Monthly Coverage Dossier
October 2017

IIT-M students set record for operating largest number of robots to clean an area

IMPROVING PLANT PRODUCTIVITY, QUALITY

IIT-Madras Has an Algorithm to Fix Factory Woes

The Big Data

IIT-M gets new biotechnology lab

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IIT Madras is a campus of choice for high ranking JEE students

Date: 23rd October 2017
Publication: Deccan Chronicle
Edition: Bangalore
Page no.: 4
Journalist: NA
Alumni/students: Gobinath P, Shreeram R & Santosh G V
Headline: 3 IIT students bag innovation prize

3 IIT students bag innovation prize

Bengaluru: The idea of a foldable house to address the need of decent temporary shelter to rehabilitate disaster-affected victims has won laurels for three IIT Madras students in a challenge hosted in the city.

Gobinath P, Shreeram R and Santosh G.V. from IIT Madras were adjudged winners of the national level Social Enterprise Challenge organised by Azim Premji University at their campus in Electronic City. The model addressed the problem by introducing cheap, portable, doable and quick to set up Modular Housing solutions for needy.

Ranjith Kumar and Akhil Krishna from Kumaraguru College of Technology, Coimbatore won the second prize for their idea on 'Reinforced Accoustic Tiles', which included Utilization of Agro Waste and Housing material using straw. The third prize was shared between two colleges – Niranjan Kargi from Angadi Institute Of Technology and Management, Belagavi and Nitish J. Bhagat from Montford College, Bengaluru for their projects on Portable Water filter device and 'Rise' – a platform to bridge the gap in the mental health sector by providing public, respectively.

Date: 23rd October 2017
Publication: The Economic Times
Edition: Bangalore
Page no.: 2
Journalist: NA
Alumni/students: Gobinath P, Shreeram R & Santosh G V
Headline: Foldable Housing Gets First Prize

Foldable Housing Gets First Prize

Students of IIT Madras bagged first prize in the second edition of Azim Premji University's National Social Enterprise Idea challenge, organised at its campus on Hosur road. In over 100 submissions, 15 finalists presented their ideas to tackle specific social problems. Gobinath P, Shreeram R and Santosh G V from IIT Madras presented the idea on foldable housing to address the need of temporary shelters.

Date: 23rd October 2017
Publication: Prajavani
Edition: Bangalore
Page no.: 4
Journalist: NA
Alumni/students: Gobinath P, Shreeram R & Santosh G V
Headline: Award for IIT Madras students

ಮದ್ರಾಸ್ ಐಐಟಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಬಹುಮಾನ

ಪ್ರಜಾವಾಣಿ ವಾರ್ತೆ

ಬೆಂಗಳೂರು: ಅಜೀಂ ಪ್ರೇಮ್‌ಜಿ ವಿಶ್ವ ವಿದ್ಯಾಲಯ ಆಯೋಜಿಸಿದ್ದ 'ಸಾಮಾಜಿಕ ಸಮಸ್ಯೆಗಳ ನಿವಾರಣೆಗಿರುವ ಸವಾಲುಗಳು' ಸ್ಪರ್ಧೆಯಲ್ಲಿ ಮದ್ರಾಸ್ ಐಐಟಿ ವಿದ್ಯಾರ್ಥಿಗಳಾದ ಗೋಪಿನಾಥ್ ಪಿ., ಶ್ರೀರಾಮ್ ಆರ್. ಮತ್ತು ಸಂತೋಷ್ ಜಿ.ವಿ. ಪ್ರಥಮ ಬಹುಮಾನ ಪಡೆದರು.

ಕೊಯಮತ್ತೂರಿನ ಕುಮಾರಗೃಹ ತಾಂತ್ರಿಕ ಕಾಲೇಜಿನ ವಿದ್ಯಾರ್ಥಿಗಳಾದ ರಂಜಿತ್ ಕುಮಾರ್ ಮತ್ತು ಅಖಿಲ್ ಕೃಷ್ಣ ಅವರು 2ನೇ ಬಹುಮಾನ ಪಡೆದರು. ಬೆಳಗಾವಿ ಕಾಲೇಜಿನ ನಿರಂಜನ್ ಕರ್ಗಿ ಮತ್ತು ಬೆಂಗಳೂರಿನ ಮೌಂಟ್‌ಫೋರ್ಡ್ ಕಾಲೇಜಿನ ನಿತೀಶ್ ಜೆ. ಭಗತ್ ತೃತೀಯ ಬಹುಮಾನ ಹಂಚಿಕೊಂಡರು. ವಿಜೇತರಿಗೆ ಕ್ರಮವಾಗಿ ₹ 25,000, ₹ 15,000 ಮತ್ತು ₹ 10,000 ಬಹುಮಾನ ನೀಡಲಾಯಿತು ಎಂದು ಪ್ರಕಟಣೆ ತಿಳಿಸಿದೆ.

ಪ್ರಥಮ ಪ್ರಶಸ್ತಿ ವಿಜೇತ ವಿದ್ಯಾರ್ಥಿಗಳು

Date: 23rd October 2017
Publication: India Education Diary
Edition: Online
Journalist: NA
Alumni/students: Gobinath P, Shreeram R & Santosh G V
Headline: Students of IIT Madras emerge winners of Azim Premji University's National level Social Enterprise Idea challenge for students
URL: http://indiaeducationdiary.in/students-iit-madras-emerge-winners-azim-premji-universitys-national-level-social-enterprise-idea-challenge-students/

Students of IIT Madras emerge winners of Azim Premji University's National level Social Enterprise Idea challenge for students

Bangalore: Students of IIT Madras bagged first prize in second edition of Azim Premji University's National level Social enterprise Idea challenge organized at University Campus Hosur Road, Electronic city Campus.

The Social Enterprise Cell organizes the Idea Challenge every year with a purpose to provide students of Colleges and Universities across India an opportunity to explore social entrepreneurship and share their innovative ideas in a rigorous and competitive manner. The event also acts as a great networking platform for young minds to meet each other, exchange thoughts and showcase their talent and skills to some of the early stage mentors and funders.

Gobinath P, Shreeram R and Santosh G V from IIT Madras emerged winners for their idea on 'Modular Housing' – An Idea of foldable housing to address the need of Decent Temporary shelter to rehabilitate the disaster affected victims and refugees across the world. The conventional methods don't provide safety, privacy or Insulation from the extreme climatic conditions. This model addresses the gap by introducing cheap, portable, doable and quick to set up Modular Housing solutions for needy.

Ranjith Kumar and Akhil Krishna from Kumaraguru College of Technology, from Coimbatore won the second prize for their idea on 'Reinforced Accoustic Tiles' which included Utilization of Agro Waste and Housing material using straw. The third prize was shared between two colleges – Niranjan Kargi from Angadi Inst. Of Technology and Management from Belgaum and Nitish J Bhagat from Montford College, Bangalore for their projects on Portable Water filter device and 'Rise' – a platform to bridge the gap in the mental health sector by providing public, respectively.

More than 100 teams participated and submitted their innovative solution models in the first round. The submissions were broadly in the domains of education, livelihood, health, sustainability and governance. 15 teams were shortlisted for the finale which was evaluated by a eminent panel of Jury members including Sanjay Anandaram and Ganesh Rengaswamy, both very active in the Social Entrepreneurship scenario as mentors and funders.

Azim Premji University was established by Azim Premji Foundation as a fully philanthropic and not-for-profit entity, with a clear social purpose. The University's key mission is to prepare graduates with great competence, integrity and social commitment who can contribute to the Education and Development

sectors in India. The Social Enterprise cell of the University reflects that vision as many students are trying to come up with innovative solutions to some of the most complex social problems. The cell is a platform to share, debate and discuss those ideas and connect with individuals and like-minded groups.

In his keynote address, Mr. Sudheesh Venkatesh, Chief People Officer, Azim Premji Foundation said "Social Enterprise play a very important role in today's India since we are also facing the huge issue of jobless growth. The Social enterprises not only contribute in creating new jobs but also make social impact in an equitable and inclusive manner".

Date: 24th October 2017
Publication: Open PR
Edition: Online
Journalist: NA
Alumni/students: Gobinath P, Shreeram R & Santosh G V
Headline: Students of IIT Madras emerge winners of Azim Premji University's National level Social Enterprise Idea challenge for students
URL: https://www.openpr.com/news/780576/Students-of-IIT-Madras-emerge-winners-of-Azim-Premji-University-s-National-level-Social-Enterprise-Idea-challenge-for-students.html

Students of IIT Madras emerge winners of Azim Premji University's National level Social Enterprise Idea challenge for students

NewsPatrolling.com / glamourtreat.com - In over 100 submissions from across colleges in India, 15 finalists presented their ideas to tackle specific social problems

Gobinath P, Shreeram R and Santosh G V from IIT Madras won the first prize for their idea on foldable housing to address the need of decent temporary shelter to rehabilitate the disaster affected victims

Bangalore, October 22, 2017: Students of IIT Madras bagged first prize in second edition of Azim Premji University's National level Social enterprise Idea challenge organized at University Campus Hosur Road, Electronic city Campus.

The Social Enterprise Cell organizes the Idea Challenge every year with a purpose to provide students of Colleges and Universities across India an opportunity to explore social entrepreneurship and share their innovative ideas in a rigorous and competitive manner. The event also acts as a great networking platform for young minds to meet each other, exchange thoughts and showcase their talent and skills to some of the early stage mentors and funders.

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Panelists – Profile

Ganesh is the Co – founding partner of Quona Capital – the first global venture capital firm focused on financial technology for inclusive finance. They back innovators enhancing the quality and availability of financial products and services for underserved consumers and enterprises through business model innovation and a passion for making a positive change in the world. He is also a board member of reputed organizations like IndiaMart, CreditMantri etc.

Sanjay has close to 30 years' experience as entrepreneur, corporate executive, venture capitalist, angel investor, teacher, advisor and mentor. He is involved with companies like redBus, Instahealth. Sanjay is the founder of a VC backed Silicon Valley startup, set up India's first e-magazine for entrepreneurs in 1999. He lectures, teaches and writes extensively on entrepreneurship.

The third Jury member is Annapurna Neti – faculty at Azim Premji University. Annapurna's current research interests include livelihoods, women empowerment through financial services and micro-enterprises. She has been working in the areas of SME financing, Microfinance, Financial Inclusion and Social Performance Management for 10 years. She has worked with Small Industries Development Bank of India and has been a consultant to multiple organizations in the development sector.

Date: 26th October 2017
Publication: The New Indian Express
Edition: Bangalore
Page no.: 3
Journalist: Ramzauva Chhakchhuak
Alumni/student: Gobinath P
Headline: IITians fold 400-sq-ft home into a box, win prize
URL: http://www.newindianexpress.com/cities/bengaluru/2017/oct/26/iitians-fold-400-sq-ft-home-into-a-box-win-prize-1683156.html

IITians fold 400-sq-ft home into a box, win prize

Ramzauva Chhakchhuak

The floods of 2015 in Chennai was a moment that shook the city to its core. At the IIT Madras, a group of students used the floods as a learning opportunity to fine-tune a design for making strong, foldable and easily portable shelters to house people who were in great distress, as those during the floods.

The fourth year civil engineering students have already built a prototype of the temporary shelters. Explaining the technical bit about their modular housing project Gobinath P says, "The prototype is built on the 'telescopic principal'. Just like a telescope can be folded and made bigger or smaller, so is our shelter. It has a dimension of a 400 sq foot area and can be folded into a 5ft-by-5ft box," adds Gopinath.

Their idea won the Azim Premji University's National level Social enterprise idea challenge that took place in the city recently. They won a cash prize of Rs 35,000 for their project and made a number of industry connections.

The prototype also has inbuilt facilities such as restrooms, power, water and heating connections (that can be run with external power sources). "It is also very easy to set up the shelter and transport it. We are also trying to integrate solar power systems," adds Gopinath.

Made of steel and aluminum, Gopinath says that it is more durable than the simple tents that are usually installed as shelters during disasters and for refugees. The modular housing aims at providing better shelters during such situations, says Gobinath. "Our shelter lasts for around 15 years and can house four families at one time. Each unit costs Rs 2.5 lakh. Temporary tents last for a very short time and need to be set up more once. In that sense our shelters are more economical," he adds. They are also planning to make these structures available to national and international organizations such as NGOs and government bodies so that they reach the people in need.

The students plan to set up a start up around the idea and are also part of the incubation programme of their institute.

Gopinath P with fellow classmates and prototype of the temporary shelter. They are soon going to launch a startup around their concept

"The prototype is built on the 'telescopic principal'. Just like a telescope can be folded and made bigger or smaller, so is our shelter. It has a dimension of a 400 sq foot area and can be folded into a 5ft-by-5ft box – Gopinath P

Date: 27th October 2017
Publication: The Hindu
Edition: Chennai
Page no.: 4
Journalist: NA
Alumni/students: Gobinath P., Shreeram R. & Santosh G. V
Headline: Students bag social entrepreneurship award

Students bag social entrepreneurship award

IIT-M team designs shelter for disaster victims that is safer and ensures privacy

SPECIAL CORRESPONDENT
CHENNAI

Three students from the Indian Institute of Technology-Madras won the first prize for designing a temporary shelter that could be used to rehabilitate disaster-affected victims.

The modular house that Gobinath P., Shreeram R. and Santosh G. V. built is inexpensive, portable and quick to set up. It also addresses issues of safety, privacy and insulation, which conventional methods could not offer. The design was among the 100 ideas presented at the National Social Enterprise Idea Challenge competition organised by the Azim Premji University, Bengaluru, on October 21.

The second place went to Ranjith Kumar and Akhil Krishna of Kumaraguru College of Technology, Coimbatore, for developing reinforced acoustic tiles using agro waste and straw.

As many as 15 teams were shortlisted for the finals. The products were evaluated by a three-member jury that included social entrepreneurship mentors Sanjay Anandaram and Ganesh Rengaswamy, according to a release from Azim Premji University. The university's social enterprise cell acts as a platform "to share, debate and discuss those ideas and connect with individuals and like-minded groups."

Annapurna Neti, faculty from the University, who has been working in the area of small and micro-enterprise financing, was also on the jury.

Date: 28th October 2017
Publication: The New Indian Express
Edition: Hyderabad
Page no.: 2
Journalist: Ramzauva Chhakchhuak
Alumni/student: Gobinath P
Headline: IITians fold 400-sq-ft home into a box, win prize
URL: http://www.newindianexpress.com/cities/bengaluru/2017/oct/26/iitians-fold-400-sq-ft-home-into-a-box-win-prize-1683156.html

IITians fold 400-sq-ft home into a box, win prize

Here's a useful and practical housing idea relevant for all cities in India

Ramzauva Chhakchhuak

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Their idea won the Azim Premji University's National level Social enterprise Idea challenge that took place in the city recently. They won a cash prize of ₹35,000 for their project and made a number of industry connections.

The prototype also has inbuilt facilities such as restrooms, power, water and heating connections (that can be run with external power sources). "It is also very easy to set up the shelter and transport it. We are also trying to integrate solar power systems," adds Gopinath.

Made of steel and aluminum, Gopinath says that it is more durable than the simple tents that are usually installed as shelters during situations of disasters and for refugees. The modular housing aims at providing better shelters during such situations, says Gobinath. "Our shelter lasts for around 15 years and can house four families at one time. Each unit costs Rs 2.5 lakh. Temporary tents last for a very short time and need to be set up more than one time. In that sense our shelters are more economical," he adds. They are also planning to make these structures available to national and international organizations like NGOs and government bodies so that they reach the people in need.

The students plan to set up a start up around the idea and are also part of the incubation programe of their institute.

Date: 30th October 2017
Publication: The New Indian Express
Edition: Bangalore/Hyderabad/Kochi
Page no: 11
Journalist: NA
Headline: IIT-M students win social enterprise challenge

IIT-M students win social enterprise challenge

Students of IIT Madras bagged the first prize at the second edition of Azim Premji University's National-Level Social Enterprise Idea Challenge organised at the university campus in Hosur. The Social Enterprise Cell organises the Idea Challenge every year with a purpose to provide students of colleges and universities across India an opportunity to explore social entrepreneurship and share their innovative ideas in a rigorous and competitive manner. The event also acts as a great networking platform for young minds to meet each other, exchange thoughts and showcase their talents and skills to some of the early-stage mentors and funders.

Date: 30th October 2017
Publication: Deccan Herald
Edition: Onlne
Journalist: NA
Professor: Prof B Ravindran
Headline: IIT-M students sweep their way to unique record
URL: http://www.deccanherald.com/content/640105/iit-m-students-sweep-their.htm

IIT-M students sweep their way to unique record

IIT-Madras students on Sunday had set about creating an Asian and Indian record for deploying largest number of robots for floor cleaning.

Nearly 250 students from several disciplines at the Centre For Innovation (CFI) fabricated about 50 robots at a workshop organized at IIT-Madras.

The robots consisted of a high-RPM motor at its heart with two rotating scrub pads shoveling the dust into the central suction system and a filter in the vacuum tunnel collecting the waste.

The robots were controlled over Bluetooth by an app created for the Android system. A proximity ultrasound fixed to the robots ensured they did not collide.

All the robots cleaned the floor non-stop for five minutes (simultaneously) to set the record. NO manual intervention was allowed inside the cleaning area during the exercise.

Representatives of Asia Book of Records and India Book of Records adjudicated the event. Both organizations had issued a detailed set of guidelines to conduct the event according to 2018 Edition of International Protocol of Records (IPR).

Speaking about the effort, CFI faculty-in-charge Prof B Ravindran said the record was the latest in a list of astounding feat by the robotics groups at the Centre.

"Another major aim of this attempt is to sustain, spread and strengthen the concept of Swachh Bharat Abhiyan (Clean India Initiative) by some of the most skilled students in the country's Premier Engineering institute," he added.

Date: 30th October 2017
Publication: India Times
Edition: Online
Journalist: NA
Alumni/students: Gobinath P, Shreeram R, Akhilesh DSN & Santosh G V
Headline: To Provide Shelter To Disaster Victims, IIT-Madras Students Come Up With Foldable Houses
URL: https://www.indiatimes.com/news/india/to-provide-shelter-to-disaster-victims-iit-madras-students-come-up-with-foldable-houses-332624.html

To Provide Shelter To Disaster Victims, IIT-Madras Students Come Up With Foldable Houses

The 2015 Chennai floods and refugee crisis across the world prompted three students of Indian Institute of Technology, Madras to invent a foldable house to help rehabilitate disaster victims.

The project by fourth-year civil engineering students Gobinath P, Shreeram R, Akhilesh DSN and Santosh G V won Azim Premji University's national-level Social Enterprise Idea Challenge held in Bengaluru.

"During disasters when people need shelter, time management is a crucial factor. This housing facility can be installed in 15 minutes by any non-technical person. The shelter is foldable on three sides, making it compact and portable during calamities. The furnished house becomes a small box within a few minutes; it can be folded 32 times its original size and taken anywhere," Gobinath said.

The structure is made of steel and aluminium composite panels. The walls are double-layered to provide thermal insulation in extreme climatic conditions.

The students are now trying to include restroom fixtures with inbuilt biodigesters, solar panels and a first-floor feature to add more self-sustainability to the structure.

Date: 30th October 2017
Publication: NDTV India
Programme: Prime Time
Edition: Electronic
Journalist: NA
Headline: IIT Madras students join Prime Minister's Swachh Bharat Abhiyan

Date: 30th October 2017
Channel: NDTV 24x7
Edition: Electronic
Journalist: NA
Headline: IIT Madras students join Prime Minister's Swachh Bharat Abhiyan

Date: 31st October 2017
Publication: The Times of India
Edition: Chennai
Page no.: 4
Journalist: Vinayashree J
Professor: Prof B Ravindran
Alumni/student: Gaurav Lodha
Headline: IIT-M students set record for operating largest number of robots to clean an area
URL: https://timesofindia.indiatimes.com/city/chennai/iit-madras-students-make-a-clean-sweep-with-45-robots-set-records/articleshow/61345121.cms

IIT-M students set record for operating largest number of robots to clean an area

TIMES NEWS NETWORK

Chennai: Students of IIT Madras, who developed 45 robots to clean simultaneously for more than 15 minutes, have set the record for operating the "largest number of robots cleaning an area" in India and Asia.

A total of 270 students from across different disciplines participated at the Centre For Innovation (CFI) workshop in IIT Madras on Sunday where the robots cleaned an area of 750sqft simultaneously.

Each robot has a high RPM motor at its centre with two rotating scrub pads that direct the dust into the central suction mechanism, which is then collected by a filter in the vacuum tunnel. The robots were controlled through Bluetooth from an app. No manual intervention was allowed inside the cleaning area after the start of the exercise.

GETTING THE JOB DONE: Students with their robots at the Students Activities Centre on the IIT Madras campus on Sunday

"Such exercises teach the basics of electronics, robotics, automation, wireless communication, 3D printing, rapid prototyping and software modelling along with soft skills," said Gaurav Lodha, student executive head, CFI, and fourth-year dual-degree student of civil engineering.

Another major aim of this initiative was to spread and strengthen the concept of Swachh Bharat Abhiyan, said the institute. Professor B Ravindran, faculty-in-charge, CFI, said robotics is one of the oldest co-curricular activity at IIT Madras. "This record is the latest in the list of achievements of the robotics groups at the Centre for Innovation," he said.

Date: 31st October 2017
Publication: NDTV
Edition: Online
Journalist: Pallava Bagla
Professor: Prof B Ravindran
Alumni/student: Gaurav Lodha
Headline: Robots Made By IIT Students Sweep Their Way To Record Books
URL: https://www.ndtv.com/tamil-nadu-news/robots-made-by-iit-students-sweep-their-way-to-record-books-1769026

Robots Made By IIT Students Sweep Their Way To Record Books

Students at the Indian Institute of Technology Madras (IIT-M) campus on Sunday created a new Asian record for deploying the largest number of robots for sweeping an area.

Nearly 270 students from IIT-M's Centre For Innovation (CFI) created 45 custom-designed robots, that wielded a fast rotating 'jhadu' or scrubber that cleaned an area the size of badminton court to create the new record.

The robots were controlled using smartphones via bluetooth. Each robot consisted of a high-speed motor at its centre, with two rotating scrub-pads that directed the dust into the central suction mechanism, which was collected by a filter in a vacuum tunnel.

The robots were controlled using smartphones via bluetooth.

Prof B Ravindran, CFI Faculty-in-Charge said the record was the latest in the list of achievements by the robotics groups. "Robotics is one of the oldest co-curricular activity at IIT Madras. In the past, IIT-M teams have successfully participated in various global competitions," he said.

Gaurav Lodha, Student Executive Head, CFI, and a Fourth Year Dual-Degree Student, Department of Civil Engineering listed the benefits of use of robots. "This will also impart technical training to students by teaching them the basics of electronics, robotics, automation, wireless communication, 3D printing, rapid prototyping and software modelling along with soft skills like teamwork, time management, problem-solving, communication and leadership," he said.

Experts claim that use of robots can contribute to eradication of manual scavenging and also help replace humans in cleaning sewer waste.

Date: 31st October 2017
Publication: The Hindu
Edition: Chennai
Page no.: 3
Journalist: NA
Headline: IIT-M students set record

IIT-M students set record

SPECIAL CORRESPONDENT
CHENNAI

Students of the Indian Institute of Technology - Madras set a record of sorts on Sunday by putting to work 45 robots for 15 minutes.

The robots were fabricated at the centre for innovation workshop and 270 students from various disciplines participated in the event. The effort was adjudicated by representatives from the Asia Book of Records and India Book of Records as 'the largest number of robots used for cleaning an area.'

Date: 31st October 2017
Publication: Deccan Chronicle
Edition: Chennai
Page no.: 5
Journalist: NA
Headline: Creating Record

CREATING RECORD

IIT Madras students set an Asian record for operating the largest number of robots to clean an area. Fabricated by the IIT's Centre for Innovation (CFI), 45 robots cleaned an area of 750 ft simultaneously without stop to set the record at the Students' Activities Centre (SAC) in the campus Sunday evening. As many as 270 students belonging to several disciplines fabricated the robots, each comprising a high RPM motor at the centre with two rotating scrub pads that directed the dust into the central suction mechanism, which was collected by a filter in the vacuum tunnel. They were controlled by Bluetooth from an App based on Android platform. — *DC*

Date: 31st October 2017
Publication: Dinamalar
Edition: Chennai
Page no: 16
Journalist: NA
Headline: Operating 45 robots: IIT Madras creates record
URL: http://www.dinamalar.com/news_detail.asp?id=1885968

45 'ரோபோ'க்கள் இயக்கம்: சென்னை ஐ.ஐ.டி., சாதனை

சென்னை, அக். 31- தேசிய உயர் கல்வி நிறுவனமான, சென்னை, ஐ.ஐ.டி.,யில், தூய்மை பணிக்கு, 45 'ரோபோ'க்களை, ஒரே நேரத்தில் பயன்படுத்தி, ஆசிய அளவில் சாதனை படைத்துள்ளனர்.

ஆசிய அளவிலும், தேசிய அளவிலும், அதிக ரோபோக்களை இயக்கி, சாதனை படைக்கும் நிகழ்ச்சி, சென்னை, ஐ.ஐ.டி.,யில், நேற்று முன்தினம் நடந்தது.

