



NEWS CLIPS

September 22-28, 2018

Highlights of the Week@IITD

IIT Delhi's 2nd Industry Day promises growth in innovation

September 23, 2018 <https://www.dnaindia.com/delhi/report-iit-delhi-s-2nd-industry-day-promises-growth-in-innovation-2666597>



RACING CAR a racing car developed by students of IIT-D

The Indian Institute of Technology, Delhi culminated its second Industry Day 2018 — Accelerating Innovation in Science & Technology' at the IIT campus on Saturday. The one-day event brought together academic researchers and businesses from across sectors to forge engagement opportunities and identify future research project ideas for development.

More than 1000 visitors, including industry experts and other delegates, attended the event. Over 350 industry experts discussed major collaborations and built relationships between industry and academia based on current societal requirement.

The Industry Day focused on five themes this year namely Healthcare for All, Smart Manufacturing, Artificial Intelligence and Blockchain Technologies, Sustainable Habitat and Strengthening the Start-up Ecosystem, under which IIT-Delhi's work and research was highlighted.

A host of innovative solutions were on display such as pesticide-based treatment for snake bites, advancement of recombinant DNA technology, Ultra Precision Machining for Strategic Manufacturing Capability, Air Pollution Monitoring from Space and Phase Change Material (PCM) incorporated bricks for composite climate. A host of projects incubated at the Technology Business Incubation Unit (TBIU) were also highlighted, which included Botlab Dynamics, Vecmocon, Sanfe, TestRight, promising a treat for innovative solution seekers at the Industry Day.

Talks were also held by keynote speakers who explored avenues of possible fusion pertaining to research and consultancy, as well as panel discussions to find plausible solutions to bridge corporate expectation with academic training.

Sept 28

13 SCIENTISTS ACROSS THE COUNTRY CHOSEN FOR SHANTI SWARUP BHATNAGAR PRIZE

<https://www.firstpost.com/tech/science/13-scientists-across-the-country-chosen-for-shanti-swarup-bhatnagar-prize-5277441.html>

A total of 13 scientists from different institutions across the country have been chosen for the prestigious Shanti Swarup Bhatnagar prize for 2018.



The award winners include Dr. Ganesh Nagaraju and Dr. Ambarish Ghosh (Indian Institute of Science, Bengaluru); Dr. Amit Agarwal and Dr. Ashwin Anil Gumaste (IIT, Bombay), Dr. Rahul Banerjee and Dr. Swadhin Kumar Mandal (IISER, Kolkatta); Dr. Nitin Saxena (IIT, Kanpur); **Dr. Amit Kumar (IIT, Delhi)**; Dr. Thomas Pucadyil (IISER, Pune); Dr. Parthasarathi Chakraborty (National Institute of Oceanography, Goa); Dr. Madineni Venkat Ratnam (National Atmospheric Research Laboratory, Tirupathi); Dr. Ganesan Venkatasubramanian (National Institute of Mental Health and Neurosciences, Bengaluru) and Dr. Aditi Sen De (Harish Chandra Research, Allahabad).

The names were announced by Prof Ashutosh Sharma, secretary, Department of Science and Technology and Director General of Council of Scientific and Industrial Research (CSIR) on the occasion of CSIR Foundation Day on Wednesday.

The prize carries a cash component of Rs. 5 lakh each. It is awarded annually for outstanding research, both fundamental and applied, in the areas of chemical sciences, biological sciences, earth, atmosphere, ocean and planetary sciences, engineering sciences, mathematical sciences and physical sciences. It is named after the founder Director of CSIR, Dr. Shanti Swarup Bhatnagar.

On the occasion, Minister for Science and Technology Dr. Harsh Vardhan presented CSIR Technology Awards for 2018 to under different categories to Institute of Microbial Technology, Chandigarh (CSIR-IMTECH); Central Glass & Ceramic Research Institute, Kolkata (CSIR-CGCRI); Indian Institute of

Chemical Technology, Hyderabad (CSIR-IICT); Central Institute of Mining and Fuel Research (CSIR-CIMFR), Dhanbad and Indian Institute of Petroleum (CSIR-IIP), Dehradun.

