have developed a vaccine that is customised for the Indian population. It has apparently shown promising results in pre-clinical studies. Numerous pre-clinical trials of virus-like particle (VLP)-based vaccine strategies are in progress around the world. But in the IISc study, the scientists have generated gt3a Hepatitis C virus-like particles (HCV-LP). The researchers are quoted as saying that they have created a "molecular cocktail of virus-like particles that mimics HCV along with a bio-engineered adenovirus vector (viral vectors are tools commonly used by molecular biologists to deliver genetic material into cells), encoding the core and envelope proteins of HCV". The researchers then inserted the genes of HCV into the adenovirus vector so that it would provoke the immune system to produce neutralising antibodies against the hepatitis C virus, states the report. The combination of VLP with HCV protein boost has shown positive results.

Dr Das was quoted as saying, "Our results suggest that the combined regimen of HCV-LP followed by the HCV core and envelope protein boost could be a more effective strategy of HCV vaccination." They will now need to test it in higher animals. The daily reports that the scientists are proposing a two-step vaccination approach against HCV.

IIT-M faculty expresses solidarity with JNU


Chennai: Expressing solidarity with students and staff of Jawaharlal Nehru University, faculty members of IIT-Madras have said that universities need to nurture critical thinking as opposed to telling students and the polity on how to think.

A statement was released in light of the February 9 incident in which Delhi police slapped sedition charges against a group of JNU students who organised a programme to mark the death anniversary of Parliament attack convict Afzal Guru, who was hanged. Police also arrested Kanhaiya Kumar, president of JNU students’ union.

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In a letter to the President, IIT-M faculty wrote: "A democracy is nothing without the ability to both question and disagree. Our university spaces have always fostered this space for debate and disagreement, and always in a fashion that encourages respectful co-existence through difference. As we view these spaces being criminalized and violently curbed, we are concerned that we are no longer able to foster spaces for open democracy. This atmosphere of stark binaries, needing declaration of loyalties is a dangerous and demoralizing one, and will not lead to a vibrant state or nation."
The statement maintained that it reflected individual opinions of the staff members and not that of the institution. IITM's letter follows similar communications conveyed by other IITs such as Delhi or Bombay. In all, 38 IITM professors have expressed their solidarity in the letter, including Prof Anil Prabhakar of electrical engineering department who is part of the core team involved in building the Advanced LIGO Observatory in India.

Now, IIT-Kharagpur’s law school raises the bar

Hindustan Times (Kolkata)

IIT-Kharagpur has always been known for excellence in technological and interdisciplinary education and research. The institute, however, made its foray into several newer domains such as management education in the early 1990s, engineering entrepreneurship and law education around 2010.

More recently, it entered into bioenergy, bioscience, nanotechnology, environment science and energy science, among others. While traditionally the torchbearers have been the technology programmes, the scenario has changed significantly in recent times and courses such as management and law at IIT-KGP are regarded among the best in the league. The most recent endorsement of the fact is the high rank accorded to the law school at IIT-Kharagpur.

The Rajiv Gandhi School of Intellectual Property Law (RGSOIPL) at IIT-KGP offers a rigorous three-year full-time residential LLB programme with a specialisation in intellectual property law, which is recognised by the Bar Council of India.

The programme is intensively tailored for graduates in engineering, medical sciences, or a masters’ in science or management and provides a one-of-its-kind environment that fosters the confluence of various technological fields with law.

The school recently launched a two-year Master’s degree programme (LLM) The LLM programme will offer a wide range of specialisations, including intellectual property, corporate laws, taxation, criminal laws, international law, constitutional law and competition law. Besides, it offers a vibrant doctoral degree program (Ph.D). The school also imparts short-term courses to external candidates in the international summer and winter term programmes.

Most law schools in the country open up their LLB programmes to students who have completed their studies at the 10+2 level. In most programmes again, intellectual property law is at best left to a few course electives. But RGSOIPL strongly believes that IPR-related legalities and their nuances are best grasped by students with a certain level of maturity and with a technical or science background. Alumni from the school are wellplaced in reputed organisations such as Bosch, Cognizant, Wipro, Siemens, Reliance, TCS, DartsIP and in top law firms such as Amarchand & Mangaldas and Luthra & Luthra, among others, while some are practicing lawyers in high courts.