மாணவர் செயல் திறன் மையத்தில் நடந்த நிகழ்ச்சியில், 750 மாணவர்கள் பங்கேற்றனர். அவர்கள், 45 ரோபோக்களை வடிவமைத்து, அவற்றை ஒரே நேரத்தில் செயல்பட வைத்தனர்.

'பைதே' தொழில் நுட்பத்தில் இணைக்கப் பட்டு, 'ஆண்ட்ராய்டு' மொபைல் போன் செயலியால், ரோபோக்கள், ஒரே நேரத்தில் இயக்கப் பட்டன. மாணவர்கள், 'ஸ்மார்ட் கன்ட்ரோல்' மூலம், ரோபோக்களின் திசையை மாற்றினர்.

ரோபோக்களில் பொருத்தப்பட்ட, மெல்லிய துடைப்பான்கள், 750 சதுர. மீட்டர் பரப்பளவு உள்ள தரைப்பகுதியை, ஒரு மணி நேரத்தில் சுத்தம் செய்தன.

இந்த முயற்சியை நேரில் பார்த்து, ஆசிய சாதனை புத்தகம் மற்றும் இந்திய சாதனை புத்தக ஆராய்வாளர், சான்றிதழ் அளித்துள்ளனர். இந்நிகழ்ச்சியை, ஆசிய நாடுகளின் முதல் சாதனையாக, சென்னை, ஐ.ஐ.டி., அறிவித்துள்ளது.

ஐ.ஐ.டி.,யின், நுண்ணோடி ஆராய்ச்சி மையத்தின் பொறுப்பு பேராசிரியர், ஸ்ரீத்திரன் தலைமையில், இந்த சாதனை நிகழ்த்தப் பட்டது.

சென்னை, ஐ.ஐ.டி.,யில், ஒரே நேரத்தில், 45, 'ரோபோ'க்களை, தூய்மை பணியில் ஈடுபடுத்தி, ஆசிய அளவில் சாதனை புரிந்த மாணவர்கள்.

Date: 31st October 2017
Publication: Dinamani
Edition: Chennai
Page no: 4
Journalist: NA
Headline: 45 robots on cleaning duty: IIT Madras students achievement
URL: https://goo.gl/3VUBBM

தூய்மைப் பணியில் 45 ரோபோட்டுகள்: ஐஐடி மாணவர்கள் சாதனை

சென்னை, அக்.30: ஏராளமான ரோபாட்டுகளை ஒரே நேரத்தில் தூய்மைப் பணியில் ஈடுபடுத்தி ஆசிய சாதனையை சென்னை ஐஐடி மாணவர்கள் செய்துள்ளனர்.

இதுகுறித்து சென்னை ஐஐடி வெளியிட்ட செய்தி: சென்னை ஐஐடி வளாகத்தில் அமைந்துள்ள புதிய கண்டுபிடிப்புகளுக்கான மையத்தில் இந்தச் சாதனையை மாணவர்கள் மேற்கொண்டனர்.

ஒரே நேரத்தில் 45 ரோபோட்டுகளை 270 மாணவ, மாணவிகள் ஆண்ட்ராய்டு செயலி அடிப்படையிலான புளூடூத் தொழில்நுட்பம் மூலம் இயக்கி சாதனை படைத்தனர். மொத்தம் 750 சதுர அடி பரப்பளவை ரோபோட்டுகள் சுத்தம் செய்தன.

இந்திய மற்றும் ஆசிய சாதனைப் புத்தகங்களில் இடம்பெறும் நோக்கில் மேற்கொண்டு வெற்றிகரமாக முடித்ததற்காக, மாணவர்களுக்கு உடனடியாக தாற்காலிகச் சான்றிதழ் வழங்கப்பட்டது.

இறுதிச் சான்றிதழுக்காக, இந்தச் சாதனை முடிவுகள் மற்றும் ஆதாரங்கள் சாதனை புத்தக ஆய்வுக் குழுக்களுக்கு அனுப்பி வைக்கப்பட்டுள்ளன.

Date: 31st October 2017
Publication: Navbharat Times
Edition: Online
Journalist: NA
Headline: IIT Madras Students Set Record by Making 45 Robots Clean an Area
URL: https://navbharattimes.indiatimes.com/state/other-states/bangalore/chennai/iit-madras-students-make-a-clean-sweep-with-45-robots-set-records/articleshow/61346879.cms

आईआईटी मद्रास के छात्रों ने 45 रोबॉट्स से सफाई कर बनाया रेकॉर्ड

चेन्नै
आईआईटी मद्रास के छात्रों ने एशिया और भारत में रेकॉर्ड बनाते हुए सबसे ज्यादा संख्या में रोबॉट्स का इस्तेमाल करते हुए सफाई की। यह कारनामा रविवार को आयोजित एक वर्कशॉप में किया गया।

संस्थान के छात्रों ने 45 रोबॉट बनाए, जिन्होंने 15 मिनट तक सफाई की। इसमें अलग-अलग विषयों के 270 छात्रों ने हिस्सा लिया। यहां रोबॉट्स ने 750 वर्गफीट क्षेत्र में सफाई की।

हर रोबॉट में एक हाई आरपीएम वाली मोटर लगी थी। इसके साथ ही इनमें दो घूमने वाले स्क्रब लगे हुए थे। इनके जरिए जमीन पर इकट्ठा धूल अंदर खींची जा रही थी। एक फिल्टर के जरिए यह धूल वैक्यूम टनल तक पहुंच रही थी। इस दौरान रोबॉट्स को ऐंड्रॉयड आधारित ऐप से ब्लूटूथ के जरिए संचालित किया गया।

छात्र जब सफाई के इस अनोखे अभियान को अंजाम दे रहे थे, उस वक्त एशिया बुक ऑफ रेकॉर्ड्स और इंडियन बुक ऑफ रेकॉर्ड्स के प्रतिनिधि मौजूद रहे। बाद में प्रतिभागियों को प्रोविजनल सर्टिफिकेट भी दिया गया। इसके अलावा एक अंतिम एवं निर्णायक सर्टिफिकेट भी दिया जाएगा। आईआईटी मद्रास का कहना है कि वर्कशॉप के अतिरिक्त इस आयोजन का उद्देश्य स्वच्छ भारत अभियान के संदेश को फैलाना भी था।

Date: 31st October 2017
Publication: UNI
Edition: Online
Journalist: NA
Professor: Prof B Ravindran
Headline: CFI students at IIT-Madras create record in cleaning with Robots
URL: http://www.uniindia.com/cfi-students-at-iit-madras-create-record-in-cleaning-with-robots/states/news/1032011.html

CFI students at IIT-Madras create record in cleaning with Robots

Chennai, Oct 30 (UNI) Students from the Centre For Innovation (CFI) at the Indian Institute of Technology, Madras (IIT-M) have created an Asia and India records for operating the "largest number of Robots cleaning an area."

Representatives from the Asia Book of Records and India Book of Records adjudicated the event, which took place last evening at the Students Activities Centre (SAC) in the IIT-M campus.

A provisional certificate was awarded after the completion of the event. The final certification would follow after validation and assessment of the record evidences submitted by the Investigation Team of Asia Book of Records and the India Book of Records, a release from IIT-M said today.

As many as 270 students belonging to several disciplines fabricated a total of 45 robots at the CFI Workshop in IIT-M. Each robot consisted of a high RPM motor at its centre, with two rotating scrub pads that directed the dust into the Central Suction Mechanism, which was collected by a filter in the vacuum tunnel. They were controlled over Bluetooth from an App based on Android platform.

The robots cleaned an area of 750 sqft simultaneously non-stop for more than 15 minutes to create a new record. No manual intervention was allowed inside the cleaning area after the start of the exercise.

Speaking about the initiative, Prof B Ravindran, Faculty-in-Charge, CFI, said, “Robotics is one of the oldest co-curricular activity "at IIT-M. "In the past, IIT-M teams have successfully participated in various global competitions", he said.

This record is the latest in the list of achievements of the robotics groups at the Centre for Innovation, he added.

Date: 31st October 2017
Publication: Skill Outlook
Edition: Online
Journalist: NA
Professor: Prof B Ravindran
Alumni/student: Gaurav Lodha
Headline: IIT Madras students set Asia, India records for operating largest number of robots to clean an area
URL: http://skilloutlook.com/education/iit-madras-students-set-asia-india-records-operating-largest-number-robots-clean-area

IIT Madras students set Asia, India records for operating largest number of robots to clean an area

Chennai: Indian Institute of Technology (IIT) Madras students from the Centre for Innovation (CFI) have set the Asia and India Records for operating the "Largest Number of Robots Cleaning an Area."

Representatives from the Asia Book of Records and India Book of Records adjudicated the event, which took place between 6 p.m. and 8 p.m. on Sunday (29th October 2017) at Students Activities Centre (SAC) in the campus.

A Provisional Certificate was awarded on Sunday itself after the successful completion of the exercise. The Final certification would follow after Validation and Assessment of the record evidences submitted by the Investigation Team of Asia Book of Records and the India Book of Records.

As many as 270 students belonging to several disciplines fabricated a total of 45 Robots at the CFI Workshop in IIT Madras. Each robot consisted of a high RPM motor at its centre, with two rotating scrub

pads that directed the dust into the Central Suction Mechanism, which was collected by a filter in the vacuum tunnel. They were controlled over Bluetooth from an App based on Android platform.

The robots cleaned an area of 750 sq.ft. simultaneously for more than Fifteen Minutes without stopping to set the Record. No manual intervention was allowed inside the cleaning area after the start of the exercise.

Speaking about the initiative, Prof B. Ravindran, Faculty-in-Charge, CFI, said, "Robotics is one of the oldest co-curricular activity "at IIT Madras. In the past, IITM teams have successfully participated in various global competitions. This record is the latest in the list of achievements of the robotics groups at the Centre for Innovation."

Another major aim of this initiative is to sustain, spread and strengthen the concept of Swachh Bharat Abhiyan (A Clean India Initiative) by some of the most skilled students in the Premier Engineering institute in the country. The City Union Bank (CUB) generously supported this event through their CSR funds to IIT Madras.

Mr. Gaurav Lodha, Student Executive Head, CFI, and a Fourth Year Dual-Degree Student, Department of Civil Engineering, said, "This will also impart technical training to I Year students by teaching them the basics of Electronics, Robotics, Automation, Wireless Communication, 3D Printing, Rapid Prototyping and Software Modelling along with soft skills like Teamwork, Time Management, Problem-Solving, Communication and Leadership."

A lot of concepts are taught to IIT Madras First Year students, a combination of theory and hands-on experience. This exercise would provide the freshmen a wholesome one-to-one hands-on exposure and an opportunity to make something of their own, Mr. Gaurav Lodha added.

The Asia Book of Records and the India Book of Records issued detailed guidelines and criteria for conduct of the event as per the 2018 Edition of International Protocol of Records (IPR).

Date: 31st October 2017
Publication: Web India 123
Edition: Online
Journalist: NA
Professor: Prof B Ravindran
Headline: CFI students at IIT-Madras create record in cleaning with Robots
URL: https://news.webindia123.com/news/articles/india/20171030/3209874.html

CFI students at IIT-Madras create record in cleaning with Robots

Students from the Centre For Innovation (CFI) at the Indian Institute of Technology, Madras (IIT-M) have created an Asia and India records for operating the "largest number of Robots cleaning an area." Representatives from the Asia Book of Records and India Book of Records adjudicated the event, which took place last evening at the Students Activities Centre (SAC) in the IIT-M campus. A provisional certificate was awarded after the completion of the event. The final certification would follow after validation and assessment of the record evidences submitted by the Investigation Team of Asia Book of Records and the India Book of Records, a release from IIT-M said today. As many as 270 students belonging to several disciplines fabricated a total of 45 robots at the CFI Workshop in IIT-M. Each robot consisted of a high RPM motor at its centre, with two rotating scrub pads that directed the dust into the Central Suction Mechanism, which was collected by a filter in the vacuum tunnel. They were controlled over Bluetooth from an App based on Android platform. The robots cleaned an area of 750 sqft simultaneously non-stop for more than 15 minutes to create a new record. No manual intervention was allowed inside the cleaning area after the start of the exercise. Speaking about the initiative, Prof B Ravindran, Faculty-in-Charge, CFI, said, "Robotics is one of the oldest co-curricular activity "at IIT-M. "In the past, IIT-M teams have successfully participated in various global competitions", he said. This record is the latest in the list of achievements of the robotics groups at the Centre for Innovation, he added. UNI GV 1833

Date: 31st October 2017
Publication: Tamil Samayam
Edition: Online
Journalist: NA
Headline: 45 robots used to clean an Area: IIT Madras students record
URL: https://tamil.samayam.com/latest-news/international-news/iit-madras-students-make-a-clean-sweep-with-45-robots-set-records/articleshow/61347188.cms

துப்பரவு பணியில் 45 ரோபோக்கள்; சென்னை ஐஐடி மாணவர்கள் சாதனை

துப்பரவு பணியில் 45 ரோபோக்கள்; சென்னை ஐஐடி மாணவர்கள் சாதனை

ஆசியாவிலேயே சென்னை ஐஐடி மாணவர்கள் துப்புரவு பணிக்கு 45 ரோபோக்களை உருவாக்கி சாதனை புரிந்துள்ளனர்.

சென்னை ஐஐடியில் நடைபெற்ற பயிற்சி பட்டறை ஒன்றில் வெவ்வெறு துறைகளைச் சார்ந்த 270 மாணவர்கள், துப்புரவு பணிக்காக 45 ரோபோக்களை உருவாக்கியுள்ளனர்.

புளூடூத் மூலமாக இயக்கக் கூடிய இந்த ரோபோக்கள் மூலம் 750 சதுரஅடி பரப்பளவுள்ள இடத்தை 15 நிமிடத்தில் சுத்தம் செய்யும் திறன் பெற்றது.

தூய்மை இந்தியா திட்டத்தை அடிப்டையாகக் கொண்டு உருவாக்கப்பட்டுள்ள இந்த ரோபோக்கள் ஆசிய அளவில் பெரும் சாதனை புரிந்துள்ளது.

Date: 31st October 2017
Publication: City Today
Edition: Online
Journalist: Murali
Professor: Prof B Ravindran
Alumni/student: Gaurav Lodha
Headline: Robots made by IIT students make their way to record books
URL: https://citytoday.news/robots-made-by-iit-students-make-their-way-to-record-books/

Robots made by IIT students make their way to record books

Prime News, National (Chennai), October 30:- Students at the Indian Institute of Technology Madras (IIT-M) campus on Sunday created a new Asian record for deploying the largest number of robots for sweeping an area.

Nearly 270 students from IIT-M's Centre For Innovation (CFI) created 45 custom-designed robots, that wielded a fast rotating 'jhadu' or scrubber that cleaned an area the size of badminton court to create the new record.

The robots were controlled using smartphones via bluetooth. Each robot consisted of a high-speed motor at its centre, with two rotating scrub-pads that directed the dust into the central suction mechanism, which was collected by a filter in a vacuum tunnel.
The robots were controlled using smartphones via bluetooth.

Prof B Ravindran, CFI Faculty-in-Charge said the record was the latest in the list of achievements by the robotics groups. “Robotics is one of the oldest co-curricular activity at IIT Madras. In the past, IIT-M teams have successfully participated in various global competitions,” he said.

Gaurav Lodha, Student Executive Head, CFI, and a Fourth Year Dual-Degree Student, Department of Civil Engineering listed the benefits of use of robots. “This will also impart technical training to students by teaching them the basics of electronics, robotics, automation, wireless communication, 3D printing, rapid prototyping and software modelling along with soft skills like teamwork, time management, problem-solving, communication and leadership,” he said.

Experts claim that use of robots can contribute to eradication of manual scavenging and also help replace humans in cleaning sewer waste. (MR, Inputs: Agencies).

Date: 31st October 2017
Publication: India.com
Edition: Online
Journalist: NA
Headline: IIT-Madras Students Set Record by Making 45 Robots Clean 750 Square Feet Area to Promote Swachh Bharat Abhiyan
URL: http://www.india.com/news/india/iit-madras-students-set-record-by-making-45-robots-clean-750-square-feet-area-to-promote-swachh-bharat-abhiyan-2582882/

IIT-Madras Students Set Record by Making 45 Robots Clean 750 Square Feet Area to Promote Swachh Bharat Abhiyan

New Delhi, Oct 30: Students of IIT-Madras made 45 robots clean 750 square feet of student activity centre at campus simultaneously for 15 minutes, that makes it a record in Asia and India. In the CFI workshop at IIT-Madras, around 270 students from different disciplines had participated on Sunday.

Robots were fitted with two rotating scrubs that was capable of cleaning an area by navigating dust into a central suction mechanism. All the 45 machines were controlled by an Android app over Bluetooth, reported Times of India.

The event was judged by representatives of Asiab Book of Records and India Book Of Records. After the completion of the event, a provisional certificate was awarded, whereas the final certificate would be issued once the process of validation and assessment of record evidence is finished.

The event also aimed at boosting Prime Minister Narendra Modi's Swachh Bharat campaign, said the institute.

Date: 31st October 2017
Channel: Zee News
Edition: Electronic
Journalist: NA
Headline: IIT Madras students make new record

Date: 31st October 2017
Channel: WION
Edition: Electronic
Journalist: NA
Headline: IIT-Madras students set a new record

Date: 31st October 2017
Publication: The Better India
Edition: Online
Journalist: Jovita Aranha
Headline: IIT-M Students for Swachh Bharat Abhiyaan, Clean Area Using 45 Robots in 15 Mins!
URL: https://www.thebetterindia.com/119720/iit-m-swachh-bharat-abhiyaan-robots/

IIT-M Students for Swachh Bharat Abhiyaan, Clean Area Using 45 Robots in 15 Mins!

Sweeping it clean figuratively and literally, IIT Madras students may have set an all-new Asian and Indian record for deploying the largest number of robots to clean an area.

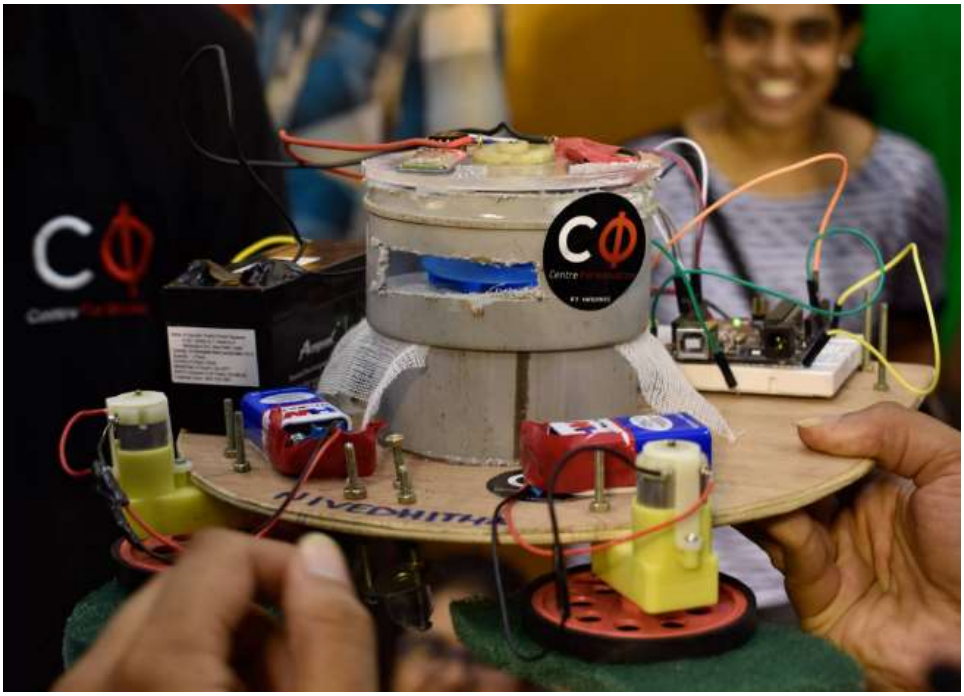
These young innovators created over 45 robots and swept an area of 750 square feet clean, putting all of them to use in less than 15 minutes.

Source: Facebook/ IIT Madras

Over 270 students from various disciplines participated in the CFI Workshop at IIT-Madras on Sunday.

The mechanism used was that each robot had a high RPM (revolutions per minute) motor at its centre, and two rotating scrub pads that directed the dust into the central suction mechanism, which was collected by a filter in the vacuum tunnel, reported the Times of India.

These 45 robots were controlled over Bluetooth via an Android-based application.



The event which took place at Students Activities Centre on the campus was monitored by representatives of the Asia Book of Records and the India Book of Records.

Source: Facebook/ IIT Madras

Marvelled by the feat, a provisional certificate was awarded to the students after they successfully demonstrated completion of the exercise

Date: 31st October 2017
Publication: Dinakaran
Edition: Chennai
Page no.: 4
Journalist: NA
Headline: IIT students achievement

ஐஐடி மாணவர்கள் சாதனை

சென்னை ஐஐடி மாணவர்கள் சிஎப்ஐ ஒர்க்ஷாப்பில், 45 ரோபோக்கள் மூலம் 750 சதுர அடி கொண்ட இடத்தை சுமார் 15 நிமிடங்களில் சுத்தம் செய்து சாதனை படைத்துள்ளனர். இந்த சாதனை ஏசியா புக் ஆப் ரெக்கார்ட்ஸ் மற்றும் இந்திய புக் ரெக்கார்ட்ஸ் ஆகியவற்றில் இடம்பெற்றுள்ளது.

Date: 31st October 2017
Publication: Domain B
Edition: Online
Journalist: NA
Professor: Prof B Ravindran
Alumni/student: Gaurav Lodha
Headline: IIT-Madras students set record with 45 robotic cleaners
URL: http://www.domain-b.com/technology/electronics/20171031_robotic_cleaners.html

IIT-Madras students set record with 45 robotic cleaners

IIT-Madras students have fabricated 45 robots to simultaneously clean an area of 750 square feet for over 15 minutes on Sunday, in a major initiative aimed at sustaining and strengthening the concept of Swachh Bharat Abhiyan.

A total of 270 students from IIT-M's Centre For Innovation (CFI) created 45 custom-designed robots that wielded a fast rotating 'jhadu' or scrubber that cleaned an area the size of badminton court to create the new record.

Each robot is fitted with a high RPM motor at the centre, with two rotating scrub pads that direct dust into the central suction mechanism, while a filter in the vacuum tunnel collects the dust.

The robots were controlled over Bluetooth via an Android-based application.

Representatives of the Asia Book of Records and the India Book of Records, who adjudicated the event at Students Activities Centre on the campus, have awarded a provisional certificate after the successful completion of the exercise.

The final certification would follow after validation and assessment of the record evidences.

Prof B Ravindran, CFI faculty-in-charge, said the record was the latest in the list of achievements by the robotics groups. "Robotics is one of the oldest co-curricular activities at IIT Madras. In the past, IIT-M teams have successfully participated in various global competitions," he said.

Gaurav Lodha, student executive head, CFI, and a fourth year dual-degree student in the department of civil engineering, listed the benefits of use of robots.

"This will also impart technical training to students by teaching them the basics of electronics, robotics, automation, wireless communication, 3D printing, rapid prototyping and software modelling along with soft skills like teamwork, time management, problem-solving, communication and leadership," he said.

Experts claim the use of robots can contribute to eradication of manual scavenging and also help replace humans in cleaning sewer waste.

IIT Madras is a multi-cultural campus

Date: 5th October 2017
Publication: The Times of India
Edition: Online
Journalist: U Tejonmayam
Professor: Prof R Nagarajan
Headline: IIT-M students celebrate Joy of Giving Week with lunch for support staff
URL: https://timesofindia.indiatimes.com/city/chennai/iit-m-students-celebrate-joy-of-giving-week-with-lunch-for-support-staff/articleshow/60941475.cms

IIT-M students celebrate Joy of Giving Week with lunch for support staff

CHENNAI: Students of the Indian Institute of Technology- Madras celebrated Daan Utsav, a week-long Joy of Giving festival of philanthropy, with a thanksgiving lunch for the institute's support staff on Wednesday. Support staff, including security guards, cleaning staff, mess workers, bus drivers and others participated in the celebrations.

This is the second year that IIT-Madras is celebrating the festival with the events being organised by the IIT-Madras Branding Cell of International and Alumni Relations Student Council. The celebrations, which began on Monday, will be on till October 8.

The Joy of Giving Week is celebrated every year through 'acts of giving'- be it time, money, resources and skills- spanning the corporate, NGO and the government sector besides schools, colleges and the general public.

"The students of the International and Alumni Secretariat have been playing a major role in the past two years with IIT-M's Daan Utsav, and this year too, have come up with some laudable initiatives. Just as our alumni give back to society by creating jobs and boosting the economy, so do our students -- albeit in a different context," said Prof R Nagarajan, dean, international and alumni relations, IIT Madras.

Several other events are also planned for the week. They include beautifying Velachery railway station with the help of Fine Arts Club on October 7, informal games in collaboration with Hindi Mitra Mandal and donations to the Cancer Institute.