IMTECH has won the award for development of clot-buster drugs for thrombolytic therapy, while CGCRI got the award for an innovative technology for the manufacturing of specialty material for immobilization of high level radioactive waste. IICT has been chosen for the award for transfer of technology for the production of two chemicals. CIMFR and IIP have jointly won the award for their efforts for effective marketing of their knowledge bases.

JEE Main 2019, UGC NET 2018: NTA releases information about Computer Based Test, all you need to know

<https://www.timesnownews.com/education/article/upsc-ese-examination-2019-online-application-forms-declared-on-upsc-gov-in-check-important-dates-here/290692>

National Testing Agency, NTA has released an important information for JEE MAIN Examination 2019 and UGC NET Examination 2018.



Important information: JEE Main 2019 and UGC NET 2018 | Photo Credit: Thinkstock

National testing agency, NTA organizes UGC NET, JEE, CMAT and GPAT and NEET examinations. It released a notification today, September 27, 2018 regarding the procedure and schedule of these major examinations. All these exams would be Computer based test, CBT i.e., candidates need to give the exam online on computer within a limited period of time. Let's take a look at the procedure and general guidelines for UGC NET, JEE, CMAT, GPAT and NEET examinations 2018 and 2019. Check complete schedule and general guidelines for the examination below.

Candidates are further reminded that the JEE Main 2019 Registration and UGC NET 2018 December Exam Registrations close on September 30, 2018. The fees can be filled by October 1, 2018 using bank challan or through online methods.

UGC NET, JEE, CMAT & GPAT and NEET CBT Exam: Procedure and General Guidelines

The answers can be changed, if required, anytime during the test. To save the answer, candidates must click on the "Save & Next" button and to mark the question for review (without answering it), click on the "Mark for Review & Next" button.

Candidate will have the option to change previously saved answer of any question, anytime during the entire duration of the test. To change the answer to a question that has already been answered, first select the corresponding question from the Question Palette, then click on "Clear Response" to clear

the previously entered answer and subsequently follow the procedure for answering that type of question.

Candidates would be allotted a separate computer. They would be required to enter log in details on the computer of the day of the examination.

After login, the candidate shall be able to see the detailed instructions for the examination. Candidates are advised to go through the instructions carefully regarding the type of questions and marking scheme.

The countdown timer would be displayed on the top right side of computer screen. When the timer reaches zero, the examination will end by itself. Candidate will not be required to end or submit the examination. Responses not saved at that point of time would be rejected.

Remember, NTA would be provided Blank Sheets for doing rough work/calculations to the candidates. Candidates may download the mock tests available on UGC NET website, ntanet.nic.in to get a clearer idea about the exam pattern.

Sept 27

World University Rankings 2019: From IISc to IIT, no Indian varsity in top 250; check full list

<https://www.financialexpress.com/education-2/world-university-rankings-2019-from-iisc-iit-bombay-to-delhi-university-bhu-check-position-full-list-indian-varsities/1328850/>

World University Rankings 2019: While the Indian Institute of Science (IISc) Bangalore holds the top position among Indian Universities, the ranking of Indian Institute of Technology (IIT), Bombay has fallen further.

World University Rankings 2019: The Times Higher Education (THE) on Wednesday released the World University Rankings for the year 2019. The list released on the website includes a total of 1250 varsities from across the world along with the positions that they hold. As far as Indian universities and educational institutions are concerned, the World University Ranking list holds a total of 49 colleges and their positions among global varsities, however, none of them in the top 250.

While the Indian Institute of Science (IISc) Bangalore holds the top position among Indian Universities, the ranking of Indian Institute of Technology (IIT), Bombay has fallen further. Shockingly, all Indian universities on the list hold positions after rank 250, with no Indian varsity able to make it to the top 250 global colleges.

Among universities in Asia, this year the Tsinghua University (China) overthrew the National University of Singapore to become the best university in the continent. The Tsinghua University ranks no 22 on the global list. Whereas, the University of Oxford and the University of Cambridge that are located in the United Kingdom, hold the top 2 ranks in the world.