RGSOIPL has a long-standing professional collaboration with the law school of George Washington University, Washington DC, for exchange of students and faculty. The dean and other faculty members of George
Washington University law school, along with Prof NL Mitra, advisor to RGSOIPL, played a key role in designing the course structure and curriculum of the school in its early days.

**IIT-designed ambulances boost Tamil Nadu’s healthcare drive**


NEW DELHI: Tamil Nadu government has deployed 65 neonatal ambulances over the last 18 months designed by the Indian Institute of Technology (IIT), Madras.

Apart from designing, the institute's healthcare technology innovation centre (HTIC) also provided technical recommendations.

According to the state's department of health & family welfare, design elements and recommendations from HTIC during the project covered crucial aspects for improved safety and functionality of the neonatal ambulances. With these ambulances, the state will now cover 32 districts and is expected to conduct over 28,000 neonatal transports annually.

"Research projects that yield direct and immediate benefits to the public form an important element of IIT-M's contributions to society. In this context, it gives us great satisfaction that our design for ambulances specifically meant for transporting newborns that need care has been deployed in our home state of Tamil Nadu," IIT Madras director Bhaskar Ramamurthi said.

The new design of the ambulance overcomes challenges like loading the transport incubator, accessing the neonate, maintaining a clean and safe environment, limited space, etc. Design modifications include installation of air suspension on base vehicle for easy loading of transport incubator by providing adjustable floor height.

It also reduces shock and vibration due to air suspension, which provides a better ride for neonate and EMT personnel. Adjustable EMT seats and additional additional foldable seats at the head of incubator provide improved access to neonate. Other additions, like an exhaust fan with auto shutter, have also ensured a safe and clean environment inside the ambulance.

HTIC is a research and development centre established through a joint initiative between IIT Madras and the department of biotechnology.

**Ather Energy unveils first ‘Made in India’ smart electric scooter**

http://yourstory.com/2016/02/ather-energy-s340/

Electric two-wheeler startup Ather Energy launched its first product, Ather S340, in Bengaluru on Tuesday at the startup event ‘Surge’.

The company was founded in 2013 by IIT Madras alumni Tarun Mehta and Swapnil Jain and has since been working on developing India’s first smart electric scooter.
There is a growing need for a sustainable energy-based transport. “Electric vehicles are an inevitable future,” said Tarun Mehta, CEO and Co-founder of Ather Energy, at Surge 2016, the startup event organised by the team behind Web Summit.

Products in general are getting into an intelligent loop of data collection, control, and intelligence, thus reducing human intervention.

However, the automobile industry is yet to catch up. The Ather S340, which has taken close to three years to build, aims to bring in the power of data and intelligence to the automobile industry.
As mentioned in a YourStory article on Ather, the Ather-S340 is a connected vehicle powered by a lithium-Ion battery pack, and features a digital touchscreen dashboard, a light-weight aluminium chassis, and can reach speeds of 72 kmph. The smart dashboard in the vehicle will enable users to create personalised profiles, choose riding modes and set other ride preferences. The vehicle charges up to 80 per cent in less than an hour. Its touchscreen dashboard contains a Vehicle Control Unit (diagnostic system) that constantly monitors the rider’s behaviour, a GPS, and an indicator showing how much distance can be travelled on the remaining charge. The personalised profile feature will allow users to create their profile comprising all the basic information.

The inbuilt navigation, Tarun said, works very differently from the plain vanilla mapping that is available in other vehicles. The map uses data to not only predict the time taken to reach a destination but will also analyse the road conditions. They will also add data on charging points on the route and time taken to reach a destination based on driving patterns and use.

Some of the features of the bike can be highlighted as follows:

- Touchscreen dashboard with 24*7 connectivity
- On-board navigation
- Range of 60 km in single charge
- 80% charge in one hour
- Top speed of 72 kmph
- 15 patent applications filed
- Manufacturing in Bangalore, Karnataka
- Online-only sales model
- Doorstep delivery and service
“There’s also a growing need for predictive analysis in vehicle maintenance. In most cases, vehicular maintenance takes place after something goes wrong. With our predictive maintenance vehicle, owners can figure out when the scooter needs a service or maintenance check,” said Tarun.

Ather is backed by angel investors like Flipkart founders, Sachin Bansal and Binny Bansal, MEDALL CEO Raju Venkatraman, and Tiger Global. Tiger Global invested $12 million in May 2015.