Date: 5th October 2017
Publication: Chennai Patrika
Edition: Online
Journalist: NA
Professor: Prof. R. Nagarajan
Alumni/student: Vineesha Badabhagni
Headline: IIT Madras students celebrate the Joy of Giving Daan Utsav
URL: http://news.chennaipatrika.com/post/2017/10/04/IIT-Madras-students-celebrate-the-Joy-of-Giving-Daan-Utsav.aspx

IIT Madras students celebrate the Joy of Giving Daan Utsav

Chennai, 04 October 2017: Indian Institute of Technology Madras students are celebrating the week-long festival of philanthropy – Daan Utsav – from 2nd to 8th October 2017.

The Joy of Giving Week is celebrated every year through "acts of giving" - money, time, resources, and skills - spanning the corporate, NGO and the government sector besides schools, colleges and the general public. This is the second year IIT Madras is celebrating Daan Utsav, which is organised by the IIT Madras Branding Cell of International and Alumni Relations Student Council.

Speaking about the initiative, Prof. R. Nagarajan, Dean, International and Alumni Relations, IIT Madras, said, "The students of the International and Alumni Secretariat have been playing a major role in the past two years with IITM's Daan Utsav, and this year too, have come up with some laudable initiatives. Just as our alumni give back to society by creating jobs and boosting the economy, so do our students -- albeit in a different context. I'm proud of the philanthropic work they do, and their total dedication to such worthwhile causes."

Last year, IIT Madras students celebrated Daan Utsav by organising Thanksgiving Lunch for the support staff and mural painting at Kasturibai Nagar Railway Station. This year, students have planned several activities:

* Thanksgiving Lunch on 4th October 2017 for the support staff (security guards, cleaning staff, mess workers, bus drivers etc.)
* Beautifying of Velachery Railway Station with the help of Fine Arts Club on 7th October 2017
* Informal Games - in collaboration with Hindi Mitra Mandal
* Donations – to the Cancer Institute, Chennai

Elaborating on the initiative Ms. Vineesha Badabhagni, Secretary, International and Alumni Relations, IIT Madras, says, “As a part of Daan Utsav festival, people all over India come together and celebrate the joy of giving. We at IIT Madras want to celebrate the same in our capacity. Every student here is encouraged and given a chance to volunteer. The span of activities is also versatile giving a student flexibility to contribute - time, money, efforts, etc. This festival evokes a sense of giving among IITians who are the makers of future India”.

Date: 5th October 2017
Publication: The Hindu- Metro Plus
Edition: Chennai
Page no.: 5
Journalist: Parshathy J Nath
Headline: Memories for life
URL: http://www.thehindu.com/society/memories-for-life/article19796541.ece

ON THE ROAD

Memories for life

Tim Hohmann just cannot get himself to bid farewell to the verdant IIT-Madras campus and his friends

Amidst the green The IIT campus is Tim Hohmann's favourite spot in the city • K PICHUMANI

PARSHATHY J NATH

Tim Hohmann will leave for Bremen, a town in Germany, his home, next week to study. But, this student of the Indian Institute of Technology - Madras is a happy man.

Along with his certified course work and grades, he will also carry home many warm memories – of evenings huddling together with his close friends in the canteen, using the library in the institute late into the night and strolling through the green campus full of spotted deer and mischievous monkeys.

There is a sea of a difference in campus lives in Germany and India, he says. While there is a lot of freedom in the former, here, he feels, a student has to follow many rules and restrictions. "I felt I was treated like a child. In Germany, we are used to a lot of freedom. This was tough for me to adapt to in the beginning." However, there are some good takeaways too. In Germany, the only way to celebrate among friends is to drink and smoke. "But, here I realised you can have a good time with your friends, just sipping tea and talking. That's fun too. But, in Germany, people will find you strange if you call them over to your place and do not offer them drinks."

The 28-year-old researcher joined IIT-M last July, as a Masters' exchange student in the HSEE department to specialise in Urban Development. He finds the campus the closest to his heart of all the spots in Chennai.

But, that has not stopped him from exploring other areas. He loves the Marina and Besant Nagar beaches. He soaks in the sights and flavours when he is there, of the women selling corn cobs and sparks of fire flying in the air from their carts, of

There is a sea of a difference in campus lives in Germany and India, says Hohmann

carousel rides on toy horses, of vendors selling crispy spring potatoes...

And, he cannot also forget his experience of watching *Kabali*, of seeing Rajinikanth on the big screen for the first time!

"I even bought a *Kabali* T-shirt. I watched the film at a multiplex theatre. The fans were going crazy. The mood was insane," Hohmann recalls.

Being a politically aware student, Hohmann finds the debates around what constitutes nationalism quite disturbing. "If we are not careful, imposed nationalism can do what it did to Germany. We know how it affected us and led to the Holocaust," he says.

Germany and IIT-M's relationship backs back to the inception of the institution, says Hohmann. It all began in the 1950s, when Pandit Jawaharlal Nehru, the then Prime Minister of India, made an official visit to West Germany and was offered assistance by the Government of the Federal Republic of Germany to set up a higher technological institute in India.

Currently, Hohmann is doing research at Indo German Centre for Sustainability (IGCS). He also takes a keen interest in making sense of Chennai's development in the last few years: the population explosion and infrastructural issues. Asked whether he will come back to India and join IIT-Madras as a professor one day, Hohmann says with a reflective smile, "Maybe."

In this series, we feature people who continue to work as they travel.

Date: 9th October 2017
Publication: The Hindu
Edition: Hyderabad/Chennai/Delhi
Page no.: 4
Journalist: NA
Headline: Giving back

IN BRIEF

Giving back

Indian Institute of Technology Madras students celebrated Daan Utsav, a week-long festival of philanthropy, from October 2 to 8. The Joy of Giving Week is celebrated every year through "acts of giving" - money, time, resources, and skills.

Date: 21st October 2017
Publication: First Post
Edition: Online
Journalist: Krupa Ge
Professor: Prof. Srilata K and P. Swarnalatha R
Headline: Found in Translation: A few noteworthy initiatives are helping Indian literature breach the language barrier
URL: http://www.firstpost.com/living/found-in-translation-a-few-noteworthy-initiatives-are-helping-indian-literature-breach-the-language-barrier-4161509.html

Found in Translation: A few noteworthy initiatives are helping Indian literature breach the language barrier

Translation efforts seem to almost always come out of passion, especially in the Indian publishing space. Take the Murty Classical Library, launched in January 2015 which "aims to make available the great literary works of India from the past two millennia" or the new Indian Novels Collective which felt "young readers needed to access the rich literature in Indian languages." The collective is now in the process of translating 100 novels from across India with a special thrust on Hindi.

Very few publishers in India focus on translation with the vigour and discipline that for instance, the Oxford University Press does. The academic press which has been in India for over a century now, recently announced its plans to enter Indian languages with translations of its back titles to Hindi and Bengali. This is an interesting development that yet again makes the case for India as a rich, prime player in the translation game, where books travel into the English speaking world and away from it as well, into India's various languages. Much the way classics of various languages can enrich English, so too can local languages gain from English.

Kolkata-based Seagull Books is a unique gem, as well as a delightful aberration in the Indian translation story. Seagull, which publishes world literature and sells translation across the globe, is an important player not just in India. It is also the third largest publisher of translated fiction in the United States of America!

On a global scale, another new game-changer is afoot. In October 2015, AmazonCrossing announced a whopping $10 million commitment to translating books into English and in the same year emerged as the largest publisher of translations in the USA. Earlier this year, AmazonCrossing opened up its submissions to 13 languages including Hindi and Bengali.

Nurturing of translation talent in India is also a relatively new and interesting space. Sangam House, an international writers' residency, has been at the forefront with various initiatives. For instance, The Simurgh Project on Words Without Borders brings Kashmiri poetry out to the world and it all started with a nine-day workshop in Srinagar and Pahalgam that brought together translators, poets, scholars and writers. In June 2017, Sangam hosted the Yali Translation Workshop where MT Vasudevan Nair's *Manju* was translated from Malayalam to Tamil by R Shalini with N Sukumaran, Vivek Shanbhag's *Ghachar Ghochar* was translated from Kannada to Hindi by Ajai Kumar Singh with Rahul Soni,

from Kannada to Konkani by Ramesh Lad with Damodar Mauzo, poets Lal Ded, Rupa Bhawani, Arnimal and Habba Khatoon were translated from Kashmiri to English by Neerja Mattoo with Arshia Sattar, Rahul Soni and Poorna Swami.
Says Arshia Sattar of Sangam House, “It is always important to nurture translators. We always need translations to read from other languages and other cultures, the more we have, the luckier we are. It's also important to nurture a community of translators, so that we can share our trials as well as our triumphs. Our work gets better when we talk to each other about our work, our positions, our techniques, our tricks.”

"The project came about like so many other projects — the stars were right. What that means is that people who were interested in the same things got together, we found a generous and committed funder who also cares deeply about sharing literature across languages and we were ready to go. It's about planning and pulling people together and then you need a large dollop of luck — that's where the stars come in,” she said.

At the IIT Madras, the Department of Humanities and Social Studies is abuzz as it prepares for an event of great significance that includes three events around the idea of translation. Professor Srilata K and Professor Swarnalatha R elaborate: “Mapping the Ahampuram is a set of three events really, all organised around the thematic of women’s writing in Tamil. As part of the morning’s inaugural, the Tamil writer R Meenakshi will be releasing a book of poems by the writer Sakthi Arulanandam which was published with the help of a grant from IIT Madras. Dr V Padma (Mangai) will then deliver the keynote address.”

Following this, the event will feature two panel discussions, one on the important theme of women writing the body. “There is a history to this,” the duo explains, “Not many years ago, some of our participating writers received threats and hate mail for daring to write about their bodies and sexualities. This is perhaps the first time these writers are meeting again after that. The other panel is meant to debate the question of what it means to be a woman writer, the politics of writing as a woman — both topical questions for feminism, especially in our context.”

In the afternoon, the organisers have planned a translation workshop where registered participants can (under the guidance of Prof Azhagarasan from the University of Madras) try their hand at translating a set of carefully curated writings by participating writers.

In the evening, there is a screening of the film She Write by professors Anjali Monteiro and KP Jayasankar from TISS, Mumbai. This film weaves together the narratives and work of Tamil women poets: Kutti Revathi, Salma, Malathi Maithri, Sukirtharani — all of whom are participating in the event. This event is open to all, as is the morning’s session.

Asked if they see a gap even within the academic space as far as the craft of translation is concerned and if they hope to address that wit this event, the say, “Certainly, yes, there is a gap. Academia is quite a different sort of beast from anything hands on — be it writing or translation. And yet, of course, it feeds off the work of writers and translators! There is certainly an interest among academics in the question of translation, since so many of the literary texts we read even in English Studies, have travelled into English from other languages. Today, we read Neruda and Marquez as part of the canon almost. We cannot and

must not forget that they had other histories and that someone, some gifted translator out there, has made it possible for us to read them! We also see this translation project as an attempt to foreground the significance of those Tamil women writers whose writings are relatively unknown to the Anglophone world. This, we hope, will help the academia to include more regional voices in the 'canon' of Indian writing."

Date: 24th October 2017
Publication: Deccan Chronicle
Edition: Chennai
Page no.: 5
Journalist: NA
Headline: IIT-M to host meet on Tamil women writers, poets

IIT-M to host meet on Tamil women writers, poets

Chennai: Indian Institute of Technology, Madras, will host a symposium 'Mapping the Ahampuram' focusing on contemporary Tamil women writers and poets here on October 26 The symposium is an outcome of an exploratory project funded by IIT Madras, for which the department of humanities interviewed contemporary Tamil women writers, a release from the premier institute here said. A translation workshop would also be held and would be conducted by Prof R. Azhagarasan from the department of English, University of Madras. The participants would be taught the "fine art of translation" and also have an opportunity to read their translations along with the other participants. V. Padma (Mangai), renowned theatre activist and writer, will deliver the keynote address at the symposium. *—PTI*

Date: 24th October 2017
Publication: Outlook
Edition: Online
Journalist: NA
Headline: IIT Madras to host meet on Tamil women writers, poets
URL: https://www.outlookindia.com/newsscroll/iit-madras-to-host-meet-on-tamil-women-writers-poets/1172783

IIT Madras to host meet on Tamil women writers, poets

Chennai, Oct 23 Indian Institute of Technology, Madras, will host a symposium 'Mapping the Ahampuram' focusing on contemporary Tamil women writers and poets here on October 26.

The symposium is an outcome of an exploratory project funded by IIT Madras, for which the Department of Humanities interviewed contemporary Tamil women writers, a release from the premier institute here said.

The meet will have panel discussions that will revolve around relevant topics like 'What it means to be a woman writer today' and 'writing the body'.

A translation workshop would also be held and would be conducted by Prof R Azhagarasan from the Department of English, University of Madras.

The participants would be taught the "fine art of translation" and also have an opportunity to read their translations along with the other participants.

V Padma (Mangai), renowned theatre activist and writer, will deliver the keynote address at the symposium.

Date: 24th October 2017
Publication: Business Standard
Edition: Online
Journalist: NA
Headline: IIT Madras to host meet on Tamil women writers, poets
URL: http://www.business-standard.com/article/pti-stories/iit-madras-to-host-meet-on-tamil-women-writers-poets-117102300996_1.html

IIT Madras to host meet on Tamil women writers, poets

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V Padma (Mangai), renowned theatre activist and writer, will deliver the keynote address at the symposium.

Date: 24th October 2017
Publication: Zee News
Edition: Online
Journalist: NA
Headline: IIT Madras to host meet on Tamil women writers, poets
URL: http://zeenews.india.com/tamil-nadu/iit-madras-to-host-meet-on-tamil-women-writers-poets-2051639.html

IIT Madras to host meet on Tamil women writers, poets

Chennai: Indian Institute of Technology, Madras, will host a symposium 'Mapping the Ahampuram' focusing on contemporary Tamil women writers and poets here on October 26.

The symposium is an outcome of an exploratory project funded by IIT Madras, for which the Department of Humanities interviewed contemporary Tamil women writers, a release from the premier institute here said.

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V Padma (Mangai), renowned theatre activist and writer, will deliver the keynote address at the symposium.

Date: 24th October 2017
Publication: Chennai Patrika
Edition: Online
Journalist: NA
Professor: Prof. R. Swarnalatha & Prof. K.Srilata
Headline: IIT Madras to host a Symposium on Contemporary Tamil Women Writers and Poets
URL: http://news.chennaipatrika.com/post/2017/10/23/IIT-Madras-to-host-a-Symposium-on-Contemporary-Tamil-Women-Writers-and-Poets.aspx

IIT Madras to host a Symposium on Contemporary Tamil Women Writers and Poets

Chennai, 23rd October 2017: Indian Institute of Technology Madras will host a Symposium - "Mapping the Ahampuram" – focusing on Contemporary Tamil Women Writers and Poets on 26th October 2017.

The symposium is an organic outcome of an exploratory project funded by IIT Madras for which the Department of Humanities interviewed contemporary Tamil Women Writers whose writings discuss the implication of 'women's place' in social discourses.

Mangai (pseudonym for Dr. V. Padma), Renowned Theatre Activist, Academician, Writer and Director of "Pani Thee," will be delivering the Keynote address.

Speaking about the Symposium, Prof. R. Swarnalatha and Prof. K.Srilata, Department of Humanities and Social Sciences, IIT Madras, and conference coordinators, said, "We want to focus on women writers whose personal histories have been erased and made invisible. We want to look at issues that preoccupy these writers as women and as 'translators' of culture and history. We feel that there is a need for an alternative form of criticism that is personal and pedagogical, analytical and reflective at the same time." Further, Prof. R. Swarnalatha and Prof. K. Srilata said, "We have selected the genre of the personal interview to explore the author's cultural backgrounds and relevant personal histories that are mostly not given adequate importance in 'strictly' academic criticism."

The Event has 3 components:
1. Panel Discussions
2. A Translation Workshop, and
3. A Translation Workshop

The panel discussions revolve around relevant topics like 'What it means to be a woman writer today' and 'Writing the Body'. The Translation Workshop, conducted by Prof. R. Azhagarasan, Dept. of English, University of Madras, will involve participants drawn from various colleges in Chennai. The participants will be taught the fine art of translation and will also have an opportunity to read their translations along with the other participants.

The Symposium will conclude with the screening of the film 'Shewrite' (2005) which weaves together the narratives and work of four Tamil women poets: Ms. Salma, Ms. Kuttirevathi, Ms. Malathy Maitri and Ms. Sukirtharani.

The film will be anchored by the directors, Ms. Anjali Monteiro and Mr. K.P. Jayasankar, Professors at the School of Media and Cultural Studies, Tata Institute of Social Sciences, Mumbai. Both of them are involved in media production, teaching and research. Their documentary films, which have been screened across the world, have won 32 national and international awards.

The writers and poets taking in the Symposium include Ms.Bama, Ms. Kutti Revathi, Ms. R.Meenakshi,Ms. Salma, Ms.Malathy Maithri, Ms. Sukirtharani, Ms. Manushi Bharati, Ms. Ilampirai, Ms. Sakti Arulanandam, Ms. Brindha Sethu, Ms. Ilampirai and Ms. Kavin Malar. The Symposium is an endeavour to bring all these writers in conversation with each other. The creation of a repository of author interviews will be an invaluable source of information, validation and support to researchers in the field of gender studies and also to new writers seeking to refine their craft, add Prof. R. Swarnalatha and Prof.K. Srilata.

Date: 24th October 2017
Publication: India Today
Edition: Online
Journalist: NA
Headline: IIT Madras to host meet on Tamil women writers, poets
URL: http://indiatoday.intoday.in/story/iit-madras-to-host-meet-on-tamil-women-writers-poets/1/1073674.html

IIT Madras to host meet on Tamil women writers, poets

Chennai, Oct 23 (PTI) Indian Institute of Technology, Madras, will host a symposium Mapping the Ahampuram focusing on contemporary Tamil women writers and poets here on October 26. The symposium is an outcome of an exploratory project funded by IIT Madras, for which the Department of Humanities interviewed contemporary Tamil women writers, a release from the premier institute here said. The meet will have panel discussions that will revolve around relevant topics like What it means to be a woman writer today and writing the body. A translation workshop would also be held and would be conducted by Prof R Azhagarasan from the Department of English, University of Madras. The participants would be taught the "fine art of translation" and also have an opportunity to read their translations along with the other participants. V Padma (Mangai), renowned theatre activist and writer, will deliver the keynote address at the symposium. PTI VGN APR APR NTR

Date: 24th October 2017
Publication: The New Indian Express
Edition: Online
Journalist: NA
Headline: IIT Madras to host meet on Tamil women writers, poets
URL: http://www.newindianexpress.com/pti-news/2017/oct/23/iit-madras-to-host-meet-on-tamil-women-writers-poets-1680849.html

IIT Madras to host meet on Tamil women writers, poets

Chennai, Oct 23 (PTI) Indian Institute of Technology, Madras, will host a symposium 'Mapping the Ahampuram' focusing on contemporary Tamil women writers and poets here on October 26.

The symposium is an outcome of an exploratory project funded by IIT Madras, for which the Department of Humanities interviewed contemporary Tamil women writers, a release from the premier institute here said.

The meet will have panel discussions that will revolve around relevant topics like 'What it means to be a woman writer today' and 'writing the body'.

A translation workshop would also be held and would be conducted by Prof R Azhagarasan from the Department of English, University of Madras.

The participants would be taught the "fine art of translation" and also have an opportunity to read their translations along with the other participants.

V Padma (Mangai), renowned theatre activist and writer, will deliver the keynote address at the symposium. PTI VGN APR APR .

Date: 25th October 2017
Publication: PTI
Edition: Online
Journalist: NA
Headline: IIT Madras to host meet on Tamil women writers, poets
URL: http://www.ptinews.com/news/9173342_IIT-Madras-to-host-meet-on-Tamil-women-writers--poets.html

IIT Madras to host meet on Tamil women writers, poets

Chennai, Oct 23 (PTI) Indian Institute of Technology, Madras, will host a symposium 'Mapping the Ahampuram' focusing on contemporary Tamil women writers and poets here on October 26.

The symposium is an outcome of an exploratory project funded by IIT Madras, for which the Department of Humanities interviewed contemporary Tamil women writers, a release from the premier institute here said.

The meet will have panel discussions that will revolve around relevant topics like 'What it means to be a woman writer today' and 'writing the body'.

A translation workshop would also be held and would be conducted by Prof R Azhagarasan from the Department of English, University of Madras.

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V Padma (Mangai), renowned theatre activist and writer, will deliver the keynote address at the symposium.

Date: 25th October 2017
Publication: The Times of India
Edition: Chennai
Page no.: 6
Journalist: NA
Headline: Symposium on Tamil women writers

Symposium on Tamil women writers: Indian Institute of Technology Madras will host a Symposium 'Mapping the Ahampuram' focusing on Contemporary Tamil Women Writers and Poets on October 26, Thursday.

Date: 25th October 2017
Publication: Jagran Josh
Edition: Online
Journalist: NA
Headline: IIT Madras to host meet on Tamil women writers, poets
URL: http://www.jagranjosh.com/trending/education-iit-madras-to-host-meet-on-tamil-women-writers-poets-336059

IIT Madras to host meet on Tamil women writers, poets

Indian Institute of Technology, Madras, will host a symposium 'Mapping the Ahampuram' focusing on contemporary Tamil women writers and poets here on October 26.

The symposium is an outcome of an exploratory project funded by IIT Madras, for which the Department of Humanities interviewed contemporary Tamil women writers, a release from the premier institute here said.

The meet will have panel discussions that will revolve around relevant topics like 'What it means to be a woman writer today' and 'writing the body'.

A translation workshop would also be held and would be conducted by Prof R Azhagarasan from the Department of English, University of Madras.

The participants would be taught the "fine art of translation" and also have an opportunity to read their translations along with the other participants. V Padma (Mangai), renowned theatre activist and writer, will deliver the keynote address at the symposium.

Date: 25th October 2017
Publication: Kalvimalar
Edition: Online
Journalist: NA
Headline: IIT Madras to host meet on Tamil women writers, poets
URL: http://kalvimalar.dinamalar.com/news-details.asp?id=26315&cat=1

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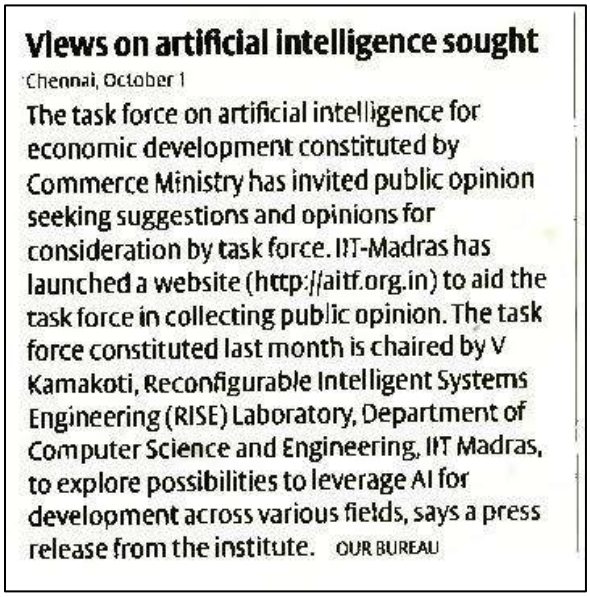
IIT Madras is an industry friendly Institute

Date: 2nd October 2017
Publication: The Hindu Business Line
Edition: Delhi/Pune/Bangalore/Ahmedabad/Mumbai
Page no.: 17
Journalist: NA
Professor: Prof. V Kamakoti
Headline: Views on artificial intelligence sought
URL: http://www.thehindubusinessline.com/economy/views-on-artificial-intelligence-sought/article9883485.ece



Views on artificial intelligence sought

Chennai, October 1

The task force on artificial intelligence for economic development constituted by Commerce Ministry has invited public opinion seeking suggestions and opinions for consideration by task force. IIT-Madras has launched a website (http://aitf.org.in) to aid the task force in collecting public opinion. The task force constituted last month is chaired by V Kamakoti, Reconfigurable Intelligent Systems Engineering (RISE) Laboratory, Department of Computer Science and Engineering, IIT Madras, to explore possibilities to leverage AI for development across various fields, says a press release from the institute. OUR BUREAU

Date: 2nd October 2017
Publication: The New Indian Express - Education Express
Edition: Kochi
Page no.: 3
Journalist: Blessy Mathew Prasad
Professor: Prof. Ashok Jhunjhunwala
Headline: IIT's lighting up our villages

IIT's lighting up our villages

Blessy Mathew Prasad finds out about IIT Madras's latest initiative to bring solar technology to rural Telangana

For about six to eight hours every day, the people of Devarakonda, a small village in Telangana live without electricity. However, their age-old problem has now been solved as IIT Madras took their solar-powered technology to these households. The reputable institute, in collaboration with Telangana State Southern Power Distribution Company Limited and Rural Electrification Corporation, took up this project to provide uninterrupted power through solar technology to these households spread across four hamlets in rural Telangana.

The project is implemented under the aegis of Ashok Jhunjhunwala, Principal Advisor, Ministries of Power and New and Renewable Energy, Government of India, and Professor (on sabbatical), IIT Madras. The technology called Inverterless System, comprises a 125 Wp solar panel, a 1 kWh battery, an inverterless controller unit and DC loads operating on a 48V DC internal distribution line. It powers a DC fan, a DC tube light, two DC bulbs, a DC mobile charger, a DC power socket and a remote controller to operate the fan and tube light.