World University Rankings 2019: Full list of Indian varsities and their ranking-

1. Indian Institute of Science (251-300)
2. Indian Institute of Technology (IIT), Indore (351-400)
3. Indian Institute of Technology (IIT), Bombay (401-500)
4. Indian Institute of Technology Roorkee (401-500)
5. JSS Academy of Higher Education and Research (401-500)
- 6. Indian Institute of Technology Delhi (501-600)**
7. Indian Institute of Technology Kanpur (501-600)
8. Indian Institute of Technology Kharagpur (501-600)
9. Savitribai Phule Pune University (501-600)
10. Amrita University (601-800)
11. Banaras Hindu University (601-800)
12. University of Delhi (601-800)
13. Indian Institute of Science Education and Research, Pune (601-800)
14. Indian Institute of Technology Guwahati (601-800)
15. Indian Institute of Technology Madras (601-800)
16. Indian Institute of Technology Bhubaneswar (601-800)
17. Indian Institute of Technology Hyderabad (601-800)
18. Jadavpur University (601-800)
19. National Institute of Technology Rourkela (601-800)
20. Panjab University (601-800)
21. Tezpur University (601-800)
22. Acharya Nagarjuna University (801-1000)
23. Aligarh Muslim University (801-1000)
24. Birla Institute of Technology and Science, Pilani (801-1000)
25. Indian Institute of Science Education and Research Kolkata (801-1000)
26. Indian Institute of Technology (Indian School of Mines) Dhanbad (801-1000)
27. Jamia Millia Islamia (801-1000)
28. National Institute of Technology, Tiruchirappalli (801-1000)
29. Osmania University (801-1000)
30. Pondicherry University (801-1000)
31. Sri Venkateswara University (801-1000)
32. Thapar University (801-1000)
33. VIT University (801-1000)
34. Amity University (1001+)
35. Andhra University (1001+)
36. Annamalai University (1001+)
37. Cochin University of Science and Technology (1001+)
38. G.B. Pant University of Agriculture & Technology, Pantnagar (1001+)
39. GITAM University (1001+)
40. University of Kerala (1001+)
41. KIIT University (1001+)
42. Maharaja Sayajirao University of Baroda (1001+)
43. Manipal Academy of Higher Education (1001+)
44. University of Mysore (1001+)
45. PSG College of Technology (1001+)

46. SASTRA University (1001+)
47. Sathyabama University (1001+)
48. SRM University (1001+)
49. Tamil Nadu Agricultural University (1001+)

According to Times Higher Education, the world university rankings are calculated using 13 carefully calibrated performance indicators that are aimed to provide the most comprehensive and balanced comparisons which can be trusted by students, academics, university leaders, industry and governments. This year, colleges from 86 countries are represented in the list and for the first time, it includes varsities from Iraq, Jamaica, Nepal, Tanzania and Kazakhstan.

आईआईटी बीएचयू में खुलेगा रिफरेक्टरी का एक्सीलेंस सेंटर

<https://www.livehindustan.com/uttar-pradesh/varanasi/story-iit-bhu-will-open-up-referencells-excellence-center-2193881.html>

आईआईटी बीएचयू में रिफरेक्टरी उद्योग के विकास व संवर्द्धन के लिये एक्सीलेंस सेंटर खुलेगा। यह देश में अपनी तरह का पहला सेंटर होगा जिसका गठन उद्योग और शैक्षणिक व तकनीकी संस्थान के बीच किया जा रहा है। आईआईटी बीएचयू के सिरेमिक इंजीनियरिंग विभाग में केमिकल व फिजिकल लैब बनाई गई है जिसमें रिफरेक्टरी उद्योग व देश के किसी भी औद्योगिक संस्थान द्वारा रिफरेक्टरी की जांच कराई जा सकेगी।

आईआईटी बीएचयू व इंडियन रिफरेक्टरी मेकर्स एसोसिएशन (इरमा) के बीच समझौते के तहत 28 सितंबर को सेंटर की औपचारिक शुरुआत होगी। जिसमें आईआईटी बीएचयू के निदेशक प्रो. पीके जैन और इरमा के अध्यक्ष हकीमुद्दीन अली समझौते पर हस्ताक्षर करेंगे।