Aditya Lolla, Project Officer, Centre for Decentralised Power Systems at IIT M explains the working of the technology. "The technology is part of a solar DC initiative, keeping in mind the affordability is an issue especially in the rural areas, there is a need for technology that would make the system more effective for the people." Although it is currently suitable for lower-income households, Aditya believes that it will soon be implemented in middle-class households as well.

> The DC current from the solar panel is converted to AC, and then the power is sent to the battery to store energy to bring down the cost
> Aditya Lolla

The solar technology was commercialised by Cygni Energy Private Limited

10,000

The number of households the technology has been installed in across 11 states

Helping hands

Verizon provided financial assistance of ₹75 lakh under Corporate Social Responsibility (CSR) for this project

Date: 6th October 2017
Publication: The Times of India
Edition: Online
Journalist: NA
Headline: NIT Goa, IIT Madras to ink MoU
URL: https://timesofindia.indiatimes.com/city/goa/nit-goa-iit-madras-to-ink-mou/articleshow/60961741.cms

NIT Goa, IIT Madras to ink MoU

Panaji: National Institute of Technology (NIT), Goa, will sign an MoU with the Indian Institute of Technology (IIT), Madras, under which 10% of the NIT's graduates will receive orientation from IIT Madras to prepare them to qualify for doctorate programmes at IITs. "We want to ensure that 10% of our students go directly into the line of research," NIT Goa director Gopal Mugeraya said.

This year 44 students received a masters degree from NIT Goa. Ten percent of all students passing out from the masters programme will be eligible to receive orientation at IIT Madras from the next academic year 2018-19.
"At NIT Goa, students are continuously encouraged to take up innovative research projects relating to societal needs," Mugeraya said.

Date: 14th October 2017
Publication: Cellular News
Edition: Online
Journalist: NA
Professor: Prof. Ashok Jhunjhunwala
Headline: Verizon and IIT Madras help light up 300 homes in India
URL: http://www.cellular-news.com/story/Operators/74428.php

Verizon and IIT Madras help light up 300 homes in India

For over a thousand people in rural Telengana in south India, nights without electricity have faded out into oblivion thanks to an innovation from a premier engineering school in the country and Verizon's commitment to using technology to transform lives.

At a recent event organized at a small hamlet near Hyderabad, leaders from Verizon India, including Kalyani Sekar, MD &VP, and Ramesh S.Kumar, General Manager-HR, along with representatives from Indian Institute of Technology (IIT) Madras, came together to mark the success of one of the largest installations of the Inverterless Solar Technology in the country.

Verizon India provided a financial grant of Rs. 75 lakhs (approximately $116, 000 USD) required for the cause.

The initiative led by IIT Madras to provide uninterrupted power using Inverterless Solar Technology to 300 households spread across four hamlets in rural Telangana, India, ties in perfectly with Ve rizon's CSR goals.

Leaders from Verizon India came together to mark the success of one of the largest installations of the Inverterless Solar Technology in the country.

This technology has been developed in-house by IIT and transferred to and commercialized by Cygni Energy Private limited, to carry out the installations. The Inverterless System, comprising a 125Wp Solar Panel, a 1kWh battery, an Inverterless controller unit and DC was installed in June 2017, making sustained power supply a reality for the people from four of the hamlets in the area.

This technology brings multiple benefits to these hamlets:

The path-breaking idea took shape under the guidance of Prof. Ashok Jhunjhunwala, Professor, IIT Madras and Principal Advisor, Ministries of Power and New and Renewable Energy, Government of India.

Commenting on the project, Kalyani said, "At Verizon, our commitment to empower communities around us is rooted in the firm belief that technology has the power to make lives better. Verizon India's collaboration with IIT Madras to implement the Inverterless Solar System for 'near off-grid' areas in Telangana, is a reaffirmation that we share our success with the community to make the world in which we work better than it was yesterday."

Date: 17th October 2017
Publication: India Education Diary
Edition: Online
Journalist: NA
Professor: Prof. Gaurav Raina
Headline: IIT Madras Professor elected as Chairman of Mobile Payment Forum of India
URL: http://indiaeducationdiary.in/iit-madras-professor-elected-chairman-mobile-payment-forum-india/

IIT Madras Professor elected as Chairman of Mobile Payment Forum of India

Chennai: Indian Institute of Technology Madras Professor Gaurav Raina has been elected as the Chairman of Mobile Payment Forum of India (MPFI), which played a key role in developing interoperability and security standards for Immediate Payment Service (IMPS) and later, the Unified Payments Interface (UPI) built upon the IMPS platform."

A joint initiative of Institute for Development and Research in Banking Technology, Hyderabad and Rural Technology Business Incubator (RTBI), IIT Madras, taken up in 2006, MPFI's mission is to enable mobile payments and mobile financial services by everyone in Digital India through secure, efficient and low-cost transaction.

Speaking about his priorities, Prof. Gaurav Raina, Associate Professor, Department of Electrical Engineering, IIT Madras, said, "The MPFI will focus on Future solutions such as Voice-based Authentication, Security and Privacy. Another area of priority will be the UPI platform, including the BHIM application."

Creating User awareness, Simplifying Message Formats for SMS banking, and Proximity Solutions, including NFC (Near Field Communication), will also be taken up in the next few months. The MPFI will work closely with National Payments Corporation of India (NPCI) to play a key role in this critical transformation, he said.

The IMPS and UPI platforms have been completely designed, architected and engineered in India. These digital platforms are world class, and in the coming years, millions of Indians will stand to benefit.

Prof. Gaurav Raina, took over as the Chairman for a 2-year tenure during the General Meeting of MPFI held on 4th October 2017, at Mumbai. The NPCI, Public and Private Sector banks, financial institutions, Government of India, Academia, and Technology Firms, attended the meeting to discuss the priorities for the future.

In August 2017 alone, over 90 million financial transactions took place using IMPS and UPI platforms. Transactions on IMPS have doubled each year over the last two years, with over 500 million transactions being completed in FY 2016-2017. These massive growth numbers are but a small indication of the tremendous potential for mobile payments in the Indian economy.

Today, the MPFI is positioned as a pivotal solutions-oriented think tank focusing on developing policy frameworks, supporting businesses and building out the technology platforms further.

According to Prof. Gaurav Raina, "We have only seen the tip of the iceberg in mobile payments. There is tremendous potential for IMPS and UPI-based payments to change the face of Indian economy, by increasing efficiency, enhancing financial inclusion and fostering innovation."

"We will see the solid growth in mobile payments be further accelerated through network effects, once a critical mass of users is achieved. Individuals, start-ups and small enterprises, as well as large businesses will benefit from these gains," he said.

The next meeting of MPFI is expected to be held in January 2018. In subsequent meetings, the MPFI will also host sessions for show-casing innovative solutions by financial technology companies and start-up companies working in this space.

Date: 17th October 2017
Publication: UNI
Edition: Online
Journalist: NA
Professor: Prof. Gaurav Raina
Headline: IIT-M Professor elected MPFI Chairman
URL: http://www.uniindia.com/iit-m-professor-elected-mpfi-chairman/states/news/1019635.html

IIT-M Professor elected MPFI Chairman

Chennai, Oct 16 (UNI) Prof Gaurav Raina of Indian Institute of Technology, Madras, has been elected as Chairman of Mobile Payment Forum of India (MPFI), which played a key role in developing interoperability and security standards for Immediate Payment Service (IMPS) and later, the Unified Payments Interface (UPI) built upon the IMPS platform."

A joint initiative of Institute for Development and Research in Banking Technology, Hyderabad, and Rural Technology Business Incubator (RTBI), IIT Madras, taken up in 2006, MPFI's mission was to enable mobile payments and mobile financial services by everyone in Digital India through secure, efficient and low-cost transaction.

Prof Gaurav, Associate Professor, Department of Electrical Engineering, IIT-M, said "the MPFI will focus on Future solutions such as Voice-based Authentication, Security and Privacy.

''Another area of priority will be the UPI platform, including BHIM application'', he said, an IIT-M release here today said.

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Date: 17th October 2017
Publication: HT Syndication
Edition: Online
Journalist: NA
Professor: Prof. Gaurav Raina
Headline: IIT-M Professor elected MPFI Chairman
URL: http://htsyndication.com/htsportal/united-news-of-india/article/iit-m-professor-elected-mpfi-chairman/23633108

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The next meeting of MPFI is expected to be held in January 2018. In subsequent meetings, the MPFI will also host sessions for show-casing innovative solutions by financial technology companies and start-up companies working in this space.

Date: 18th October 2017
Publication: The Times of India
Edition: Chennai
Page no.: 5
Journalist: NA
Professor: Prof. Gaurav Raina
Headline: IIT-M prof elected MPFI chairman

IIT-M prof elected MPFI chairman: IIT Madras professor Gaurav Raina has been elected chairman of the Mobile Payment Forum of India (MPFI), the body which focuses on voice-based authentication, security, and privacy aspects of mobile usage.

Date: 18th October 2017
Publication: The Hans India
Edition: Hyderabad
Page no.: 14
Journalist: NA
Professor: Prof. Gaurav Raina
Headline: IIT-M professor elected new MPFI Chairman

IIT-M professor elected new MPFI Chairman

OUR BUREAU

Chennai: Indian Institute of Technology Madras (IIT-M) Professor Gaurav Raina has been elected as the Chairman of Mobile Payment Forum of India (MPFI), which played a key role in developing interoperability and security standards for Immediate Payment Service (IMPS). The Unified Payments Interface (UPI) built upon the IMPS platform.

Speaking on the occasion, Prof. Gaurav Raina, Associate Professor, Department of Electrical Engineering, IIT Madras, said, "The MPFI will focus on Future solutions such as Voice-based Authentication, Security and Privacy. Another area of priority will be the UPI platform, including the BHIM application." The professor took over as the Chairman for two-year tenure. He was elected as Chairman at a general meeting of MPFI held on October 4, in Mumbai. Gaurav Raina said, "We have only seen the tip of the iceberg in mobile payments. There is tremendous potential for IMPS and UPI-based payments to change the face of Indian economy, by increasing efficiency, enhancing financial inclusion and fostering innovation."

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Date: 18th October 2017
Publication: Chennai Patrika
Edition: Online
Journalist: NA
Professor: Prof. Gaurav Raina
Headline: IIT Madras Professor elected as Chairman of Mobile Payment Forum of India
URL: http://news.chennaipatrika.com/post/2017/10/16/IIT-Madras-Professor-elected-as-Chairman-of-Mobile-Payment-Forum-of-India.aspx

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Date: 20th October 2017
Publication: Property House
Edition: Magazine
Page no.: 39
Journalist: NA
Professor: Prof. Manu Santhanam & Prof. Ravindra Gettu
Headline: International Conference on Advances in Construction Materials and Systems, Chennai, Sep 4 – 8, 2017

INTERNATIONAL CONFERENCE ON ADVANCES IN CONSTRUCTION MATERIALS AND SYSTEMS, CHENNAI, SEP 4 - 8, 2017

The International Conference on Advances in Construction Materials and Systems (ICACMS 2017) was held in conjunction with RILEM Annual Week 2017, at IIT Madras and Hotel Leela Palace, Chennai, between Sep 4 and 8, 2017. RILEM is an international organization consisting of academic and industry experts in the area of construction materials and technologies. The mission of the association is to advance scientific knowledge related to construction materials, systems and structures and to encourage transfer and application of this knowledge world-wide. The work of RILEM is conducted through several technical committees, which encompass a wide range of issues within the overall subject area. Every year, the standing committees of RILEM meet in the period between late August and early September, and this meeting is held in conjunction with a major international conference. In its 71 year history, this is the first time that a RILEM Annual Week event was held in India.

The event was primarily organized by IIT Madras – Department of Civil Engineering, with support from Indian Concrete Institute, National Centre for Safety of Heritage Structures, NACE International, American Concrete Institute, Transportation Research Group and International Society for Asphalt Pavements. From IIT Madras, Prof. Manu Santhanam was the conference chairman, and Profs. Ravindra Gettu, Radhakrishna Pillai, Benny Raphael, Arun Menon and Murali Krishnan were the co-chairmen. The event was also support by 29 industrial sponsors, many of whom put up their products and services in a large exhibit at the conference venue.

Two pre-conference workshops, one dealing with Limestone Calcined Clay Cement and the other with Textile Reinforced Concrete were organized on Sep 4 at two different venues within IIT Madras. Apart from the registered delegates for the conference, there were also several other participants who had come solely for the workshops. These workshops were preceded by a session on 'How to publish technical research' that was organized by Springer, a leading publications company. A Welcome Reception was organized on the same evening for all the conference participants at the Open Air Theatre in IIT Madras.

The main conference was held between Sep 5 and 7 at Hotel Leela Palace, and saw the participation of nearly 550 delegates, with over 160 from outside India. Apart from 17 keynote speakers, more than 200 papers were presented by speakers from across the world in 33 parallel sessions. Besides the paper presentation nearly 50 posters were also presented at the conference. A banquet featuring cultural performances was also organized for all the participants on Sep 6. The conference was closed on Sep 8 with two well attended post-conference workshops, which dealt with Corrosion Control and Monitoring, and Non-destructive Testing of Modern and Heritage Structures. These workshops were dedicated to two of the leading researchers in these areas – Dr. Carmen Andrade and late Prof. Luigia Binda, respectively.

The conference and the associated workshops gave an excellent opportunity for researchers and practitioners in construction materials and systems to hear from the leading experts, as well as to engage in constructive partnerships for the future. With the large number of participants from India and abroad, this event was an unprecedented success.

Date: 29th October 2017
Publication: The Economic Times
Edition: Online
Journalist: NA
Professor: Prof. Gaurav Raina
Headline: MPFI plan to come out with user-friendly features
URL: https://economictimes.indiatimes.com/industry/banking/finance/banking/mpfi-plan-to-come-out-with-user-friendly-features/articleshow/61316209.cms

MPFI plan to come out with user-friendly features

The Mobile Payment Forum of India (MPFI), a think tank, has set its eyes on coming out with a number of user-friendly features like voice-based authentication, a top official said.

A joint initiative of the Institute for Development and Research in Banking Technology, Hyderabad and Rural Technology Business Incubator, IIT Madras, MPFI's mission "is to enable mobile payments and financial services through secure, efficient and low cost transaction."

It played a key role in developing interoperability and security standards for Immediate Payment Service (IMPS), the basic platform for mobile payments, and later the Unified Payments Interface (UPI), built using IMPS.

MPFI's stakeholders include policy makers, banks, telcos and others.

"MPFI will focus on futuristic solutions such as voice based authentication and security and privacy, among others," MPFI Chairman Gaurav Raina said.

As a solutions oriented think tank, MPFI was looking at issues across policy, business and technology over short, medium and long-term horizons, he said during an interaction with.

Raina, a Professor at Indian Institute of Technology, Madras (IIT-M), said others like creating user awareness, simplifying message formats for SMS banking, proximity payments and Near Field Communication (tap and pay) would also be taken up in the coming months.

For instance, MPFI was working towards standardisation of message formats for SMS banking across banks, he said.

"Not everyone has a smartphone.. Connectivity could be patchy although it is getting better.. SMS as a channel for at least basic financial services should be promoted and needs standardisation," he explained.

For example, one mastercode could be used across banks for account balance purposes, Raina said.

On voice-based authentication, he said it was being assumed that there was a certain level of literacy whenever a financial transaction is done, but the aim was to make it easier for more and more people.

Further, elderly people may not be comfortable with other kinds of technology, he said.

"So can we not think of a world where voice plays a very important role in banking," he said on efforts on designing voice-based authentication.

MPFI will focus on developing such features over the coming years, he said.

Giving statistics, Raina said that in August 2017 alone, there were over 90 million financial transactions using IMPS and UPI.

As many as 500 million transactions were done on IMPS in FY 2016-17, he said.

"These massive growth numbers are but a small indication of the tremendous potential for mobile payments in the Indian economy," he said.

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URL: https://timesofindia.indiatimes.com/business/india-business/mpfi-plan-to-come-out-with-user-friendly-features/articleshow/61315912.cms

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URL: http://indiatoday.intoday.in/story/mpfi-plan-to-come-out-with-user-friendly-features/1/1077610.html

MPFI plan to come out with user-friendly features

Chennai, Oct 29 (PTI) The Mobile Payment Forum of India (MPFI), a think tank, has set its eyes on coming out with a number of user-friendly features like voice-based authentication, a top official said. A joint initiative of the Institute for Development and Research in Banking Technology, Hyderabad and Rural Technology Business Incubator, IIT Madras, MPFIs mission "is to enable mobile payments and financial services through secure, efficient and low cost transaction." It played a key role in developing interoperability and security standards for Immediate Payment Service (IMPS), the basic platform for mobile payments, and later the Unified Payments Interface (UPI), built using IMPS. MPFIs stakeholders include policy makers, banks, telcos and others. "MPFI will focus on futuristic solutions such as voice based authentication and security and privacy, among others," MPFI Chairman Gaurav Raina said. As a solutions oriented think tank, MPFI was looking at issues across policy, business and technology over short, medium and long-term horizons, he said during an interaction with PTI. Raina, a Professor at Indian Institute of Technology, Madras (IIT-M), said others like creating user awareness, simplifying message formats for SMS banking, proximity payments and Near Field Communication (tap and pay) would also be taken up in the coming months. For instance, MPFI was working towards standardisation of message formats for SMS banking across banks, he said. "Not everyone has a smartphone.. Connectivity could be patchy although it is getting better.. SMS as a channel for at least basic financial services should be promoted and needs standardisation," he explained. For example, one mastercode could be used across banks for account balance purposes, Raina said. On voice-based authentication, he said it was being assumed that there was a certain level of literacy whenever a financial transaction is done, but the aim was to make it easier for more and more people. Further, elderly people may not be comfortable with other kinds of technology, he said. "So can we not think of a world where voice plays a very important role in banking," he said on efforts on designing voice-based authentication. MPFI will focus on developing such features over the coming years, he said. Giving statistics, Raina said that in August 2017 alone, there were over 90 million financial transactions using IMPS and UPI. As many as 500 million transactions were done on IMPS in FY 2016-17, he said. "These massive growth numbers are but a small indication of the tremendous potential for mobile payments in the Indian economy," he said. PTI SA APR ROH

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मोबाइल पेमेंट का बदल जाएगा तरीका, ट्रांजैक्शन में आपकी आवाज का होगा बड़ा रोल

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चेन्नई. आने वाले वर्षों में मोबाइल पेमेंट और सरल व आसान हो जाएगा। मोबाइल पेमेंट फोरम ऑफ इंडिया (एमपीएफआई) यूजर फ्रेंडली फीचर्स जैसे वायस बेस्ड अथेंटिकेशन को लाने की तैयारी कर रहा है। यानी, इस तरह के फीचर आने से खासकर बुजुर्ग लोगों के लिए मोबाइल से पेमेंट करना काफी आसान हो जाएगा। साथ ही उन लोगों के लिए भी यह काफी मददगार होगा, जिन्हें फाइनेंशियल ट्रांजैक्शन के लिए आवश्यक जानकारी नहीं है। बता दें, एमपीएफआई एक थिंक टैंक है, जो मोबाइल पेमेंट सिस्टम को लेकर सॉल्यूशन देता है।

एमपीएफआई, इंस्टीट्यूट फॉर डेवलपमेंट एंड रिसर्च इन बैंकिंग टेक्नोलॉजी, हैदराबाद और रूरल टेक्नोलॉजी बिजनेस इनक्युबेटर, आईआईटी मद्रास का एक ज्वाइंट इनीशिएटिव है। फोरम का मिशन मोबाइल पेमेंट्स और फाइनेंशियल सर्विसेज को सुरक्षित, प्रभावी और सस्ता बनाना है। एमपीएफआई ने इमीडिएट पेमेंट सर्विस (आईएमपीएस) और यूनिफाइड पेमेंट्स इंटरफेस (यूपीआई) के लिए इंटरपोर्टेबिलिटी और सिक्युरिटी स्टैंडर्ड्स डेवलप करने में अहम रोल अदा किया है। आईएमपीएस मोबाइल पेमेंट्स का बेसिक प्लेटफॉर्म है। एमपीएफआई में पॉलिसी मेकर्स, बैंक, टेलिकॉम कंपनियां और अन्य शामिल हैं।

फ्यूचर की टेक्नोलॉजी पर है फोकस

एमपीएफआई के चेयरमैन गौरव रैना ने बताया कि हमारा फोकस फ्यूचर की टेक्नोलॉजी को लेकर है, जिसमें वायस बेस्ड अंथेटिकेशन और सिक्युरिटी एंड प्राइवेसी शामिल है। उन्होंने कहा कि हम शॉर्ट, मीडियम और लॉन्ग टर्म के लिए एक नीति, बिजनेस और टेक्नोलॉजी की संभावनाएं तलाश रहे हैं। रैना आईआईटी मद्रास के प्रोफेसर हैं। उन्होंने कहा कि आने वाले महीनों में यूजर अवेयरनेस, एसएमएस बैंकिंग के लिए मैसेज फॉर्मेट को सरल बनाने, प्रॉक्सीमिटी पेमेंट्स और नियर फील्ड कम्युनिकेशन (टैप एंड पे) पर भी विचार करेंगे। अभी हम सभी बैंकों में एसएमएस बैंकों के लिए मैसेज फॉर्मेट का एक मानक बनाने पर काम करे हैं।

पेमेंट में अहम होगा वायस बेस्ड अथेंटिकेशन

रैना ने बताया वायस बेस्ड अथेंटिकेशन पर कहा है कि अभी यह माना जाता है कि फाइनेंशियल ट्रांजैक्शन के लिए एक निश्चित लेवल की साक्षरता जरूरी है। लेकिन हमारा उद्देश्य इसे अधिक से अधिक लोगों के लिए आसान बनाना है। भविष्य में बुजुर्ग लोग अन्य तरह की टेक्नोलॉजी के साथ सहज नहीं हो सकते हैं। इसलिए एक ऐसे संसाद के बारे में सोच रहे हैं जहां वॉयस का बैंकिंग में अहम रोल हो सकता है। वॉयस बेस्ड अथेंटिकेशन की डिजाइनिंग को लेकर प्रयास शुरू हैं। एमपीएफआई का फोकस आने वाले सालों में इस तरह के फीचर डेलवप करने पर है।

बढ़ रहा हैIMPSऔरUPIसे ट्रांजैक्शन

रैना ने बताया कि अगस्त 2017 में अकेले आईएमपीएस और यूपीआई के जरिए 9 करोड़ से ज्यादा फाइनेंशियल ट्रांजैक्शन हुए। 2016-17 में आईएमपीएस पर 50 करोड़ ट्रांजैक्शन हुए थे। उन्होंने कहा कि आंकड़ों में ग्रोथ काफी बेहतर है लेकिन यह इस बात का भी संकेत है कि इंडियन इकोनॉमी में मोबाइल पेमेंट्स के लिए काफी ज्यादा संभावनाएं हैं।

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Chennai-based think-tank MPFI plans to come out with user-friendly features

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It played a key role in developing interoperability and security standards for Immediate Payment Service (IMPS), the basic platform for mobile payments, and later the Unified Payments Interface (UPI), built using IMPS.

MPFI's stakeholders include policy makers, banks, telcos and others.

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Further, elderly people may not be comfortable with other kinds of technology, he said. "So can we not think of a world where voice plays a very important role in banking," he said on efforts on designing voice-based authentication.

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"These massive growth numbers are but a small indication of the tremendous potential for mobile payments in the Indian economy," he said.

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योजना वित्त वर्ष 2016-17 में आईएमपीएस के जरिये 50 करोड़ लेन-देन किए गए थे

मोबाइल भुगतान और सरल बनाने की योजना

एजेंसी ■ चेन्नई

डिजिटल भुगतान को बढ़ावा देने के लिए स्थापित संगठन मोबाइल पेमेंट फोरम ऑफ इंडिया (एमपीएफआई) आवाज आधारित प्रमाणन समेत कई सुविधाजनक फीचर लाने वाला है। इस फोरम का गठन भारतीय प्रौद्योगिकी संस्थान (आईआईटी) मद्रास और बैंकिंग प्राद्योगिकी पर काम करने वाली हैदराबाद की संस्था इंस्टिट्यूट फार डेवलपमेंट एंड रिसर्च इन बैंकिंग टेक्नोलाजी ने मिल कर किया है। एमपीएफआई के चेयरमैन गौरव रैना ने कहा, एमपीएफआई आवाज आधारित प्रमाणन, सुरक्षा एवं निजता सुविधा जैसे कई भविष्य के

हल पर ध्यान केंद्रित कर रहा है। आईआईटी मद्रास के प्रोफैसर रैना ने पीटीआई भाषा से कहा कि आने वाले महीनों में लोगों के बीच जागरूकता बढ़ाने, एसएमएस बैंकिंग के लिए संदेशों का फॉर्मेट आसान बनाने, नियर फील्ड कम्यूनिकेशन (एनएफसी), प्रॉक्सिमिटी पेमेंट आदि पर भी ध्यान दिया जाएगा। उन्होंने आगे कहा, हर किसी के पास स्मार्टफोन नहीं है। नेटवर्क बेहतर हो रहा है पर यह कई बार खराब हो सकता है। पर एसएमएस कम से कम आधारभूत वित्तीय सेवाओं का एक माध्यम हो सकता है। इसे बढ़ावा देने और इसके मानकीकरण की जरूरत है। रैना ने उदाहरण के तौर पर कहा कि खाते की राशि संबंधी उद्देश्यों के लिए सभी बैंकों में एक मास्टरकोड का इस्तेमाल किया जा सकता है। आवाज आधारित प्रमाणन के बारे में उन्होंने कहा, ऐसा माना जा रहा है कि वित्तीय लेन-देन के संबंध में साक्षरता का एक तय स्तर है पर उद्देश्य इसे अधिक से अधिक लोगों के लिए आसान बनाना है। उन्होंने आगे कहा, उम्रदराज लोग अन्य किस्म की प्रौद्योगिकी के प्रति सहज नहीं हो सकते हैं। उन्होंने कहा, तो क्या हम एक ऐसी कल्पना नहीं कर सकते हैं जहां बैंकिंग में आवाज की महत्वपूर्ण भूमिका हो। रैना ने कहा कि एमपीएफआई आने वाले वर्षों में इस तरह के फीचर विकसित करने पर ध्यान देगा। आंकड़े पेश करते हुए उन्होंने कहा कि सिर्फ अगस्त 2017 में ही आईएमपीएस और यूपीआई का इस्तेमाल करते हुए नौ करोड़ से अधिक लेन-देन किए गए हैं। वित्त वर्ष 2016-17 में आईएमपीएस के जरिए 50 करोड़ लेन-देन किए गए थे।

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और सरल बनेगा मोबाइल भुगतान

योजना पर चल रहा काम

एजेंसिया

चेन्नई. डिजिटल भुगतान को बढ़ावा देने के लिए स्थापित संगठन मोबाइल पेमेंट फोरम ऑफ इंडिया (एमपीएफआई) आवाज आधारित प्रमाणन समेत कई सुविधाजनक फीचर लाने वाला है. इस फोरम का गठन भारतीय प्रौद्योगिकी संस्थान (आईआईटी) मद्रास और बैंकिंग प्राद्योगिकी पर काम करने वाली हैदराबाद की संस्था इंस्टिट्यूट फार डेवलपमेंट एंड रिसर्च इन बैंकिंग टेक्नोलाजी ने मिल कर किया है. एमपीएफआई के चेयरमैन गौरव रैना ने कहा एमपीएफआई आवाज आधारित प्रमाणन, सुरक्षा एवं निजता सुविधा जैसे कई भविष्य के हल पर ध्यान केंद्रित कर रहा है. आईआईटी मद्रास के प्रोफैसर रैना ने कहा कि आने वाले महीनों में लोगों के बीच जागरुकता बढाने, एसएमएस बैंकिंग के लिए संदेशों का फॉर्मेट आसान बनाने, नियर फील्ड कम्यूनिकेशन (एनएफसी), प्रॉक्सिमिटी पेमेंट आदि पर भी ध्यान दिया जाएगा. उन्होंने आगे कहा हर किसी के पास स्मार्टफोन नहीं है. नेटवर्क बेहतर हो रहा है पर यह कई बार खराब हो सकता है. पर एसएमएस कम से कम आधारभूत वित्तीय सेवाओं का एक माध्यम हो सकता है. इसे बढावा देने और इसके मानकीकरण की जरूरत है.

रैना ने उदाहरण के तौर पर कहा कि खाते की राशि संबंधी उद्देश्यों के लिए सभी बैंकों में एक मास्टरकोड का इस्तेमाल किया जा सकता है. आवाज आधारित प्रमाण्गन के बारे में उन्होंने कहा, ऐसा माना जा रहा है कि वित्तीय लेन-देन के संबंध में साक्षरता का एक तय स्तर है; पर उद्देश्य इसे अधिक से अधिक लोगों के लिए आसान बनाना है.

उन्होंने आगे कहा, उम्रदराज लोग अन्य किस्म की प्रौद्योगिकी के प्रति सहज नहीं हो सकते हैं. उन्होंने कहा तो क्या हम एक ऐसी कल्पना नहीं कर सकते हैं जहां बैंकिंग में आवाज की महत्वपूर्ण भूमिका हो. रैना ने कहा कि एमपीएफआई आने वाले वर्षों में इस तरह के फीचर विकसित करने पर ध्यान देगा.

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MPFI to come out with user-friendly features: Official

PTI ■ CHENNAI

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Headline: MPFI plans to launch user-friendly features

MPFI plans to launch user-friendly features

Chennai: The Mobile Payment Forum of India (MPFI), a think tank, has set its eyes on coming out with a number of user-friendly features like voice-based authentication, a top official said. A joint initiative of the Institute for Development and Research in Banking Technology, Hyderabad and Rural Technology Business Incubator, IIT Madras, MPFI's mission "is to enable mobile payments through secure, efficient and low cost transaction."

It played a key role in developing interoperability and security standards for Immediate Payment Service, the basic platform for mobile payments. "MPFI will focus on futuristic solutions," MPFI Chairman Gaurav Raina said. —PTI

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Professor: Prof. Gaurav Raina
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मोबाइल भुगतान और सरल बनाने की योजना

चेन्नई: मोबाइल पेमेंट फोरम ऑफ इंडिया (एमपीएफआई) डिजिटल भुगतान को बढ़ावा देने के लिए आवाज आधारित प्रमाणन समेत कई सुविधाजनक फीचर लाने वाला है। भारतीय प्रौद्योगिकी संस्थान (आईआईटी) मद्रास और बैंकिंग प्राद्योगिकी पर काम करने वाली हैदराबाद की संस्था इंस्टिटयूट फार डेवलपमेंट एंड रिसर्च इन बैंकिंग टेक्नोलाजी ने मिल कर इस फोरम का गठन किया है।

क्या है योजना

एमपीएफआई आवाज आधारित प्रमाणन, सुरक्षा एवं निजता सुविधा जैसे कई भविष्य के हल पर ध्यान केंद्रित कर रहा है। एमपीएफआई के चेयरमैन गौरव रैना ने यह जानकारी दी। आईआईटी मद्रास के प्रोफैसर रैना ने कहा कि आने वाले महीनों में लोगों के बीच जागरूकता बढ़ाने, एसएमएस बैंकिंग के लिए संदेशों का फॉर्मेट आसान बनाने, नियर फील्ड कम्यूनिकेशन (एनएफसी), प्राक्सिमिटी पेमेंट आदि पर भी ध्यान दिया जाएगा। हर किसी के पास स्मार्टफोन नहीं है। नेटवर्क बेहतर हो रहा है पर वह कई बार खराब हो सकता है। पर एसएमएस कम से कम आधारभूत वित्तीय सेवाओं का एक माध्यम हो सकता है। इसे बढ़ावा देने और इसके मानकीकरण की जरूरत है।

मास्टरकोड

उदाहरण के तौर पर रैना ने कहा कि खाते की राशि संबंधी उद्देश्यों के लिए सभी बैंकों में एक मास्टरकोड का इस्तेमाल किया जा सकता है। आवाज आधारित प्रमाणन के बारे में उन्होंने कहा, ऐसा माना जा रहा है कि वित्तीय लेन-देन के संबंध में साक्षरता का एक तय स्तर है पर उद्देश्य इसे अधिक से अधिक लोगों के लिए आसान बनाना है। उन्होंने आगे कहा, उम्रदराज लोग अन्य किस्म की प्रौद्योगिकी के प्रति सहज नहीं हो सकते हैं। क्या हम एक ऐसी कल्पना नहीं कर सकते हैं जहां बैंकिंग में आवाज की महत्वपूर्ण भूमिका हो। एमपीएफआई आने वाले वर्षों में इस तरह के फीचर विकसित करने पर ध्यान देगा।

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एजेंसी • चेन्नई

सभी बैंकों में मास्टर कोड का इस्तेमाल किया जा सकता है

डिजिटल भुगतान को बढ़ावा देने के लिए स्थापित संगठन मोबाइल पेमेंट फोरम ऑफ इंडिया (एमपीएफआई) आधार आधारित प्रमाणन समेत कई सुविधाजनक फीचर लाने वाला है। इस फोरम का गठन भारतीय प्रौद्योगिकी संस्थान (आईआईटी) मद्रास और बैंकिंग प्रौद्योगिकी पर काम करने वाली हैदराबाद की संस्था इंस्टिट्यूट फॉर डेवलपमेंट एंड रिसर्च इन बैंकिंग टेक्नोलाजी ने मिल कर किया है। एमपीएफआई के चेयरमैन गौरव रैना ने कहा, एमपीएफआई आधार आधारित प्रमाणन, सुरक्षा एवं निजता सुविधा जैसे कई फीचर्स के हल पर ध्यान केंद्रित कर रहा है। आईआईटी मद्रास के प्रोफेसर रैना ने कहा कि आने वाले महीनों में लोगों के बीच जागरूकता बढ़ाने, एसएमएस बैंकिंग के लिए संदेशों का फॉर्मेट आसान बनाने, नियर फील्ड कम्युनिकेशन (एनएफसी), इंटिग्रिटी पेमेंट आदि पर भी ध्यान दिया जाएगा। उन्होंने आगे कहा, हर किसी के पास स्मार्टफोन नहीं है।

नेटवर्क बेहतर हो रहा है पर यह कई बार खराब हो सकता है। पर एसएमएस कम से कम आधारभूत वित्तीय सेवाओं का एक माध्यम हो सकता है। इसे बढ़ावा देने और इसके मानकीकरण की जरूरत है। रैना ने उदाहरण के तौर पर कहा कि खाते की एक्सि संबंधी उद्देश्यों के लिए सभी बैंकों में एक मास्टरकोड का इस्तेमाल किया जा सकता है। आधार आधारित प्रमाणन के बारे में उन्होंने कहा, ऐसा माना जा रहा है कि वित्तीय लेन-देन के संबंध में साक्षरता का एक उच्च स्तर है पर उद्देश्य इसे अधिक से अधिक लोगों के लिए आसान बनाना है। उन्होंने आगे कहा, उच्चतर लेन-देन जैसे नियम तो प्रौद्योगिकी के प्रति सहज नहीं हो सकते हैं। उन्होंने कहा, तो क्या हम एक ऐसी व्यवस्था नहीं कर सकते हैं जहां बैंकिंग में आधार की महत्वपूर्ण भूमिका हो। रैना ने कहा कि एमपीएफआई आने वाले वर्षों में इस दिशा के परिवार विकसित करने पर ध्यान देगा। आंकड़े पेश करते हुए उन्होंने कहा कि सिर्फ अगस्त 2017 में ही आईएमपीएस और यूपीआई का इस्तेमाल करते हुए नौ करोड़ से अधिक लेन-देन किये गये हैं। वित्त वर्ष 2016-17 में आईएमपीएस के जरिये 50 करोड़ लेन-देन किये गये थे। उन्होंने कहा, वृद्धि के ये आंकड़े भारतीय अर्थव्यवस्था में मोबाइल भुगतान की बेहतरीन संभावनाओं के सूचकांक हैं।

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Professor: Prof. Gaurav Raina
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MPFI plan to come out with user-friendly features

The Mobile Payment Forum of India (MPFI), a think tank, has set its eyes on coming out with a number of user-friendly features like voice-based authentication, a top official said.

A joint initiative of the Institute for Development and Research in Banking Technology, Hyderabad and Rural Technology Business Incubator, IIT Madras, MPFI's mission "is to enable mobile payments and financial services through secure, efficient and low cost transaction."

It played a key role in developing interoperability and security standards for Immediate Payment Service (IMPS), the basic platform for mobile payments, and later the Unified Payments Interface (UPI), built using IMPS.

MPFI's stakeholders include policy makers, banks, telcos and others.

"MPFI will focus on futuristic solutions such as voice based authentication and security and privacy, among others," MPFI Chairman Gaurav Raina said.

As a solutions oriented think tank, MPFI was looking at issues across policy, business and technology over short, medium and long-term horizons, he said during an interaction with PTI.

Raina, a Professor at Indian Institute of Technology, Madras (IIT-M), said others like creating user awareness, simplifying message formats for SMS banking, proximity payments and Near Field Communication (tap and pay) would also be taken up in the coming months.

For instance, MPFI was working towards standardisation of message formats for SMS banking across banks, he said.

"Not everyone has a smartphone.. Connectivity could be patchy although it is getting better.. SMS as a channel for at least basic financial services should be promoted and needs standardisation," he explained.

For example, one mastercode could be used across banks for account balance purposes, Raina said.

On voice-based authentication, he said it was being assumed that there was a certain level of literacy whenever a financial transaction is done, but the aim was to make it easier for more and more people.

Further, elderly people may not be comfortable with other kinds of technology, he said.

"So can we not think of a world where voice plays a very important role in banking," he said on efforts on designing voice-based authentication.

MPFI will focus on developing such features over the coming years, he said.

Giving statistics, Raina said that in August 2017 alone, there were over 90 million financial transactions using IMPS and UPI.

As many as 500 million transactions were done on IMPS in FY 2016-17, he said.

"These massive growth numbers are but a small indication of the tremendous potential for mobile payments in the Indian economy," he said.

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Professor: Prof. Gaurav Raina
Headline: Mobile Payment Forum plans to come out with user-friendly features
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Journalist: NA
Professor: Prof. Gaurav Raina
Headline: Mobile Payment Forum to come out with user-friendly features
URL: http://www.livemint.com/Industry/Zncj7qme3j2sogXLAptAOO/Mobile-Payments-Forum-to-come-out-with-userfriendly-feature.html

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Professor: Prof. Gaurav Raina
Headline: MPFI plan to come out with user-friendly features

मोबाइल भुगतान और सरल बनाने की योजना

चेन्नई, डिजिटल भुगतान को बढ़ावा देने के लिए स्थापित संगठन मोबाइल पेमेंट फोरम्म ऑफ इंडिया (एमपीएफआई) आवाज आधारित प्रमाणन समेत कई सुविधाजनक फीचर लाने वाला है। इस फोरम का गठन भारतीय प्रौद्योगिकी संस्थान (आईआईटी) मद्रास और ब्यैंकिग प्राद्योगिकी पर काम करने वाली हैदराबाद की संस्था इंस्टिट्यूट फार डेवलपमेंट एंड रिसर्च इन बैंकिग टेक्नोलाजी ने मिल कर किया है।

एमपीएफआई के चेयरमैन गौरव रैना ने कहा, 'एमपीएफआई आवाज आध्यारित प्रमाणन, सुरक्षा एवं निजता सुविधा जैसे कई भविष्य के हल पर ध्यान केंद्रित कर रहा है।' आईआईटी मद्रास के प्रोफैसर रैना ने पीटीआई भाषा से कहा कि आने वाले महीानों में लोगों के बीच जागरूकता बढ़ाने, एसएमएस बैंकिग के लिऐ संदेशों का फॉर्मेट आसान बनाने, नियर फील्ड कम्यूनिकेशन (एनएफसी), प्रॉक्सिमिटी पेमेंट आदि पर भी ध्यान दिया जाएगा। उन्होंने आगे कहा, 'हर किसी के पास स्मार्टफोन नहीं है। नेटवर्क बेहतर हो रहा है पर यह कई बार खराब हो सकता है। पर एसएमएस कम से कम आधारभूत वित्तीय सेवाओं का एक माध्यम हो सकता है। इसे बढ़ावा देने और इसके मानकीकरण की जरूरत है।' रैना ने उदाहरण के तौर पर कहा कि खाते की राशि संबंधी उद्देशयों के लिए सभी बैंकों में एक मास्टरकोड का इस्तेमाल किया जा सकता है। आवाज आधारित प्रमाणन के बारे में उन्होंने कहा, ऐसा माना जा रहा है कि वित्तीय लेन-देन के संबंध में साक्षरता का एक तय स्तर है पर उद्देशय इसे अधिक से अधिक लोगों के लिए आसान बनाना है। उन्होंने आगे कहा, उम्रदराज लोग अन्य किस्म की प्रौद्योगिकी के प्रति सहज नहीं हो सकते हैं। उन्होंने कहा, 'तो क्या हम एक ऐसी कल्पना नहीं कर सकते हैं जहां बैंकिग में आवाज की महत्वपूर्ण भूमिका हो।' रैना ने कहा कि एमपीएफआई आने वाले वर्षों में इस तरह के फीचर विकसित करने पर ध्यान देगा। आंकड़े पेश करते हुए उन्होंने कहा कि सिर्फ अगस्त 2017 में ही आईएमपीएस और यूपीआई का इस्तेमाल करते हुए नौ करोड़ से अधिक लेन-देन किये गये हैं। वित्त वर्ष 2016-17 में आईएमपीएस के जरिये 50 करोड़ लेन-देन किये गये थे। उन्होंने कहा, 'वृद्धि के ये आंकड़े भारतीय अर्थव्यवस्था में मोबाइल भुगतान की बेहतरीन संभावनाओं के संकेतक हैं।'

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मोबाइल भुगतान को और सरल बनाने की योजना

चेन्नई, 29 अक्तूबर-(भाषा) डिजिटल भुगतान को बढ़ावा देने के लिए स्थापित संगठन मोबाइल पेमेंट फोरम ऑफ इंडिया (एमपीएफआई) आवाज आधारित प्रमाणन समेत कई सुविधाजनक फीचर लाने वाला है। इस फोरम का गठन भारतीय प्रौद्योगिकी संस्थान (आईआईटी) मद्रास और बैंकिंग प्रौद्योगिकी पर काम करने वाली हैदराबाद की संस्था इंस्टीट्यूट फॉर डेवलपमेंट एंड रिसर्च इन बैंकिंग टेक्नोलॉजी ने मिल कर किया है।

एमपीएफआई के चेयरमैन गौरव रैना ने कहा, 'एमपीएफआई आवाज आधारित प्रमाणन, सुरक्षा एवं निजता सुविधा जैसे कई भविष्य के हल पर ध्यान केंद्रित कर रहा है।' आईआईटी मद्रास के प्रोफेसर रैना ने पीटीआई/भाषा से कहा कि आने वाले महीनों में लोगों के बीच जागरूकता बढ़ाने, एसएमएस बैंकिंग के लिए संदेशों का फॉर्मेट आसान बनाने, नियर फील्ड कम्यूनिकेशन (एनएफसी), प्रॉक्सिमिटी पेमेंट आदि पर भी ध्यान दिया जाएगा।

उन्होंने आगे कहा, 'हर किसी के पास स्मार्टफोन नहीं है। नेटवर्क बेहतर हो रहा है पर यह कई बार खराब हो सकता है, पर एसएमएस कम से कम आधारभूत वित्तीय सेवाओं का एक माध्यम हो सकता है। इसे बढ़ावा देने और इसके मानकीकरण की जरूरत है।' रैना ने उदाहरण के तौर पर कहा कि खाते की राशि संबंधी उद्देश्यों के लिए सभी बैंकों में एक मास्टरकोड का इस्तेमाल किया जा सकता है। आवाज आधारित प्रमाणन के बारे में उन्होंने कहा, 'ऐसा माना जा रहा है कि वित्तीय लेन-देन के संबंध में साक्षरता का एक तय स्तर है पर उद्देश्य इसे अधिक से अधिक लोगों के लिए आसान बनाना है। उन्होंने आगे कहा, उम्रदराज लोग अन्य किस्म की प्रौद्योगिकी के प्रति सहज नहीं हो सकते हैं।' उन्होंने कहा, 'तो क्या हम एक ऐसी कल्पना नहीं कर सकते हैं जहां बैंकिंग में आवाज की महत्वपूर्ण भूमिका हो।' रैना ने कहा कि एमपीएफआई आने वाले वर्षों में इस तरह के फीचर विकसित करने पर ध्यान देगा। आँकड़े पेश करते हुए उन्होंने कहा कि सिर्फ अगस्त, 2017 में ही आईएमपीएस और यूपीआई का इस्तेमाल करते हुए नौ करोड़ से अधिक लेन-देन किये गये हैं।

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मोबाइल लेनदेन में आवाज से पहचान होगी

चेन्नई | एजेंसी

मोबाइल से लेनदेन को खाताधारकों की आवाज की पहचान के जरिये सुरक्षित और सरल बनाया जाएगा। मोबाइल पेमेंट फोरम ऑफ इंडिया (एमपीएफआई) ऐसे ही कई सुविधाजनक फीचर लाने वाला है।

एमपीएफआई के चेयरमैन गौरव रैना ने रविवार को कहा कि एमपीएफआई आवाज आधारित सत्यापन सहज तकनीक है। मोबाइल वॉलेट और मोबाइल बैंकिंग के जरिये लेनदेन जिस तेजी से बढ़ रहा है, उसको देखते हुए यह बेहद जरूरी है। आवाज आधारित प्रमाणन के बारे में उन्होंने कहा, ऐसा माना जा रहा है कि वित्तीय लेनदेन के संबंध में सुरक्षा का एक तय स्तर है, लिहाजा हमारा उद्देश्य लेनदेन को हर स्तर पर आसान बनाना है।

उम्रदराज लोग भी अन्य किस्म की प्रौद्योगिकी के प्रति सहज नहीं हो सकते हैं। लिहाजा बैंकिंग में आवाज की महत्वपूर्ण भूमिका हो सकती है। ईआईटी मद्रास के प्रोफैसर रैना ने कि आने वाले महीनों में एसएमएस बैंकिंग के लिए संदेशों का फॉर्मेट आसान बनाने, नियर फील्ड कम्यूनिकेशन (एनएफसी), प्रॉक्सिमिटी पेमेंट आदि पर भी ध्यान दिया जाएगा। इस फोरम का गठन भारतीय प्रौद्योगिकी संस्थान (आईआईटी) मद्रास और बैंकिंग प्राद्योगिकी पर काम करने वाली हैदराबाद की संस्था इंस्टिट्यूट फार डेवलपमेंट एंड रिसर्च इन बैंकिंग टेक्नोलाजी ने मिल कर किया है।

एसएमएस की वित्तीय सेवा में जरूरत बनी रहेगी

आईआईटी मद्रास के प्रोफेसर रैना ने कहा कि नेटवर्क बेहतर हो रहा है पर यह कई बार खराब हो सकता है। लिहाजा एसएमएस कम से कम आधारभूत वित्तीय सेवाओं का एक माध्यम हो सकता है। इसे बढ़ावा देने और इसके मानकीकरण की जरूरत है। खाते की राशि संबंधी उद्देश्यों के लिए सभी बैंकों में एक मास्टरकोड का इस्तेमाल किया जा सकता है।

डिजिटल भुगतान

09 करोड़ के लेनदेन अगस्त 2017 में आईएमपीएस और यूपीआई से

50 करोड़ से ज्यादा लेनदेन हुए आईएमपीएस से वर्ष 2016-17 में

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मोबाइल भुगतान को बनाया जाएगा सरल

चेन्नई, (भाषा): डिजिटल भुगतान को बढ़ावा देने के लिए स्थापित संगठन मोबाइल पेमेंट फोरम ऑफ इंडिया (एमपीएफआई) आवाज आधारित प्रमाणन समेत कई सुविधाजनक फीचर लाने वाला है।

इस फोरम का गठन भारतीय प्रौद्योगिकी संस्थान (आईआईटी) मद्रास और बैंकिंग प्रौद्योगिकी पर काम करने वाली हैदराबाद की संस्था इंस्टिट्यूट फार डेवलपमेंट एंड रिसर्च इन बैंकिंग टेक्नोलाजी ने मिल कर किया है। एमपीएफआई के चेयरमैन गौरव रैना ने कहा कि एमपीएफआई आवाज आधारित प्रमाणन, सुरक्षा एवं निजता सुविधा जैसे कई भविष्य के हल पर ध्यान केंद्रित कर रहा है।

● लोगों के बीच जागरूकता बढ़ने, एसएमएस बैंकिंग के लिए संदेशों का फॉर्मेट आसान बनाने, नियर फील्ड कम्यूनिकेशन (एनएफसी), प्रॉक्सिमिटी पेमेंट आदि पर भी ध्यान दिया जाएगा : एसएमएस आधारित सेवाओं को और बढ़ावा देने और मानकीकरण की आवश्यकता

आईआईटी मद्रास के प्रोफैसर रैना ने कहा कि आने वाले महीनों में लोगों के बीच जागरूकता बढ़ने, एसएमएस बैंकिंग के लिए संदेशों का फॉर्मेट आसान बनाने, नियर फील्ड कम्यूनिकेशन (एनएफसी), प्रॉक्सिमिटी पेमेंट आदि पर भी ध्यान दिया जाएगा। उन्होंने आगे कहा कि हर किसी के पास स्मार्टफोन नहीं है। नेटवर्क बेहतर हो रहा है पर यह कई बार खराब हो सकता है। पर एसएमएस कम से कम आधारभूत वित्तीय सेवाओं का एक माध्यम हो सकता है। इसे बढ़ावा देने और इसके मानकीकरण की जरूरत है। रैना ने उदाहरण के तौर पर कहा कि खाते की राशि संबंधी उद्देश्यों के लिए सभी बैंकों में एक मास्टरकोड का