इन उद्योगों में रिफरेक्टरी का उपयोग

स्टील, सीमेंट, एयरोस्पेस, फर्टिलाइजर, पेट्रोलियम, आयुध कारखानों, ऑटोमोबाइल आदि उद्योगों में इस्तेमाल होता है। उच्च तापमान सहने की क्षमता इतनी होती है कि पिघले लोहे को रखने के लिये रिफरेक्टर से बने बर्तन का उपयोग किया जाता है।

सिरेमिक इंजीनियरिंग विभाग के अध्यक्ष प्रो. देवेन्द्र कुमार ने बताया कि देश के विकास में उद्योगों की अहम भूमिका है। करीब सभी प्रकार के उद्योगों में रिफरेक्टरी का प्रयोग है। इसकी उच्च गुणवत्ता उद्योगों के विकास के लिये जरूरी है। साथ ही सुरक्षात्मक कारणों से इरमा के सलाहकार व पूर्व चेयरमैन डॉ. जेएन तिवारी ने बताया कि लैब में भारतीय व अंतरराष्ट्रीय मानकों पर रिफरेक्टरी की जांच की जा सकेगी। करीब दो करोड़ रुपये की लागत से लैब बनी है।

क्या है रिफरेक्टरी

एक ठोस पदार्थ जो उच्च तापमान (1500 डिग्री सेल्सियस से अधिक) को सहन कर सकता है। उद्योगों की जरूरत के अनुसार इसके डिजाइन बनाकर उपयोगी बनाये जाते हैं।

रिफरेक्टरी के फायदे

-उद्योगों के तापमान को सोख लेता है जिससे पर्यावरण को नुकसान नहीं होता
8000 करोड़ रुपये के आसपास हर साल का टर्नओवर है रिफरेक्टरी उद्योग का
16 लाख टन से ज्यादा हर साल खपत होती है देश के उद्योगों में
03 लाख टन से ज्यादा रिफरेक्टरी चीन से आयात होता है

Sept 25

IIT Mandi Professor Identifies Crucial Regions within the Protein of Zika Virus

<https://www.ndtv.com/education/iit-mandi-professor-identifies-crucial-regions-within-the-protein-of-the-zika-virus-1922157>

Dr. RajanishGiri at the Indian Institute of Technology (IIT), Mandi, seeks to unravel the structure and action of the Zika Virus through computational research and biophysical studies.



Dr Giri at the IIT Mandi, seeks to unravel the structure and action of the Zika Virus

Studies on virus and development of antiviral drugs used to be time-consuming and complex because the virus had to be grown in the laboratory for study. The advent and advancement of bioinformatics in the past decades have eased virology research now. Database of viral proteins and genes are now available, which help with rapid computational analyses of the virus to provide a better understanding of their action on the host. Viral bioinformatics has, in turn, offered fresh perspectives in the design of drugs and therapeutic methods to combat virus-borne illness.

Dr. RajanishGiri at the Indian Institute of Technology (IIT), Mandi, seeks to unravel the structure and action of the Zika Virus through computational research and biophysical studies. He is assisted in this work by Vladimir Uversky from University of South Florida and research scholar Pushpendra Mani Mishra. The team uses computer programs to understand the protein structure of the Zika virus, which would be valuable in designing therapeutic agents to treat viral infections. Their work has recently been published in the Journal of Molecular Biology.

"This research work is fundamental in nature and very important in terms of understanding, exploring and unraveling the complex mechanism of viral pathogenesis" says Dr. Giri.

The Zika infection is a mosquito-borne illness, much like dengue and chikungunya, although viral transmissions through infected blood and sexual contact are also possible. The biochemical and microbiological basis of the infection is being studied all over the world.

The Zika virus, like any virus, consists of a shell of protein, enclosing the nucleic acid -- single-stranded RNA or Ribonucleic acid.

The RNA codes for a polyprotein, which is a long chain of various proteins linked with one another.

When there is a Zika infection, RNA genome of virus encode the polyprotein of the virus that matures into various protein by the combined action of host and viral protease enzymes. The generated viral components form the new viral particles in addition to disrupting some of the functions of the host, resulting in various symptoms.

In the case of Zika, some of the viral proteins disrupt the generation of nerve cells in the host. Since nerve cells are extensively formed in the foetus, the infection affects the nervous system of the unborn, resulting in abnormalities such as miscarriage, stillbirth, and brain malformations called microcephaly.