इस्तेमाल किया जा सकता है। आवाज आधारित प्रमाणन के बारे में उन्होंने कहा कि ऐसा माना जा रहा है कि वित्तीय लेन-देन के संबंध में साक्षरता का एक तय स्तर है पर उद्देश्य इसे अधिक से अधिक लोगों के लिए आसान बनाना है। उन्होंने आगे कहा कि उम्रदराज लोग अन्य किस्म की प्रौद्योगिकी के प्रति सहज नहीं हो सकते हैं। उन्होंने कहा कि तो क्या हम एक ऐसी कल्पना नहीं कर सकते हैं जहां बैंकिंग में आवाज की महत्वपूर्ण भूमिका हो। रैना ने कहा कि एमपीएफआई आने वाले वर्षों में इस तरह के फीचर विकसित करने पर ध्यान देगा। एक आंकड़े के अनुसार, उन्होंने कहा कि सिर्फ अगस्त 2017 में ही आईएमपीएस और यूपीआई का इस्तेमाल करते हुए नौ करोड़ से अधिक लेन-देन किये गये हैं। जानकारीके अनुसार, वित्त वर्ष 2016-17 में आईएमपीएस के जरिये 50 करोड़ लेन-देन किये गये थे। उन्होंने कहा कि वृद्धि के ये आंकड़े भारतीय अर्थव्यवस्था में मोबाइल भुगतान को बेहतरीन संभावनाओं के संकेतक हैं।

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डिजिटल भुगतान में आएगी आवाज आधारित तकनीक

■ चेन्नई (भाषा)।

डिजिटल भुगतान को बढ़ावा देने के लिए स्थापित संगठन मोबाइल पेमेंट फोरम ऑफ इंडिया (एमपीएफआई) आवाज आधारित प्रमाणन समेत कई सुविधाजनक फीचर लाने वाला है।

इस फोरम का गठन भारतीय प्रौद्योगिकी संस्थान (आईआईटी) मद्रास और बैंकिंग प्राद्योगिकी पर काम करने वाली हैदराबाद की संस्था इंस्टीट्यूट फार डेवलपमेंट एंड रिसर्च इन बैंकिंग टेक्नोलाजी ने मिल कर किया है।

एमपीएफआई के चेयरमैन गौरव रैना ने कहा, एमपीएफआई आवाज आधारित प्रमाणन, सुरक्षा एवं निजता सुविधा जैसे कई भविष्य के हल पर ध्यान केंद्रित कर रहा है।

आईआईटी मद्रास के प्रोफैसर रैना ने कहा कि आने वाले महीनों में लोगों के बीच जागरूकता बढ़ाने, एसएमएस बैंकिंग के लिए संदेशों का फॉर्मेट आसान बनाने, नियर फील्ड कम्यूनिकेशन (एनएफसी), प्रॉक्सिमिटी पेमेंट आदि पर भी ध्यान दिया जाएगा। उन्होंने आगे कहा, हर किसी के पास स्मार्टफोन नहीं है। नेटवर्क बेहतर हो रहा है पर यह कई बार खराब हो सकता है। पर एसएमएस कम से कम आधारभूत वित्तीय सेवाओं का एक माध्यम हो सकता है। रैना ने उदाहरण के तौर पर कहा कि खाते की राशि संबंधी उद्देश्यों के लिए सभी बैंकों में एक मास्टरकोड का इस्तेमाल किया जा सकता है।

आवाज आधारित प्रमाणन के बारे में उन्होंने कहा, ऐसा माना जा रहा है कि वित्तीय लेन-देन के संबंध में साक्षरता का एक तय स्तर है पर उद्देश्य इसे अधिक से अधिक लोगों के लिए आसान बनाना है। उन्होंने आगे कहा, उम्रदराज लोग अन्य किस्म की प्रौद्योगिकी के प्रति सहज नहीं हो सकते हैं।

नई तकनीक

- आनलाइन पेमेंट बेहद आसान बनाएगा एमपीएफआई
- एसएमएस बैंकिंग को भी आसान बनाने की कवायद
- नेट की गति में उतार-चढ़ाव से नहीं प्रभावित होगा पेमेंट
- अगस्त 2017 में हुए नौ करोड़ आनलाइन ट्रांजेक्शन
- वर्ष 2016-17 में हुए थे 50 करोड आनलाइन लेनदेन

Date: 30th October 2017
Publication: Dainik Vishwamitra
Edition: Kolkata
Page no: 4
Journalist: NA
Professor: Prof. Gaurav Raina
Headline: MPFI plan to come out with user-friendly features

मोबाइल पेमेंट का बदलेगा तरीका

आपकी आवाज से होगी ट्रांजैक्शन

नई दिल्ली, 29 अक्टूबर (एजेंसियां)। आने वाले वर्षों में मोबाइल पेमेंट और सरल होने वाला है। मोबाइल पेमेंट फोरम ऑफ इंडिया (एमपीएफआई) यूजर फ्रेंडली फीचर्स जैसे वायस बेस्ड ऑथेंटिकेशन को लाने की तैयारी कर रहा है। इस तरह के फीचर आने से लोगों के लिए मोबाइल से पेमेंट करना काफी आसान होगा। ये उन लोगों के लिए भी काफी मददगार होगा, जिन्हें फाइनेंशियल ट्रांजैक्शन की जरूरी जानकारी नहीं है। बता दें, एमपीएफआई एक थिंक टैंक है, जो मोबाइल पेमेंट सिस्टम को लेकर सॉल्यूशन देता है। एमपीएफआई, इंस्टीट्यूट फॉर डेवलपमेंट एंड रिसर्च इन बैंकिंग टेक्नोलॉजी, हैदराबाद और रूरल टेक्नोलॉजी बिजनेस इनक्युबेटर, आईआईटी मद्रास का एक ज्वाइंट इनीशिएटिव है।

Date: 31st October 2017
Publication: Metro Herald
Edition: Ahmedabad
Page no.: 5
Journalist: NA
Professor: Prof. Gaurav Raina
Headline: Soon mobile payments will be made easier for you

जल्द ही अब आपके लिए मोबाइल भुगतान सेवा होगी और सरल

एजेंसी (इकोनॉमी)।

चेन्नई। डिजिटल भुगतान को बढ़ावा देने के लिए स्थापित संगठन मोबाइल पेमेंट फोरम ऑफ इंडिया (एमपीएफआई) आवाज आधारित प्रमाणन समेत कई सुविधाजनक फीचर लाने वाला है। इस फोरम का गठन भारतीय प्रौद्योगिकी संस्थान (आईआईटी) मद्रास और बैंकिंग प्रौद्योगिकी पर काम करने वाली हैदराबाद की संस्था इंस्टिट्यूट फार डेवलपमेंट एंड रिसर्च इन बैंकिंग टेक्नोलॉजी ने मिल कर किया है। एमपीएफआई के चेयरमैन गौरव रैना ने कहा, एमपीएफआई आवाज आधारित प्रमाणन, सुरक्षा एवं निजता सुविधा जैसे कई भविष्य के हल पर ध्यान केंद्रित कर रहा है।

आईआईटी मद्रास के प्रोफेसर रैना ने कहा कि आने वाले महीनों में लोगों के बीच जागरूकता बढ़ाने, एसएमएस बैंकिंग के लिए संदेशों का फॉर्मेट आसान बनाने, नियर फील्ड कम्युनिकेशन (एनएफसी), प्रीपेड्समेंट पेमेंट आदि पर भी ध्यान दिया जाएगा। उन्होंने आगे कहा, हर किसी के पास स्मार्टफोन नहीं है। नेटवर्क बेहतर हो रहा है पर यह कई बार खराब हो सकता है। पर एसएमएस कम से कम आधारभूत वित्तीय सेवाओं का एक माध्यम हो सकता है। इसे बढ़ावा देने और इसके मानकीकरण की जरूरत है। रैना ने उदाहरण के तौर पर कहा कि खाते की खरीद संबंधी जरूरतों के लिए सभी बैंकों में एक मास्टरकोड का इस्तेमाल किया जा सकता है। आवाज आधारित प्रमाणन के बारे में उन्होंने कहा, ऐसा माना जा रहा है कि वित्तीय लेन-देन के संबंध में सहजता का एक तय स्तर है पर उद्देश्य इसे अधिक से अधिक लोगों के लिए आसान बनाना है। उन्होंने आगे कहा, उम्मीद है लोग अन्य किस्म की प्रौद्योगिकी के प्रति सहज नहीं हो सकते हैं। उन्होंने कहा, तो क्या हम एक ऐसे कल्पना नहीं कर सकते हैं जहां बैंकिंग में आवाज की महत्वपूर्ण भूमिका हो। रैना ने कहा कि एमपीएफआई आने वाले वर्षों में इस तरह के फीचर विकसित करने पर ध्यान देगा। आंकड़े पेश करते हुए उन्होंने कहा कि सिर्फ अगस्त 2017 में ही आईएमपीएस और यूपीआई का इस्तेमाल करते हुए 90 करोड़ से अधिक लेन-देन किये गये हैं। वित्त वर्ष 2016-17 में आईएमपीएस के जरिये 50 करोड़ लेन-देन किये गये थे। उन्होंने कहा, वृद्धि के ये आंकड़े भारतीय अर्थव्यवस्था में मोबाइल भुगतान की बेहतरीन संभावनाओं के संकेतक हैं।

IIT Madras is a research-focused Institute

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Professor: Prof. Nitish R. Mahapatra
Headline: Blame it on the genes
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Blame it on the genes

Over a third of Indians carry a set of genetic variations that put them at higher risk of heart disease

RATNESHWAR THAKUR

GETTY IMAGES/ISTOCK PHOTO

About 35 to 40% of Indians carry a set of genetic variations which puts them at a higher risk of heart disease, finds a new study.

A team of Indian researchers at IIT-Madras (and in a collaborative effort) have discovered that carriers of a set of genetic variants in the chromogranin A (CHGA) gene called 'CHGA promoter haplotype2' may be at higher risk for cardiovascular and metabolic disorders. An estimated 35 to 40% of Indian population may be carrying this genetic variant. The study is based on analysis of genomic DNA samples from over 750 individuals in the Indian population. The research findings have been published in the *Journal of Biological Chemistry*. Though the CHGA promoter haplotype is present in other ethnic populations, it occurs more frequently in populations of South Asian ancestry.

"It is a protein of neuroendocrine origin and is secreted along with hormones like catecholamines. Earlier studies had suggested its role in regulation of cardiovascular and metabolic diseases but there was no data about it in South Asian populations," says Lakshmi Subramanian, first author of this paper.

"We studied genomic DNA of Indians and discovered a specific set of changes in the CHGA gene sequence called haplotype2 which contributed to increased CHGA gene expression, and ultimately increased CHGA protein levels in plasma. When the clinical parameters of those in the study were compared, haplotype2 carriers displayed higher levels of metabolic and cardiovascular traits like plasma glucose, blood pressure and body mass index," explains Dr. Nitish R. Mahapatra, professor at IIT-Madras.

Validation needed

However, he adds, these results need further validation in animal models as well as large-scale studies in individuals with metabolic syndrome. "We hope these findings would help unravel biological pathways and mechanisms underlying these complex diseases and would help in the development of therapeutic as well as preventive strategies," says Dr. Mahapatra. "Basic research in cardiovascular biology is at a very nascent stage in India with only a handful of researchers working in this field. This new study significantly contributes towards understanding molecular basis of cardiovascular and metabolic diseases. This is a fast emerging area with tremendous therapeutic and diagnostic potential," says Dr. Shyamal K. Goswami, a professor at School of Life Sciences, Jawaharlal Nehru University, who is not connected with the study. – India Science Wire

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Journalist: Ratneshwar Thakur
Professor: Prof. Nitish R. Mahapatra
Headline: Study identifies genetic link to heart disease in Indian population
URL: http://www.biovoicenews.com/study-identifies-genetic-link-heart-disease-indian-population/

Study identifies genetic link to heart disease in Indian population

The study is based on analysis of genomic DNA samples from over 750 individuals from Indian population

By Ratneshwar Thakur

New Delhi: About 35 to 40 percent Indians carry a set of genetic variations which puts them at higher risk of heart disease, finds a new study.

A team of Indian researchers has discovered that carriers of a set of genetic variants in the Chromogranin A (CHGA) gene called 'CHGA promoter haplotype2' may be at higher risk for cardiovascular and metabolic disorders. An estimated 35 to 40 percent of Indian population may be carrying this genetic variant.

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The research team at IIT-Madras.

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The study was led by Dr. Nitish R. Mahapatra at Indian Institute of Technology -Madras, Chennai, in a collaborative effort with Dr. Ajit S. Mullasari at Madras Medical Mission, Chennai, and Dr. Madhu Khullar at PGIMER, Chandigarh.

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Journalist: N Ramakrishnan
Alumni: Daniel Raj David
Headline: Using sensors and drones to inspect large industrial assets
URL: http://www.thehindubusinessline.com/specials/emerging-entrepreneurs/using-sensors-and-drones-to-inspect-large-industrial-assets/article9883906.ece

FROM THE INCUBATOR

Using sensors and drones to inspect large industrial assets

Chennai-based Detect Technologies has launched products developed at IIT Madras

N RAMAKRISHNAN

He talks with the intensity and passion of an industry veteran, but Daniel Raj David, CEO and co-founder, Detect Technologies Pvt Ltd, is just 23 years old, having completed a dual degree in mechanical engineering from Indian Institute of Technology Madras, just five months ago.

Detect Technologies has come out with two products – one a sensor that will work even under high temperatures to detect leaks in oil and gas pipelines and the other a drone fitted with proprietary algorithms to inspect large industrial assets such as boilers.

Both these products, says Daniel, are the result of years of research done at the Centre for Non-Destructive Evaluation, headed by Krishnan Balasubramaniam, at the IIT-Madras. Detect is being incubated at IIT-M's Incubation Cell.

Trials at Reliance

According to Daniel, the lab had come out with a sensor that worked well even at high temperatures, with which field trials were conducted at Reliance Industries' Jamnagar refinery.

The sensor worked fine, but some of the peripherals got damaged over time. They decided to keep working on it and in the process built inter-disciplinary teams because they realised that it wasn't just the sensor that was adding value. Thanks to the multi-specialty team that Detect had, it was able to automate to a great extent the process of interpreting the data generated by the sensors.

They promised their clients that once they helped the company build this product, the clients would no longer have to go to the field. All the data would be available to them on their desktop. "That was value add number two on top of the sensor," says Daniel. Value add number three came in terms of the cost; the product developed by Detect cost just a sixth of what was available in the international market, according to him. This is because almost everything has been developed in-house.

How it works

- The sensor is clamped around the pipeline and it works using a concept called guided waves, which send out signals
- The guided waves pass through the thickness of a pipe and the signals are reflected. This will help in finding out the exact location and size of the defect

Detect Technologies has got an intent of purchase for 200 sensors and is in talks with a number of global players in the oil and gas industry. This product – called GUMPS (Guided Ultrasonic Monitoring of Pipe Systems) – was developed after almost five years of lab work.

How does the sensor work? According to Daniel, the sensor is clamped around the pipeline and it works using a concept called guided waves, which send out signals. The guided waves pass through the thickness of a pipe and the signals are reflected. This will help in finding out the exact location and size of the defect.

He is confident that the Centre for Non-Destructive Evaluation will be in the forefront of deploying this product in the Indian market; there are two other international labs involved in building this technology, one in the US and the other in the UK.

Even as they were testing out the sensors, Detect Technologies realised that the companies it was working with had a large number of assets – boilers, furnaces and the like – that needed to be inspected regularly and during shut-downs. They were doing this manually. Detect wondered why the companies were not using drones to inspect these assets. The companies cited safety issues – the drones had to be manually operated and GPS came with an error of 2-20 m.

As a non-destructive testing (NDT) company, Detect realised it was better placed to provide this service rather than drone companies doing it. Daniel and the other founders – Krishnan Balasubramaniam, Tarun Mishra, Harikrishnan AS and Karthik R – spent some time understanding the problems and the requirements. "We wanted to figure out the market fit and then start building the product," says Daniel.

According to him, Detect completely automated the drone flight and made it GPS-independent. It is dependent on a system called IPS (Indoor Positioning System), thanks to which the drone can be used to inspect both the external surface and the insides of a furnace or a boiler. Instead of giving the client a video of the drone's test results, Detect automated the analysis.

Drone-as-a-service

Detect gets the drones built outside, but its value addition comes in the form of the algorithms and the data processing. This product – Noctuva, which is Latin for owl – hit the market in a drone-as-a-service model and has been sold to the large petroleum companies, including Reliance, IOCL, BPCL, HPCL and other process industries such as Coromandel Fertilizers.

Detect, which raised an undisclosed amount of funding from Keiretsu Forum Chennai chapter, Axilor Ventures and CIIE of IIM Ahmedabad in July, has a 40-member inter-disciplinary team, most of them who have either graduated from IIT Madras or are studying there.

Daniel is confident that Detect will not stop with two products. It will seek to expand the scope and the market for both GUMPS and Noctuva, but also identify niche problem areas and address those.

Daniel Raj David, CEO and co-founder, Detect Technologies

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Journalist: Tiki Rajwi
Professor: Prof. V Srinivasa Chakravarthy
Alumni/Research scholar: Krishna Bharadwaj M S
Headline: One nation, one script: Bharati is the common script for all Indian languages
URL: http://www.newindianexpress.com/cities/thiruvananthapuram/2017/oct/02/one-nation-one-script-bharati-is-the-common-script-for-all-indian-languages-1665812.html

One nation, one script: Bharati is the common script for all Indian languages

THIRUVANANTHAPURAM: The motto, like the script itself, is simple - one nation, one script. Meet 'Bharati,' the common script created by IIT-Madras for all Indian languages. The project has entered its final phase and the Computational Neuroscience Lab under the IIT's Biotechnology Department has now brought out a Bharati-Malayalam primer.

''The idea behind Bharati is just this; the script should be undemanding, logical and easy to learn. India has 22 languages and approximately 1,652 dialects written using 11 scripts. Bharati can replace all of them,'' said Krishna Bharadwaj M S, research associate and the Keralite in the Bharati team headed by Prof V Srinivasa Chakravarthy. The team has launched efforts to popularise the script across the country, said Bharadwaj, who belongs to Thycaud.

Bharati has, in general, 17 vowels and 22 consonants. For Keralites, Bharati endeavours to replace the intricate Malayalam characters - which beginners often find quite baffling - with its straightforward form. Each alphabet in the Bharati script is constructed in three parts: the main character which forms the middle part and then there are the top and base parts. The chief portion of all the vowels, for instance, is formed by a character that resembles a 'c' in reverse.

"The top part signifies the changing vowel sounds and the lower, the consonants. The script has been created by choosing the simplest characters from all Indian scripts and the Roman alphabet. Some have been modified,'' Bharadwaj said. For example, Malayalam has contributed 'Ga' while Devanagari has provided 'Cha' and Tamil, 'Ta' and 'Pa.' Five alphabets are there from the Roman alphabet - V, S, Y, R and N.

Naturally, the question arises why a country which prides itself on enjoying unity in diversity should ever require a common script. Besides, the mother tongue is a touchy issue, more so in the south where the feeling is deep-rooted that Hindi attempts to smother all other Indian tongues. The idea of a common script, asserts Bharadwaj, is entirely different. ''Bharati does not seek to replace languages, but scripts. It makes the study of Indian languages simpler. For example, the character for 'A' in Tamil and 'Bha' in Hindi look identical but sound different. Isn't that utterly confusing for a person who attempts to study these languages?" he asks.

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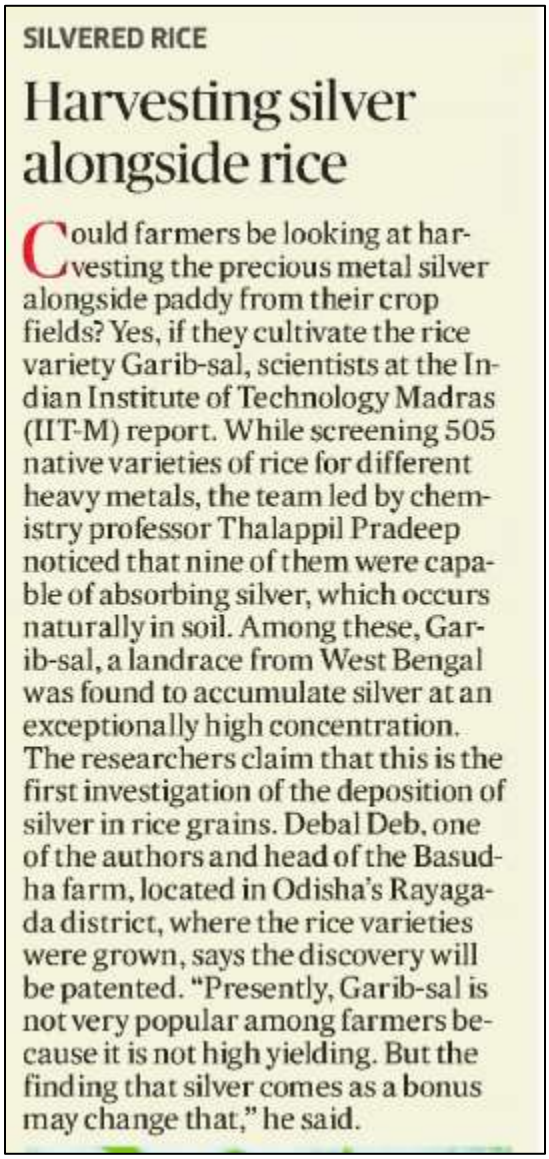
Edition: Bangalore
Page no.: 4
Journalist: NA
Professor: Prof. T. Pradeep
Headline: Harvesting silver alongside rice
URL: http://www.deccanherald.com/content/635884/snippets-nature.html



SILVERED RICE

Harvesting silver alongside rice

Could farmers be looking at harvesting the precious metal silver alongside paddy from their crop fields? Yes, if they cultivate the rice variety Garib-sal, scientists at the Indian Institute of Technology Madras (IIT-M) report. While screening 505 native varieties of rice for different heavy metals, the team led by chemistry professor Thalappil Pradeep noticed that nine of them were capable of absorbing silver, which occurs naturally in soil. Among these, Garib-sal, a landrace from West Bengal was found to accumulate silver at an exceptionally high concentration. The researchers claim that this is the first investigation of the deposition of silver in rice grains. Debal Deb, one of the authors and head of the Basudha farm, located in Odisha's Rayagada district, where the rice varieties were grown, says the discovery will be patented. "Presently, Garib-sal is not very popular among farmers because it is not high yielding. But the finding that silver comes as a bonus may change that," he said.

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Journalist: NA
Alumni/Research scholar: Krishna Bharadwaj M. S
Headline: Script which helps read 22 Indian languages on cards
URL: http://www.deccanchronicle.com/nation/in-other-news/041017/script-which-helps-read-22-indian-languages-on-cards.html

BARRIER | TO FALL ■ ***Bharati*** **exploits fact that most Indian languages have a common phonetic structure**

Script which helps read 22 Indian languages on cards

DC CORRESPONDENT
THIRUVANANTHAPURAM,
OCT. 2

A team of researchers at IIT-Madras is developing a script called 'Bharati', which according to them, will help read every Indian language. A single, unified script for 22 official Indian languages and 1652 dialects, will reduce script barriers, they say.

The project was conceived by V. Srinivasa Chakravarthy, a faculty at Computational Neuroscience lab of Department of Biotechnology, three years ago. The team has developed word games to popularise the script and is in the process of developing an app. A private party funds the research.

The script exploits the fact that most Indian languages, though written using 11 scripts, have a common phonetic structure with vowels and consonants. Instead of a separate character for various consonants, it has chosen one base character for each consonant family. A modifying character is used to distinguish different consonants in the same family. (like say ka, kha, ga. (Refer picture.)

Some sounds may be unique to one language (like 'Chillu' letters in Malayalam) and have been introduced as special characters.

It would improve domestic tourism among other things, according to Krishna Bharadwaj M. S., a research associate who is part of the team.

At a press conference at Thiruvananthapuram press club on 'Bharati' script, he narrated how when he first moved from Thiruvananthapuram, he was lost in Chennai city, as the boards in old buses would only have Tamil. Krishna said that the script would be useful for dyslexic students, as the characters chosen are very simple. When asked if the concept was not against diversity, he said it wasn't as it is an additional script, not a substitute for the existing ones.

It was during an ambitious project, which aims to develop an Optical Character Recognition (OCR) software that can recognise various microorganisms, that the idea struck the team.

Internationally OCR has been used in automobiles to read road signs. They have been training an Artificial Neural Network to read 'Bharati Script', and have achieved over 97% accuracy.

Date: 5th October 2017
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Journalist: Hari Pulakkat
Professor: Prof. Ashok Jhunjhunwala
Headline: How IITs Found a Place in the Sun
URL: http://economictimes.indiatimes.com/industry/energy/power/how-professors-at-iits-are-improving-indias-solar-power-efficiencies/articleshow/60945875.cms

How IITs Found a Place in the Sun

A clutch of professors at the elite technology institutes are finding new applications for solar energy and making existing ones more efficient

Hari Pulakkat

Professor Saroj Nayak of IIT Bhubaneswar (centre) with his PhD student Suraj Kumar (right) worked on the small solar pump for farmers while Pradeep Bisoi (left), a former student of IIT Bhubaneswar, is now a consultant at Intel

At IIT Hyderabad, Professor Nishant Dongari designed a one-stop shop solution in solar energy and formed a startup called PuREnergy, which has 100 small and medium installations and four large ones

At IIT Madras, professor Ashok Jhunjhunwala develop an inverter-less solar energy system with energy and cost savings. The team starts Cyngi Energy with entrepreneur Venkat Rajaraman

ENVIRONMENT & ECONOMY

COST COMFORT

IN THE FIELDS

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Journalist: Lekshmi Priya S
Alumni/Research Scholar: Krishna Bharadwaj M. S
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URL: https://www.thebetterindia.com/117220/22-official-languages-1652-dialects-script-by-iit-m-researchers-can-read-it-all/

From 22 Official Languages to 1652 Dialects, This Script by IIT-M Researchers Can Read It All!

A script that can read every Indian language?

According to a group of IIT-Madras researchers, a single, unified script called Bharati is underway, which once developed will help read every Indian language. From 22 official languages to 1652 dialects in the country, the team aims to reduce script barriers.

The idea was envisioned by V. Srinivasa Chakravarthy, who is a faculty at Computational Neuroscience lab of Department of Biotechnology, three years ago.

Bharati finds its validity through the fact that most Indian languages have a common phonetic structure with vowels and consonants, despite the scripts being different.

Instead of picking a separate character for each consonant, the script incorporates one base character for each consonant family and a modifying character will be used to differentiate between various consonants that fall under the same family, like ka, kha, ga.

To include certain sounds that may be unique to a particular language, like 'Chillu' letters in Malayalam, the team has introduced these as special characters in the script, reports Deccan Chronicle.

According to Krishna Bharadwaj M. S., a research associate who is part of the team, the script will help boost domestic tourism, for many tourist places still have signboards in their native languages.

He also added that the script would prove beneficial for dyslexic students, for its implementation of simple characters.

The idea struck the team, when they working on an ambitious project of developing an Optical Character Recognition (OCR) software that could identify various microorganisms.

Currently in its development phase, the team is training an Artificial Neural Network to read the script and has found over 97% accuracy.

They have also developed word games to make the script popular amidst people and will soon launch an application.

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Edition: Online
Journalist: Hari Pulakkat
Professor: Prof. Ashok Jhunjhunwala
Headline: How IITs found a place in the sun
URL: https://www.gadgetsnow.com/tech-news/how-iits-found-a-place-in-the-sun/articleshow/60954841.cms

How IITs found a place in the sun

The IIT campus was not ready when Saroj Nayak moved to Bhubaneswar from the US in 2012. The condensed matter physicist had been a professor at Renssealer Polytechnic when IIT Bhubaneswar made him a job offer.

Nayak worked for some time from an old government building without any power backup, struggling with the heat and frequent power cuts. His response? A creation to harness this heat.

Dissatisfied with the existing UPS systems, Nayak invented one that ran on solar power, got a patent and founded a company called Karma. He and his colleagues also took electricity to Odisha's villages, all the while being closely watched by the Naxalites in the hills.

During these trips, Nayak discovered that small farmers had no solar pumps either. Since larger pumps are not economical for small holdings, he developed a smaller solar-powered version that was ideal for 90% of the farmers in Odisha.

Today, Nayak is not alone. Although solar energy installations have been in the country for over two decades, few companies were practising serious technical innovation. This is changing now, as researchers in good institutions are developing ways of improving efficiencies and finding new applications for solar. Specifically, some IIT professors have used their expertise to bring significant energy efficiencies in solar installations, while creating new markets as well.

ENVIRONMENT & ECONOMY
Bhubaneswar-based Karma created a market for solar pumps that did not exist before. At IIT Madras, electrical engineering professor Ashok Jhunjhunwala developed an inverter-less solar system - also with significant energy and cost savings.

At IIT Hyderabad, aerospace engineering professor Nishant Dongari designed a one-stop shop solution in solar energy and formed a startup called PuREnergy. He says, "Even in the worst-case scenario, we would like life to go on as usual."

Heavy rains caused power outages in Hyderabad this week, but life seems to have gone as usual for PuREnergy installations in the city.

In his day job at IIT Hyderabad, Dongari studies the dynamics of the upper atmosphere, a skill that is useful around the world for calculating the path of rockets and missiles, not to speak of complicated trajectories for anti-ballistic missiles.Dongari puts his skills to good use, but he had been eyeing the solar energy market since he was a student at IIT Bombay . As he saw it, most solar energy installations were either off-grid or connected to the grid. He wanted to create a hybrid solution optimised for any situation.

In its short existence of a year and a half, PuREnergy has 100 small and medium installations and four large ones. The small installations include houses and apartments, while large installations are inside companies.

Natco Pharma in Hyderabad is working towards shifting completely to renewable energy and has an installation of 2.5 mw in Hyderabad, part of which was executed by PuREnergy. "Their design brought down the structural costs," says PSRK Prasad, executive director, engineering services, Natco. Total cost also came down from Rs 4.5 crore to Rs 4 crore.

COST COMFORT

Such a decrease in costs would be the first impact of improved efficiencies. In such cases, all capital investments would be recovered in less than five years, making solar energy attractive. Advanced technology and design improves quality, brings down operational expenses, reduces need for land and brings the ability to address problems quickly.

Ease of monitoring would be an added advantage, as both PuREnergy and IIT Madras startup Cygni Energy do remote monitoring of solar installations. Solar installations, especially those in remote areas, are always in danger of slow decay due to lack of maintenance.

The idea for Cygni, based in Hyderabad but a startup from IIT Madras, began when Ashok Jhunjhunwala and a few others tested the energy losses in existing solar systems. They found almost all installations are inefficient, with their efficiency from generation to load -ranging from 20% to 65%. The efficiency was especially poor in low-power systems, mostly because of poor-quality inverters.

Jhunjhunwala and his team then established a startup with Venkat Rajaraman, an entrepreneur based in Hyderabad. IIT Madras and Cygni made a completely new design aimed at high efficiencies. Their main innovation was to do away with the inverter in a solar energy system.

Solar cells produce direct current (DC), which is then converted to alternating current (AC) for an application. If a battery is involved, the AC is converted back to DC for charging and then converted again to AC for running devices. In some current applications such as laptops and LED lighting, the AC is once again converted to DC by the device.

The system loses energy through multiple conversions, especially if the inverters are of poor quality. In the Cygni system, current from the solar cells goes directly to devices that can take a DC input. Since LED bulbs, fans, television sets and mobile chargers can all take DC input or be tweaked to do so, the inverter-less system can be used with all these devices. Cygni was established at the end of 2014 and got its first customer in January 2015.So far, it has done 24,000 installations, nearly half in Rajasthan and Bihar. Most

them are through government support, either at the Centre or state. All the installations are being monitored from a network operating centre in Hyderabad. "Solar installations stop working after some time," says Rajaraman, CEO, Cygni Energy, "because there is no one to monitor them in remote locations." Remote monitoring is thus a game changer for the industry, and is now being practised by few other companies as well.

IN THE FIELDS

Government and industry officials regard the solar pump as a game-changer as well and not just for the farmers. "A solar pump is clean and reduces the cost of power," says Vinay Rustagi, managing director of Bridge To India, a solar energy market research company. "And a pump can be used for other purposes as well."

Officials from the ministry of new and renewable energy (MNRE) estimate that if half the diesel pumps in the country are replaced by solar pumps, it would give the banks a loan opportunity of Rs 1 lakh crore.

Back in Odisha, when Nayak did a quick study of farmers, he found about 90% of them owned less than two acres while some 60% owned less than one acre. Water pumps in the market were usually 2 horsepower or more and were a waste for such small land holdings.

The pump Nayak designed was an efficient 0.5 horsepower, which is ideal for small farmers. It is this pump that the MNRE ministry officials and banks support and expect to be used widely in the country.

Perhaps, the future will bring in more IIT professors to the realm of energy innovation.

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Journalist: Bharani Vaitheesvaran
Professor: Prof. R Raghunathan Rengaswamy
Headline: IIT-Madras has an Algorithm to Fix Factory Woes

IIT-Madras has an Algorithm to Fix Factory Woes

Bharani.Vaitheesvaran
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Chennai: Scientists at IIT-Madras have written a code that can help factories spot performance-dragging parameters — or why the output shot up suddenly on a particular day — by just studying patterns from large, unstructured historical data sets and producing analyses that offer rare insight to help improve productivity and quality at the plants of automotive majors like Tata Motors. The algorithms can learn at work, too.

With iterations, their intelligence grows to the point where the inferences, in some test cases, have astounded the professors with uncanny predictions. Taking into account hundreds of variables from weather patterns in attendance data to acidity levels (pH) in input raw material, the software, say professors, has drawn cause-effect relations that have missed the eye of experienced plant operators. "I would draw a parallel to how computers get to beat the Grandmasters at chess. While it is humans who are making software more and more intelligent, their capacity for growth can outstrip our own," said R Raghunathan Rengaswamy, professor at the Chemical Engineering department at IIT Madras, and a director at Gyan Data, the start-up that licenses this technology to be used by corporations.

The algorithm was originally fed notions of high-performance, based on which it will scrounge the data sets for parameters that are indispensable for high output and accuracy in manufacturing.

The software, built on general-purpose computing languages like Python and Java, has mathematical models as driving fundamentals. It will find applications wherever control valves — used widely in industrial machinery — are used. It can detect malfunctions in control valves effectively by studying frictional data and flag discrepancies. Internet of Things (IoT) will add another dimension to the algorithm as plants would analyse historical data along with real-time feed from IoT-enabled electronics placed inside the factories.

Gyan Data is a data mining start-up incubated at IIT-Madras to turn research into products. It holds the technology which has been licensed out for royalty. As of now three foundries including Ashok Leyland and Tata Motors, four cement manufacturers, and one fertiliser plant of The Murugappa Group have benefitted from the algorithm, according to Rengasamy, who said two US-based manufacturers have begun dialogue to explore utilising the software.

At the Tata Motors Jamshedpur plant, said foundry head Amlyn Singha, any refinement in manufacturing had always been made on pure instinct.

"In a foundry, there are no direct equations available for any change one would make in the process. There is an error rate of about 20%. Now, this technology has stabilised our process parameters. This has helped bring down costs and the casting moulds have even surfacing."

The Big Data

- **The algorithm** studies patterns from large, unstructured historical data sets and produces analyses that offer rare insight to help improve productivity and quality of the plants
- **The software** has mathematical models as driving fundamentals

- **Internet of** Things (IoT) will add another dimension to the algorithm
- **Plants would** analyse historical data along with real-time feed from IoT-enabled electronics placed inside the factories

Data has transformed many internet-based industries like ecommerce. Analytics and predictive modelling are key to modern retail and other industries — an ecommerce site can prioritise brand visibility based on search data — but they are still uncommon in core manufacturing.

"The smart machines, required to provide data necessary for analytics, are just arriving. Manufacturing can have great transformations as more and more data gets captured," said Madhavan Mukund, Professor and Dean of Studies at the Chennai Mathematical Institute, who also runs AlgoLabs, a think-tank offering predictive analysis.

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Edition: Electronic
Journalist: NA
Headline: CFI Open House 2017

Date: 8th October 2017
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Edition: Electronic
Journalist: Ramesh
Alumni/student: Narendran & Jipin
Headline: Technical exhibition at IIT Madras
URL: https://www.youtube.com/watch?v=WLRMZzuiKao&feature=youtu.be

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Publication: Dinakaran
Edition: Chennai
Page no.: 4
Journalist: NA
Headline: The student's inventions that captured the imagination of the People

பொதுமக்களை கவர்ந்த மாணவர்களின் கண்டுபிடிப்புகள்

▶ பல்வேறு போட்டிகளில் கலந்துகொண்டு சர்வதேச விருதுகள் வென்ற சென்னை ஐஐடி மாணவர்களின் கண்டுபிடிப்புகளில் சிறந்தவை ஐஐடி வளாகத்தில் நேற்று பொதுமக்களின் பார்வைக்காக வைக்கப்பட்டன. கண்டுபிடிப்புகள் பற்றி அங்கு வந்த பொதுமக்களுக்கு மாணவர்கள் விளக்குகின்றனர். அடுத்த படம்: கைகளின் அசைவில் செயல்படும் ரோபோ இயந்திரத்தை மாணவர்கள் ஆர்வமுடன் பார்க்கின்றனர்.

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Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Alumni/student: Gaurav Lodha
Headline: IIT-M displays award-winning student projects
URL: http://www.thehindu.com/news/cities/chennai/iit-m-displays-award-winning-student-projects/article19826656.ece

IIT-M displays award-winning student projects

Mars Rover, formula race car and intelligent ground vehicle qualified in international competitions

SPECIAL CORRESPONDENT
CHENNAI

The Centre for Innovation of Indian Institute of Technology-Madras on Sunday displayed some of its student projects that won international recognition in the last few months.

The CFI, a student-run laboratory, encourages student engineers to experiment and come up with solutions to real-world problems. IIT-M Director Bhaskar Ramamurthi, who inaugurated the open house said, "Many a start-up has emerged from the projects undertaken here. Walk in with an idea and walk out with a product. The projects on display this year include stellar efforts of students at the fledgling IITs at Tirupati and Palghat which are being mentored by IIT-Madras."

Among the 40 projects on display were Mars Rover, which qualified for finals of the University Rover Challenge and was demonstrated at the Mars Desert Research Station in Utah; a Formula race car, which won the top place among non-European teams in an international contest; and an intelligent ground vehicle that qualified in the annual international robotics competition conducted by the US Army Tank Automotive Research, Development and Engineering Centre and the Association for Unmanned Vehicle Systems International.

Winning acclaim: As many as 40 projects were displayed during the open house at IIT-M. • SPECIAL ARRANGEMENT

Incubating start-ups

CFI Open House offers opportunities for students to network with potential mentors and facilitators, an institute official said.

According to B. Ravindran, CFI faculty-in-charge, the centre was an integral part of student life on campus.

"This serves as an introduction to the vibrant entrepreneurial eco-system in IIT-Madras, and several successful start-ups have been incubated from projects started at CFI," he said.

Student executive head of CFI, Gaurav Lodha, who is in his fourth year of civil engineering dual degree, said around 350-400 students were part of the centre.

"In the first year, the centre is open to all students and they are briefed about the various activities and at the end of the first semester we shortlist students based on their ideas, enthusiasm and abilities. We have 14 clubs and six competition teams."

The clubs represent each domain of engineering such as aeronautics, robotics or social entrepreneurship. "We follow a cycle where the students conduct workshops for juniors, who in turn nurture their juniors. The teams participate in international competitions every year. Some of the complicated projects have large teams of 30-40 self-motivated students," Gaurav said.

"It is a 24x7 lab and entirely run by students. For all the technical work we get funding from the institute but for logistics and arranging for travel, we face difficulty. So far, we haven't yet explored how to set up a donation portal. This year, for the first time we have seen visits from industry people and hope to receive support from them," he said.

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Journalist: NA
Professor: Prof. B. Ravindran
Alumni/student: Akshay Molawade, Aishwary Gupta
Headline: IIT-M ready with this year's talent

IIT-M ready with this year's talent

EXPRESS NEWS SERVICE @ Chennai

FROM palm-sized electronic circuits that can control drones to a prototype Mars rover that can navigate rough terrains, over 40 projects designed by students were lined up for demonstration at the Centre For Innovation (CFI) at the IIT-M on Sunday.

The projects were up for public display during 'CFI Open House' - an annual event showcasing the recent work and achievements of student innovators within their campus.

This year, open house displayed the work of three internationally acclaimed competition teams: Team Anveshak's Mars Rover, Team Raftar's Formula Race Car and Team Abhiyaan's Autonomous vehicle.

The Mars Rover 'Aurora' qualified for the finals of the University Rover Challenge and was demonstrated at the Mars Desert Research Station in Utah desert in America. The team comprising 30 students designed a prototype motor vehicle that propels itself on the surface of Mars. "We have to test the vehicle on an extremely tough terrain and collect soil samples to test for presence of life," said Akshay Molawade, leader of Team Anveshak. " The machine also has sensors to detect temperature, humidity and altitude.

While 'Aurora' was designed to navigate Mars, Team Raftar had designed a race car that came first among all non-European teams in Formula SAE Italy and Formula Electric Italy. "The vehicle was tested for both static and dynamic excellence in Italy. Static would mean good design and endurance. The vehicle has to race other vehicles from across the world," said Aishwary Gupta, captain of Team Raftar.

While vehicles and robots were operating on one side, cost effective eco-friendly LEDs were used to demonstrate how a 2 metre wide billboard could be lit up by simply 100 LED bulbs. They exploited a simple biological phenomenon called persistence of vision (PoV), where the brain perceives a series of images flashed quickly as one video. Once the model is built fully, it will be the largest PoV device in the country, the students claimed.

The open house was a technical gala with professors, researchers and students from across the country exchanging knowledge. B. Ravindran, Faculty-in-Charge, CFI, IIT-Madras, said, "The Centre For Innovation serves as an introduction to the vibrant entrepreneurial eco-system in IIT-Madras and several successful start-ups have been incubated from projects started at CFI."

(From top) Team Anveshak with Aurora the Mars Rover; A member demonstrating navigation of Aurora; and (L) remote control that attaches on the forearm | ASHWIN PRASATH

We have to test the vehicle on an extremely tough terrain and collect samples to test for presence of life

Akshay Molawade, Leader of Team Anveshak

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Professor: Prof. Bhaskar Ramamurthi,
Alumni/student: Aishwary Gupta & Sankalp Chapalgaonkar
Headline: Impressive cutting edge innovation on display
URL: http://www.dtnext.in/News/Citizen/2017/10/09011438/1048375/Impressive-cutting-edge-innovation-on-display.vpf

Impressive cutting edge innovation on display

CHENNAI: The open house at the Centre for Innovation (CFI) in Indian Institute of Technology Madras (IIT-M) saw around 40 student projects demonstrated, some of which had garnered international acclaim.

The Formula race car (R) IIT-M students working on the Mars Rover before demonstrating it at the Rover challenge (file picture)

The Centre for Innovation, established in 2008 is a student-run lab that remains open 24X 7. On Sunday, enthusiastic students demonstrated their working models. Over 40 student projects were demonstrated during the event, including the Railroad Fault-Detection Robot, winner of the James Dyson Award, Intelligent Lighting System: Finalists of the Carbon Zero Challenge, among others. Prof. Bhaskar Ramamurthi, Director, IIT Madras said, "The motto of CFI is to "Walk in with an idea and walk out with a product." This year, too, there are a number of award-winning projects on display, as well as innovative products, ripe for launch by startups."

Occupying a pride of place in the centre of the hall was a green Formula race car, which was completely built from scratch by Team Raftar. "We participated in Formula Student and came second. Our car was the most fuel-efficient car, giving 14 km per litre, which is fantastic for a race car. We tuned the Engine Control Unit (ECU) to cut fuel in certain areas where it is not needed and used a fuel map we created. Team 'Raftar' was placed fifteenth overall and first amongst Non-European teams in the Formula SAE Italy & Formula Electric Italy 2017 organised at Riccardo Paletti Circuit from July 19 to 23, 2017," said Aishwary Gupta, the team captain.

In a cordoned off area, the Mars Rover model moved towards a group of curious visitors. The Mars Rover, created by Team Anveshak, qualified for the finals of the University Rover Challenge and was demonstrated at the Mars Desert Research Station in Utah Desert, US. "The idea of the Rover is to help the astronauts — we had to clear various categories with the machine: science cache (collection of samples and rocks), autonomous traversal, extreme terrain retrieval, to name a few. We were ranked 29 among the teams that participated in the challenge," said Sankalp Chapalgaonkar.

The Autonomous vehicle by Team Abhiyaan qualified for the Intelligent Ground Vehicle Competition, an annual international robotics competition conducted by U.S. Army Tank Automotive Research, Development and Engineering Centre and the Association for Unmanned Vehicle Systems International.

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Professor: Prof. Bhaskar Ramamurthi, Prof. D. Karunagaran & Prof. Rama Shanker Verma
Headline: IIT-M organises second PAN IIT Biotech meet in Goa

IIT-M organises second PAN IIT Biotech meet in Goa

OUR BUREAU

Hyderabad: Indian Institute of Technology- Madras (IIT-M), has organised a three day PAN IIT Biotech Meet at Goa from October 5 and 7.

The main objective of the event is to bring researchers, faculties, expertise from different IITs, Indian Institute of Science (IISc), Bengaluru, in-Stem and Biotechnology and Biopharmaceutical industries on to a single platform to discuss recent advances and challenging problems in synthetic biology and cardiovascular diseases.

The conference was inaugurated by the Chief Guest Manohar Parrikar, Chief Minister of Goa, in the presence of Prof Bhaskar Ramamurthi, Director, IIT-M, Prof D Karunagaran, Head, Department of Biotechnology, IIT-M, Prof Rama Shanker Verma, Organising Secretary, PAN IIT Biotech Meet, IIT M and other dignitaries.

Addressing the inaugural session, Chief Guest, Parrikar, said "Biotechnology, with its various aspects such as stem cell research, cancer drugs and cardiovascular treatment, can provide the solutions to many of our problems we're facing now. Research such as those being carried out at IIT Madras is vital."

"The Government of Goa will extend support and will definitely consider providing assistance to research in Biotechnology", he added.

"The education I got in engineering helped me in politics as I'm able to analyse a problem and arrive at solutions in a logical process," added the CM.

He is the first IIT graduate (Metallurgical Engineering, IIT Bombay) to become a Chief Minister.

Prof Bhaskar Ramamurthi, Director, IIT Madras, said, "If we want to take on something really bigger and challenging in biotechnology, very often it involves other branches of engineering, and increasingly data science as well. Many problems cannot be solved by individuals alone as solutions cannot be found within any one narrow discipline."

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Professor: Prof. Bhaskar Ramamurthi, Prof. D. Karunagaran & Prof. Rama Shanker Verma
Headline: Biotech research done at IIT- Madras vital: Parrikar
URL: http://www.dtnext.in/News/City/2017/10/09011654/1048376/Biotech-research-done-at-IIT-Madras-vital-Parrikar.vpf?TId=112132

Biotech research done at IIT- Madras vital: Parrikar

CHENNAI: The second PANIIT Biotech Meet was organised between October 5 and 7, in Goa, by the Indian Institute of Technology, Madras and Bhupat and Jyoti Mehta School of Biosciences, in association with Mehta Family Foundation, Houston, US, and IIT Madras Office of International and Alumni Relations.

The objective of the event was to bring researchers, faculty members, experts from different IITs, Indian Institute of Science (IISc), Bengaluru, inStem and Biotechnology, as well as biopharmaceutical industries on a single platform, in order to discuss recent advances and challenging problems in synthetic Biology and cardiovascular diseases.

Inaugurated by Manohar Parrikar, Chief Minister of Goa, other dignitaries present include Professor Bhaskar Ramamurthi, Director, IIT Madras, Professor D Karunagaran, Head, Department of Biotechnology, IIT Madras, Professor Rama Shanker Verma, organising secretary, PAN IIT Biotech Meet, IIT Madras.

Professor Bhaskar Ramamurthi, Director, IIT Madras, presenting a bouquet to Goa Chief Minister Manohar Parrikar, the chief guest

In his inaugural address, Parrikar said, "Biotechnology, with its various aspects such as stem cell research, cancer drugs and cardiovascular treatment, can provide solutions to many of the problems that we are facing now. Research such as those being carried out at IIT Madras are vital."

The Government of Goa will extend support and will definitely consider providing assistance to research in Biotechnology. "The education I got in Engineering helped me in politics, as I am able to analyse a problem and arrive at solutions in a logical manner," added Parrikar. He graduated in Metallurgical Engineering from IIT Bombay) and went on to become a chief minister.

Speaking later, K Vijay Raghavan, Secretary, Department of Biotechnology (DBT), Ministry of Science and Technology, said, "There are uniquely advantageous ways by which we, in India, can define problems." These meetings have the potential to have a major impact. The DBT was willing to fund major projects and invited proposals from faculty teams across institutions. Such workshops facilitate the formulation of proposals, he added.

Professor Ramamurthi said, "If we want to take on something really bigger and challenging in biotechnology, very often it involves other branches of engineering, and increasingly, data science as well. Many problems cannot be solved by individuals alone as solutions cannot be found within any one narrow discipline."

Date: 9th October 2017
Publication: India Education Diary
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi, Prof. D. Karunagaran & Prof. Rama Shanker Verma
Headline: IIT Madras organizes 2nd PAN IIT Biotech meet at Goa
URL: https://indiaeducationdiary.in/iit-madras-organizes-2nd-pan-iit-biotech-meet-goa/

IIT Madras organizes 2nd PAN IIT Biotech meet at Goa

Goa: The 2nd PAN IIT Biotech Meet was organized between 5th and 7th October 2017 at Goa by Indian Institute of Technology Madras, Bhupat and Jyoti Mehta School of Biosciences, in association with Mehta Family Foundation, Houston, U.S. and IIT Madras Office of International and Alumni Relations.

The objective is to bring researchers, faculties, expertise from different IITs, Indian Institute of Science (IISc), Bengaluru, inStem and Biotechnology as well as Biopharmaceutical industries on to a single platform to discuss recent advances and challenging problems in Synthetic Biology and Cardiovascular Diseases.