Viral vaccines and anti-virals are chemicals that bind to the viral proteins so that they cannot destroy the normal functions in the host. While proteins usually have fixed three-dimensional molecular structures, most virus, including the Zika virus, contain flexible regions, also known as disordered regions, within the protein components.

These disordered regions contain some specific areas in them called Molecular Recognition Features (MoRF), which orchestrate the interactions of the proteins with other proteins. Designing chemicals/agents that would bind to the MoRF site of the disordered proteins would prevent them from binding to the host protein and nucleic acids, thereby preventing the molecular signaling and ultimately the infection.

In order to design an anti-viral for Zika, it is necessary to identify the MoRF sites in the viral proteins that are produced due to encoding and processing of viral polyprotein in the host's body.

Dr. Giri and his team at the Indian Institute of Technology, Mandi, have performed computational studies to identify and analyse the MoRF in the Zika Virus Proteome.

There are various computer programs (bioinformatic applications) used in the field of proteomics that can be used to analyse the protein structure of any organism, using a reference protein database.

Dr. Giri's team has used molecular recognition feature analysing computational tools to identify the MoRF regions in proteins of Zika virus. They have used protein information from a Zika virus protein database called UniProt, as reference to confirm the protein sequence in a particular strain of Zika, called Mr 766. The disorderliness of the cofactor region (NS2B Region) of a particular enzyme protein (NS2B-NS3) has been confirmed using a technique called circular dichroism spectroscopy.

This analysis and identification of disorderliness and the presence of MoRF site in the Zika protein would help in understanding the specific regions of the viral protein responsible for interaction between the virus and host in an infection and specific functions such as regulation and molecular signaling in the virus. Such understanding, in turn, would provide a handle to identify chemicals that can disrupt the interaction by selectively binding with the MoRF regions of the NS2B site of the protein.

IIT-Delhi students invent design-friendly pee device

<https://www.dnaindia.com/delhi/report-iit-delhi-students-invent-design-friendly-pee-device-2667495>



Moved by the sorry plight of public toilets making them unfit for use by females, two students from Indian Institute of Technology, Delhi(IIT-D) have developed an equipment which can help them pee safely public places. Branded as Sanfe, the use and throw apparatus is cost effective and environment friendly as well.

Harry Sehrawat and Archit Agarwal, both in third year of textile engineering at IIT-D, routinely saw their female friends, classmates suffer because of dirty toilets. Most of the times, they avoided using them altogether, making matters worse while travelling. "We visited many public loo's across the city and almost all of them were unhygienic and unfit for use. Upon further research, we also found out that public toilets were also one of the prominent reasons behind Urinary Tract Infection (UTI) in women," shared Sehrawat.

The duo then started working on Sanfe six months ago, drawing from their and their peers' experiences. As they embarked on the journey, the biggest challenge they faced was to design an article that fit women of all sizes. For this, they sought help from our professor in ergonomics department who helped us with the designing part. Once ready, they asked their female friends to use them and give them feedback, making necessary changes based on them.

"The main technique behind Sanfe is that it eliminates body contact with toilet seats. It is compact enough to be carried in a purse and can be disposed of easily after one use," Sehrawat stated about the various benefits of the equipment which at the outset looks like a cardboard. The design has thumb grip for better hold to prevent spillage and the shape is such that it makes it convenient to use during menstruation as well. "Among various other advantages, the surface area of the apparatus has smooth curves to avoid paper cuts. Sanfe has been made using biodegradable paper, aiding in smooth decomposition as well," he said, adding that it is priced at Rs 10 and is available at pharmacies in

AIIMS, Apollo Hospital with commercial sale having started last month. They are awaiting for the patent to be confirmed. Applied for it in May 2018.

Design Friendly

The design has thumb grip for better hold to prevent spillage and the shape is such that it makes it convenient to use during menstruation as well

It is priced at Rs 10 and is available at pharmacies in AIIMS, Apollo Hospital with commercial sale having started last month.

IIT-M alumni to host ‘research roadshow’

<https://www.thehindu.com/news/cities/chennai/iit-m-alumni-to-host-research-roadshow/article25032571.ece>

Series of events planned to mark diamond jubilee year

The Indian Institute of Technology - Madras’ Alumni Association has organised a series of events to mark the institute’s diamond jubilee celebrations.

As part of it, a ‘research roadshow @ IIT Madras’ will be held on Friday.

Students from other engineering colleges will get to visit some of the cutting-edge facilities at the institute such as the student-run centre for innovation, National Centre for Combustion Research and Development (NCCRD), Robert Bosch Centre for Data Science and Artificial Intelligence, IIT Madras Incubation Cell and Healthcare Technology Innovation Centre (HTIC).

On Saturday, the association is holding the IITMAA Sangam - Confluence for Impact - that will feature Puducherry Lt. Governor Kiran Bedi, cricketer Anil Kumble, actor Rana Daggubati, astronaut Rakesh Sharma, Indu bhushan, chief executive officer of Ayushman Bharat and Nachiket Mor, country director, Bill and Melinda Gates Foundation, among others.

Association president Shuba Kumar said the event would become “an annual ritual for IIT Madras alumni to discuss new ideas, collaborate to deliver impact and reconnect with each other as well as the IIT Madras ecosystem.”

The association will also honour alumni and faculty involved in projects of social impact.

Social projects

The IITMAA aims to impact 10,000 people in a year and involve at least 1,000 alumni across the country in social projects through its various chapters.

Sept 24

Top 7 Free Online Courses in Computer Science from IIT Bombay

<https://in.finance.yahoo.com/news/top-7-free-online-courses-123919706.html?guccounter=1>

IIT Bombay is one amongst the oldest institute in India and acclaimed across the world for its research programs and quality education. The admission to IIT Bombay is believed to be the toughest in the country, which is made through entrance examinations such as JEE.

IIT Bombay believes in the highest quality education, which is given both online and in the classroom. The institute has created IITBombayX for learners and institutions that seek to transform themselves through cutting-edge technologies, innovative pedagogy and rigorous courses.

The IITBombayX is an open-source platform and offers numerous interactive courses. As the demand for Computer Science is more amongst students, we have decided to list the top 7 online courses in Computer Science offered by IIT Bombay.

Introduction to Computer Programming

Candidates will learn about the basic concepts of computer programming with the notion of an algorithm. It emphasizes the candidates on developing the ability to write programs to solve practical computational problems. This is a six-week course and one has to devote at least 4 hours per week.



Programming Basics

This course is closely related to the "Introduction to Computer Programming." Candidates will be learning a lot about the elements of C/C++ programming languages besides algorithms and basic data types. This is a nine-week course and one has to devote at least 6 to 8 hours per week. A registered candidate can pay USD (approx. INR 3561) for a verified certificate.



Foundation of Data Structures

Data structures are very important for designing efficient algorithms and obtaining maintainable software design. One will learn about the basic data types such as numbers and gradually build a conceptual framework for organizing and managing efficient structures. This is a six-week course and one has to devote at least 6 to 8 hours per week. A registered candidate can pay USD (approx. INR 3561) for a verified certificate.



Algorithms

The future is all about algorithm. One will learn about the numerical algorithms, string algorithms, geometric algorithms, graph algorithms and others. Candidates will also learn how to use algorithms with appropriate data structures, to solve real-life problems. This is a six-week course and one has to devote at least 6 to 8 hours per week. A registered candidate can pay USD (approx. INR 3561) for a verified certificate.



Technical Skills

This course helps a lot in preparing a candidate for a job in the technology industry. One will learn about all the basics starting from python to big data. They will also work on a case study - how stock exchange works? This is a four-week course.



Object-Oriented Programming

This course will be going beyond the basics of programming to understand the object-oriented methodology. It covers introduction to object-oriented programming, classes and methods, polymorphism, inheritance and others. With this course, candidates will learn how to abstract a problem in an object-oriented style. This is a four-week course and one has to devote at least 6 to 8 hours per week. A registered candidate can pay USD (approx. INR 3561) for a verified certificate.



Implementation of Data Structures

In this Computer Science course, registered candidates will learn about implementation of all major abstract data structures using object-oriented programming paradigm of C++. This course is closely related to 'Foundations of Data Structures' course. This is a six-week course and one has to devote at least 6 to 8 hours per week. A registered candidate can pay USD (approx. INR 3561) for a verified certificate.

To pursue these courses, aspirants are suggested to visit the official website of IITBombayX.

Sept 23

Addiction to smartphone leading to neck pain? This device by IIT-Delhi can help

<https://www.financialexpress.com/industry/technology/addiction-to-smartphone-leading-to-neck-pain-this-device-by-iit-delhi-can-help-text-neck/1323314/>

Text neck is an ailment caused by repeated stress on the neck due to excessive usage of hand-held devices.



The device was on display at the Institute on Saturday on the occasion of its second Industry Day.

As the world is adopting digital means to make life easier, health-related issues are also emerging that pose a serious challenge for the people. One such problem is of neck pain. With smartphone becoming an integral part of our lives, it has become difficult for many to minimise its use and neck-strain is emerging as a common problem among smart device users today. To deal with this posture problem of mobile/laptop users, the Indian Institute of Technology- Delhi has developed a modern device that would help to fix the posture of those who are suffering with 'text neck'.

According to an Indian Express report, the IIT Delhi has developed the device called 'Stancy'. The device was on display at the Institute on Saturday on the occasion of its second Industry Day.



The device, Stancy, on display at IIT-Delhi.

According to the institute, Industry Day aims to harness and promote the power of Industry-Academia collaborations and showcase cutting-edge technology work being conducted by the research community of the institute to provide impactful techno-social and techno-commercial solutions for the local and global community.

Text neck is an ailment caused by repeated stress on the neck due to excessive usage of hand-held devices, like mobile phones, tablets, laptop etc. Sahil Kargwal, an IIT graduate and co-founder of the device, says that text neck refers to the pain and damage caused to the neck from looking down

frequently and for too long at smart devices. He adds that continue looking down for too long leads to permanent conditions like spinal degeneration and disc compression and so to address this, they came up with the product. Stancy is currently at the stage of clinical trial.

Stancy works through its vibration. "What happens is that when you bend your neck below a certain degree, the device — which you have to attach to the back of your neck — will vibrate, indicating that you need tilt your head back," said Kargwal. However, he added that as no studies had been done on this in India, they were yet to ascertain the degree at which the vibration would start.

According to Kargwal, the posture of a person would be fixed in 50 days of regular device use. The cost of the device will be roughly around Rs 2000 and his team had started the process to get medical validation and for this, they have approached hospitals in the national capital.

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IIT-Delhi alumni 'screens' Delhi's smog troubles

<https://www.dnaindia.com/india/report-iit-delhi-alumni-screens-delhi-s-smog-troubles-2666593>



IIT-Delhi students The mesh is made of nanofibers designed by ex-students of IIT-D

At a time when air purifiers and anti-pollution masks are becoming an accessory of 'capital' living, a group of former students from IIT-Delhi have devised a wire mesh to counter pollution. Backed with nano-technology, this mesh guards against harmful pollutants that ail New Delhi's atmosphere.

The deceptively ordinary-looking NCG (Nano Clean Global) window screen is the brainchild of Jatin Kewlani, Prateek Sharma and Tushar Vyas and can be used in homes, offices and commercial buildings as a cost-effective measure to curb pollution. It has earned the trio the (Indian National Academy of Engineering) INAE Young Innovators award to be presented by the Prime Minister later this year.

The dual-layer mesh is made of nano fibres designed by the trio using an indigenous, patented method. "The mesh blocks PM (Particulate Matter) 2.5 by 95 per cent without affecting air circulation," says Kewlani, who graduated in Civil Engineering, "It lets in ample light and keeps mosquitoes at bay. The screen also blocks UV rays."

The window screen is a second offering by the team after last year's solution to the same problem. The Naso Filter was conceived as an aesthetically pleasing and refined alternative to anti-pollution masks. "One of the biggest drawbacks of respiratory masks is they are prone to leakage," Kewlani said.

"Also, their composition is such that over time we inhale our own stale breath due to multiple layers of filters. Besides, you are stared at."

The inconspicuous looking filter was to be used as a band-aid and is virtually invisible. The filter used a single layer of the same cotton-based filter media that the window screen is now based on. Priced at Rs 10 per strip, it fetched the trio the Startups National Award last year.