The conference was inaugurated by the Chief Guest Mr. Manohar Parrikar, Chief Minister of Goa, in the presence of Prof. Bhaskar Ramamurthi, Director, IIT Madras, Prof. D. Karunagaran, Head, Department of Biotechnology, IIT Madras, Prof. Rama Shanker Verma, Organizing Secretary, PAN IIT Biotech Meet, IIT Madras and other dignitaries.

Addressing the Inaugural Session on Thursday (5th October), Chief Guest Mr. Manohar Parrikar, Chief Minister of Goa, said "Biotechnology, with its various aspects such as Stem Cell Research, Cancer Drugs and Cardiovascular Treatment, can provide the Solutions to many of our problems we're facing now. Research such as those being carried out at IIT Madras are vital."

The Government of Goa will extend support and will definitely consider providing assistance to research in Biotechnology.

"The Education I got in Engineering helped me in politics as I'm able to analyze a problem and arrive at solutions in a logical process," added Mr. Manohar Parrikar. He is first IIT graduate (Metallurgical Engineering, IIT Bombay) to become a Chief Minister.

Speaking later, Mr. K. VijayRaghavan, Secretary, Department of Biotechnology (DBT), Ministry of Science and Technology, Govt. of India, said, "There are uniquely advantageous ways by which we, in India, can define problems."

These meetings have the potential to have a major impact. The DBT was willing to fund major projects and invited proposals from faculty teams across institutions. Such Workshops facilitate the formulation of proposals, he added.

Prof. Bhaskar Ramamurthi, Director, IIT Madras, said, “If we want to take on something really bigger and challenging in biotechnology, very often it involves other branches of Engineering, and increasingly data science as well. Many problems cannot be solved by individuals alone as solutions cannot be found within any one narrow discipline.”

Speaking during inaugural session, Prof. R. Nagarajan, Dean, International and Alumni Relations, IIT Madras, thanked the Mehta Family Foundation, the DBT and the Government of Goa for their support. “Thanks to all the support, only sky’s the limit for bioscience & engineering research in India,” added Prof. Nagarajan.

Mr. Rahul Mehta of the Mehta Research Foundation said that multi-institutional faculty teams should take up grand challenges of relevance to India and achieve quick impact.

Various sessions were held during meet on topics such as ‘Control of metabolic pathway fluxes by Synthetic Biology approaches,’ and ‘Cardiovascular diseases.’ Experts and faculty from across the country participated in the Meet.

Date: 9th October 2017
Publication: DD Podhigai
Edition: Electronic
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: IIT Madras Biotechnology Department gets new block

Date: 9th October 2017
Publication: Makkal Kural
Edition: Chennai
Page no.: 3
Journalist: NA
Headline: IIT-Madras students display their scientific models to the public
URL: https://goo.gl/s18cNM

சென்னை ஐஐடி மாணவர்களின் விஞ்ஞான மாதிரிகள் கண்காட்சியில் 40 பிரமிக்க வைத்த ஆச்சரியங்கள்

நாடும் நடப்பும்

ஆர் முத்துக்குமார்

Date: 9th October 2017
Publication: The Hindu- Tamil
Edition: Chennai
Page no.: 5
Journalist: Lisbun Kumar
Headline: IIT students to display their creations for the public today
URL: http://tamil.thehindu.com/tamilnadu/article19822966.ece

ஐஐடி மாணவர்களின் விதவிதமான கண்டுபிடிப்புகள்

இன்று நடைபெறும் கண்காட்சியில் பொதுமக்கள் பார்க்கலாம்

சென்னை

சென்னை ஐஐடி மாணவர்களின் விதவிதமான கண்டுபிடிப்புகளை இன்று (ஞாயிற்றுக்கிழமை) நடைபெறும் கண்காட்சியில் பொதுமக்கள் பார்வையிடலாம்.

சென்னை ஐஐடியில் கண்டுபிடிப்பு மையம் என்ற மாணவர்களின் ஆய்வகம் இயங்கி வருகிறது. ஐஐடி மாணவர்களின் புதிய கண்டுபிடிப்புகள், அறிவியல் செயல்திட்ட மாதிரிகள், நவீன சாதனங்கள் போன்றவற்றை பொதுமக்கள் நேரில் வந்து பார்வையிட்டு அது குறித்து விரிவாக தெரிந்துகொள்வதற்காக ஆண்டுதோறும் ஒருநாள் சிறப்பு கண்காட்சியை நடத்தி வருகிறது. அந்த வகையில், நடப்பு ஆண்டு கண்காட்சி கிண்டியில் உள்ள ஐஐடி வளாகத்தில் மைய பட்டறை அருகில் அமைந்துள்ள கண்டுபிடிப்பு மையத்தில் ஞாயிற்றுக்கிழமை மாலை 4 மணி முதல் இரவு 8 மணி வரை நடைபெற உள்ளது. கண்காட்சிக்கு அனுமதி இலவசம். இதில், மார்ஸ் ரோவர், ரேஸ் கார், தானியங்கி வாகனம் உள்பட 40-க்கும் மேற்பட்ட அறிவியல் மாதிரிகள், தொழில்நுட்ப சாதனங்களை பொதுமக்கள் பார்க்கலாம்.

Date: 9th October 2017
Publication: Dinamani
Edition: Chennai
Page no.: 10
Journalist: NA
Headline: Exhibition

சென்னை ஐ.ஐ.டி.யில் ஞாயிற்றுக்கிழமை நடைபெற்ற மாணவர்களின் தொழில்நுட்பப் படைப்பு குறித்த கண்காட்சியில் ஆளில்லா விமான கண்டுபிடிப்பு குறித்து விளக்கும் மாணவர். (இடது) தானாக இயங்கும் ரோபோவை கண்டுகளிக்கும் மாணவர்கள்.

Date: 9th October 2017
Publication: Deccan Chronicle
Edition: Chennai
Page no.: 5
Journalist: NA
Headline: Scientific Models

Students of IIT-Madras demonstrate innovative scientific models at the CFI Open House event in the city on Sunday. —DC

Date: 10th October 2017
Publication: The Hindu Business Line
Edition: Chennai/Delhi/Mumbai/Pune/Bangalore/Hyderabad/Kolkata/Kochi/Ahmedabad
Page no.: 17
Journalist: NA
Headline: IIT-M gets new biotechnology lab
URL: http://www.thehindubusinessline.com/news/education/iitm-gets-new-biotechnology-lab/article9895741.ece

IIT-M gets new biotechnology lab

OUR BUREAU

Chennai, October 9

The Indian Institute of Technology Madras, inaugurated its second biotechnology lab in the campus today. The new lab will have an animal house and a National Cancer Tissue Biobank (NCTB) for research purposes.

The NCTB, joint initiative of the Department of Science and Technology, Government of India, and IIT-M, will collect cancer tissue samples from patients along with their previous medical history and treatment with their consent.

The animal house, which is designed to house rats, mice, rabbits and guinea pigs, will be utilised for research in medical biotechnology with special focus on cancer, cardiovascular diseases, tuberculosis and stem cell biology.

Speaking at the inauguration of the new lab, Soumya Swaminathan, Director-General, Indian Council of Medical Research, said with deaths due to cardiovascular diseases and cancer increasing rapidly in India, the country needs a tissue bank that would help in development and testing products for early diagnostics. "You need to form clusters and use available medical expertise to get a much better understanding on genomics," she said.

(from left) Soumya Swaminathan, Director, Indian Council of Medical Research, Rahul Mehta and Jai Mehta of The Mehta Family Foundation (Houston, Texas), and Bhaskar Ramamurthi, Director, IIT Madras, at the inauguration of a new block for the Biotech Department at IIT Madras in Chennai on Monday BIJOY GHOSH

For that to happen, there is a need for pan-India representation to study more diverse categories. Swaminathan said, "We need to invest in population-based cohorts and biological specimen repositories through partnerships between government, private sector and non-governmental organisations. The time has also come to harness data science and IT expertise to look at biological data and understand distribution of diseases much better," she explained. According to her, NCTB is a step in that direction.

The bank so far has collected 1,500 tissue samples and has over 27 labs that are using this facility. S Mahalingam of the NCTB said the project intends to establish a cancer discovery genomic database.

Date: 10th October 2017
Publication: The Hindu
Edition: Chennai
Page no.: 5
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi, Prof. D. Karunagaran & Prof. S. Mahalingam
Headline: 'Form bio-cluster with institutions to deepen research'
URL: http://www.thehindu.com/news/national/tamil-nadu/iit-m-urged-to-form-bio-clusters-in-city-to-improve-research/article19830659.ece

'Form bio-cluster with institutions to deepen research'

SPECIAL CORRESPONDENT
CHENNAI

The Indian Institute of Technology–Madras could form a bio-cluster with institutions in the city, including a couple of hospitals to improve research, said Sowmya Swaminathan, Director General, Indian Council of Medical Research.

At the inauguration of the second block of the Bhupat and Jyoti Mehta School of Biosciences at the institute, she said the institute could form multidisciplinary consortia with various institutions in Taramani, and come up with translational products, making the best use of the available medical expertise in the city.

The institute's state-of-the-art equipment could be used to find answers for the diabetes epidemic, given India's diverse genetic population. The institute's data science and the IT expertise could be harnessed to look at demographic data, map hotspots and intensify control in infectious diseases, said Dr. Sowmya, who is also the Deputy Director General, World Health Organisation.

D. Karunagaran, head of the Department of Biotechnology, said the new block would not only offer additional laboratory space, but also house the Indo-German Sustainability Centre and the animal house.

The institute has a dedicated space for animal house besides the first of its kind community-driven National Cancer Tissue Biobank. The bank has over 1,500 samples collected from cancer patients in the city, S. Mahalingam, professor in the department, said.

IIT-M director Bhaskar Ramamurthi thanked the Mehta Family Foundation for their support.

Date: 10th October 2017
Publication: India Education Diary
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi, Prof. R. Nagarajan, Prof. D Karunagaran
Headline: IIT Madras Biotechnology Department gets new block with state-of-the-art research facilities
URL: http://indiaeducationdiary.in/iit-madras-biotechnology-department-gets-new-block-state-art-research-facilities/

IIT Madras Biotechnology Department gets new block with state-of-the-art research facilities

Chennai: Indian Institute of Technology Madras' Biotechnology Department has got new state-of-the-art research facilities with the inauguration of a new Block today, 09th October 2017.

The Block-2 of Bhupat and Jyoti Mehta School of Biosciences, Department of Biotechnology, IIT Madras, was inaugurated by Ms. Jyoti Mehta in the presence of Dr. Soumya Swaminathan, Director General, Indian Council of Medical Research (ICMR), Prof. Bhaskar Ramamurthi, Director, IIT Madras, Mr. Rahul Mehta, CEO, The Mehta Family Foundation, and other faculty.

The Mehta Family Foundation, Houston, Texas has sponsored the Block-2, which will enable the expansion of Department of Biotechnology, IIT Madras, and accommodate special facilities such as an Animal House and a Cancer Tissue Bank. They had earlier sponsored construction of Block 1 of Bhupat and Jyoti Mehta School of Biosciences, and it now houses the Department of Biotechnology.

Delivering the inaugural address, Dr. Soumya Swaminathan said, "Cancer and cardiovascular diseases are going to be a huge burden in India in the coming years. I'm sure that transformational research in these areas will come out of the new facilities at the Biotechnology Dept, IIT Madras."

"We need to work on the genomics of diabetes. The data science and IT expertise are a great Plus for IIT Madras. We should start using our computational processing capabilities to match existing data with other data sets. This will help find out many more information about diseases," said Dr. Soumya Swaminathan.

She said that the ICMR will be able to fast-track some of its innovations, research and development by working with institutes like IIT Madras, which have state-of-the-art infrastructure. She also recalled her earlier visits to the Bio-incubator of IIT Madras.

Speaking on the occasion, Prof. Bhaskar Ramamurthi thanked the Mehta Family for their continued support. "We are now having all the requisite infrastructure for the Biotechnology Dept. with the inauguration of this new Block."

Mr. Rahul Mehta expressed hope that IIT Madras and India will become great leaders in genetic revolution, which he said will be as disruptive as the innovations of the Silicon Valley.

Prof. R. Nagarajan, Dean, International and Alumni Relations, IIT Madras, expressed his gratitude and appreciation for the Mehta family's sustained association with the Institute. "Benefactors such as the Mehta Family have played a huge role in IITM's development as a world-class institution of higher learning and relevant research. We look forward to the Mehtas' continued involvement in shaping our future."

Speaking about the new building, Prof. D Karunagaran, Head, Department of Biotechnology, IIT Madras, said, "The new building will fulfil our requirements for additional laboratory space. It will also h ouse Indo-German Centre for Sustainability in addition to our laboratories."

The major additions in Block 2 are the National Cancer Tissue Biobank (NCTB) and the Animal House.

The NCTB, a state-of-the-art non-profit community based tissue bank, is a joint initiative of Department of Science and Technology (DST), Govt of India, and IIT Madras. It will collect cancer tissue samples with consent from patients diagnosed with cancer. Information about the previous medical history and treatment of the donors is also documented along with the tissue samples.

The NCTB is first of its kind facility in India and aiming to provide researchers with high quality of cancer tissues and the patient data in order to facilitate cancer research that will lead to improvements in cancer diagnosis and treatment.

The Animal House is mainly for research in the Medical Biotechnology area broadly and specifically for Cancer, Cardiovascular diseases, HIV, Tuberculosis and Stem Cell Biology in particular. It is a small animal facility that will have facilities for using rats, mice, rabbit and guinea pigs. It is important test the drugs first on animals before taking them on to human use and such basic preclinical data are essential in Medical biotechnology.

Date: 10th October 2017
Publication: India Education Diary
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi, Prof B. Ravindran
Headline: IIT Madras students showcase innovations, ranging from Formula Race Cars to Autonomous vehicles
URL: http://indiaeducationdiary.in/iit-madras-students-showcase-innovations-ranging-formula-race-cars-autonomous-vehicles/

IIT Madras students showcase innovations, ranging from Formula Race Cars to Autonomous vehicles

Chennai: Indian Institute of Technology Madras students demonstrated some of the projects that had won international acclaim in recent years during the CFI Open House event today, 8th October 2017.

The Centre For Innovation (or) CFI is a 'student-run lab that remains open 24X 7. It was established in 2008 with a vision to encourage engineers to apply knowledge from their academic pursuits to 'innovate' and propose solutions to real-world problems.

The CFI Open House is an annual event showcasing the recent work and achievements of our student innovators, as well as providing an opportunity for their projects to be displayed on a large scale, leading to implementation.

Speaking about CFI, Prof. Bhaskar Ramamurthi, Director, IIT Madras, who inaugurated the Open House, said, "The Centre For Innovation at IIT Madras is the student-run tinkering lab that is now nearly a decade old and a model for similar labs across institutes in the country. Student groups have won several prizes in international competitions and many a startup has emerged from the projects undertaken here."

Indeed, he added, the motto of CFI is "Walk in with an idea and walk out with a product". This year, too, there are a number of award-winning projects on display, as well as innovative products ripe for launch by startups. The projects on display this year include the stellar efforts of students at the fledgling IITs at Tirupati and Palghat, which are being mentored by IIT Madras", said Prof. Bhaskar Ramamurthi.

Prof B. Ravindran, Faculty-in-Charge, CFI, IIT Madras, said, "The Centre For Innovation has become an integral part of student life on campus with a vast majority of students undertaking some project at CFI during their tenure here. This serves as an introduction to the vibrant entrepreneurial eco-system in IIT Madras and several successful start-ups have been incubated from projects started at CFI."

This year, the Open House displayed the work of the Institute's three internationally acclaimed competition teams, namely

Ø Team Anveshak's Mars Rover, which qualified for the finals of the University Rover Challenge and was demonstrated at the Mars Desert Research Station in Utah Desert, U.S.

Ø Team Raftar's Formula Race Car, which was completely built from scratch, and is driven by, students of IIT Madras. Team 'Raftar' was placed Fifteenth overall and First amongst Non-European teams in the Formula SAE Italy & Formula Electric Italy 2017 organized at Riccardo Paletti Circuit from July 19 to 23, 2017.

Ø Team Abhiyaan's Autonomous vehicle, which qualified for the 'Intelligent Ground Vehicle Competition,' an annual international robotics competition conducted by U.S. Army Tank Automotive Research, Development and Engineering Centre and the Association for Unmanned Vehicle Systems International.

Over 40 student projects were demonstrated during the event, including the Railroad Fault-Detection Robot, winner of the James Dyson Award, Intelligent Lighting System: Finalists of the Carbon Zero Challenge, as well as ICSR projects, and CFI mentored projects from IIT Tirupati and IIT Palakkad under our mentorship program, Vistaar.

CFI Open House is an opportunity for students to network with potential mentors and facilitators in the field of technology and entrepreneurship. In the years since its inception, CFI has grown as a hub for innovation, on multiple occasions collaborating with industries and nurturing hundreds of student-proposed projects that have bagged honourable awards, internationally recognised competition teams and some of the nation's most acknowledged startups.

Date: 10th October 2017
Publication: Rajasthan Patrika
Edition: Ahmedabad/Kolkata/Delhi
Page no.: 2
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: Achievement of IIT Madras... Three projects got global recognition

आईआईटी मद्रास की उपलब्धि...

तीन प्रोजेक्ट्स को मिली वैश्विक पहचान

चेन्नई @ पत्रिका. आईआईटी मद्रास के सेंटर फॉर इनोवेशन (सीएफआई) में रविवार को छात्रों की ओर से तैयार किए उन प्रोजेक्ट्स को प्रदर्शित किया गया, जिन्होंने पिछले कुछ महीनों में अंतरराष्ट्रीय मान्यताएं हासिल की थी। आईआईटी-एम के निदेशक भास्कर राममूर्ति ने बताया कि प्रदर्शनी में 40 परियोजनाओं को शामिल किया गया है। इनमें से मंगल रोवर, जिसने विश्वविद्यालय रोवर चैलेंज के फाइनल में क्वालीफाई किया था और यूटा में मंगल डेज़र्ट रिसर्च स्टेशन पर इसका प्रदर्शन भी किया गया था। वहीं एक फॉर्मूला रेस कार, जिसने अंतरराष्ट्रीय प्रतियोगिता में गैर-

यूरोपीय टीमों के बीच शीर्ष स्थान जीता और तीसरा एक इंटेलीजेंट ग्राउंड व्हीकल जो यूएस आर्मी के टैंक मोटर वाहन अनुसंधान, विकास और इंजीनियरिंग केंद्र और मानव रहित वाहन प्रणाली इंटरनेशनल के लिए एसोसिएशन की ओर से आयोजित वार्षिक अंतरराष्ट्रीय रोबोटिक्स प्रतियोगिता में चुना गया है, आदि प्रमुख रूप से शामिल हैं।

Date: 10th October 2017
Publication: The Economic Times
Edition: Delhi/Pune
Page no.: 22
Journalist: Bharani Vaitheesvaran
Professor: Prof. R Raghunathan Rengaswamy
Headline: IIT-Madras has an Algorithm to Fix Factory Woes
URL: http://economictimes.indiatimes.com/tech/software/improving-plant-productivity-quality-iit-madras-has-an-algorithm-to-fix-factory-woes/articleshow/61013284.cms

IMPROVING PLANT PRODUCTIVITY, QUALITY

IIT-Madras Has an Algorithm to Fix Factory Woes

Code can study patterns in large, unstructured historical data sets and produce analyses

Bharani.Vaitheesvaran
@timesgroup.com

Chennai: Scientists at IIT-Madras have written a code that can help factories spot performance-dragging parameters — or why the output shot up suddenly on a particular day — by just studying patterns from large, unstructured historical data sets and producing analyses that offer rare insight to help improve productivity and quality at the plants of automotive majors like Tata Motors. The algorithms can learn at work, too.

With iterations, their intelligence grows to the point where the inferences, in some test cases, have astounded the professors with uncanny predictions. Taking into account hundreds of variables from weather patterns to attendance data to acidity levels (pH) in input raw material, the software, say professors, has drawn cause-effect relations that have missed the eye of experienced plant operators. "I would draw a parallel to how computers got to beat the Grandmasters at chess. While it is humans who are making software more and more intelligent, their capacity for growth can outstrip our own," said R Raghunathan Rengaswamy, professor at the Chemical Engineering department at IIT Madras, and a director at Gyan Data, the startup that licenses this technology to be used by corporations.

The algorithm was originally fed notions of high-performance, based on which it will scrounge the data sets for parameters that are indispensable for high output and accuracy in manufacturing.

The software, built on general-purpose computing languages like Python and Java, has mathematical models as driving fundamentals. It will find application wherever control valves — used widely in industrial machinery — are used. It can detect malfunctions in control valves effectively by studying frictional data and flag discrepancies. Internet of Things (IoT) will add another dimension to the algorithm as plants would analyse historical data along with real-time feed from IoT-enabled electronics placed inside the factories. Gyan Data is a data mining startup incubated at IIT-Madras to turn research into products. It holds the technology which has been licensed out for royalty.

As of now, three foundries including Ashok Leyland and Tata Motors, four cement manufacturers and a fertiliser plant of The Murugappa Group have benefitted from the algorithm, according to Rengaswamy who said two US-based manufacturers have begun independent exploration utilising the software.

At Tata Motors Jamshedpur, said foundry head Amiya Singha, any refinement in manufacturing had always been made on pure instinct. "In a foundry, there are no direct equations available for any change one would make in the process. There is an error rate of about 20%. Now, this technology has stabilised our process parameters. This has helped bring down costs and the casting moulds have even surfaced."

The software, built on general purpose computing languages like Python and Java, has mathematical models as its fundamentals

Data has transformed many internet-based industries like e-commerce. Analytics and predictive modelling are key to modern retail and other industries — an e-commerce site can prioritise brand visibility based on search data — but they are still uncommon in core manufacturing. "The smart machines, required to provide data necessary for analytics, are just arriving. Manufacturing can have great transformations as more and more data gets captured," said Madhavan Mukund, Professor and Dean of Studies at the Chennai Mathematical Institute, who also runs AlgoLabs, a think-tank offering predictive analysis as a consultancy.

The Big Data

- The algorithm studies patterns from large, unstructured historical data sets and produces analyses that offer rare insight to help improve productivity and quality of the plants
- The software has mathematical models as driving fundamentals

- Internet of Things (IoT) will add another dimension to the algorithm
- Plants would analyse historical data along with real-time feed from IoT-enabled electronics placed inside the factories

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Journalist: NA
Headline: IIT-M to get combustion R&D centre
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IIT-M to get combustion R&D centre

OUR BUREAU

Chennai, October 10

The National Centre for Combustion Research and Development (NCCRD) will be inaugurated at the Indian Institute of Technology, Madras, on October 13.

The centre is supported by the Science and Engineering Research Board of the Union Department of Science and Technology (DST). The NCCRD has been established at a total cost of ₹90 crore. A similar centre has been established at the Indian Institute of Science, Bangalore, as well.

The centre will focus on effective utilisation of combustion as a means of thermo-chemical energy conversion, according to a press release. These will be accomplished by creating a knowledge network with other institutional combustion researchers and industry collaboration in the field of automotive, thermal power and aerospace propulsion. Ahead of the inauguration, the NCCRD is also organising a one-day workshop at IIT Madras on October 12 with focus on automotive combustion.

Date: 11th October 2017
Publication: The Hans India
Edition: Hyderabad
Page no.: 14
Journalist: NA
Professor: Prof Satyanarayanan Chakravarthy
Headline: IIT-M to host world's largest combustion research centre
URL: http://www.thehansindia.com/posts/index/Young-Hans/2017-10-10/IIT-M-to-host-worlds-largest--combustion-research-centre/332328

IT WILL DEAL WITH THE TWIN CHALLENGES OF ALTERNATIVE ENERGY AND ENVIRONMENTAL PROTECTION

IIT-M to host world's largest combustion research centre

OUR BUREAU

Hyderabad: Indian Institute of Technology-Madras (IIT-M), is going to host the world's largest combustion research centre. It will address the twin challenges of alternative Energy and environmental protection afflicting a modern emerging economy such as India by focussing on effective utilisation of combustion as a means of thermo-chemical energy conversion.

The National Centre for Combustion Research and Development (NCCRD), scheduled to be inaugurated on October 13, is supported by Science and Engineering Research Board, Dept. of Science and Technology (DST), Government of India. A similar centre has also been established at Indian Institute of Science, Bangalore (IISc). With over 30 faculty members from six departments of IIT-M working on this project, this is the largest grouping of academic combustion researchers globally. In addition, the infrastructure facilities are also the largest for any combustion research centre in an academic setting globally. The NCCRD has been established at a total cost of Rs 90 crore. It will develop state-of-the-art capabilities in combustion research involving experts in the country.

Speaking about importance of NCCRD, Prof Satyanarayanan Chakravarthy, Professor In-charge, NCCRD, IIT Madras said, "The emphasis at NCCRD is to work on the industry-relevant problems of the future in close collaboration with organisations in application sectors of automotive, Aerospace, thermal power, process industry and fire protection."

The research interests are in 3 major application sectors: Automotive, Thermal Power, and Aerospace Propulsion, besides fire research and microgravity combustion to minor extent. The goals of the NCCRD are:

(i) Providing state-of-the-art facilities for Research,
(ii) Creating knowledge network among other institutional combustion researchers,
(iii) Manpower development at the master's and PhD levels,
(iv) Industry collaboration,
(v) Continuing education for young industry professionals and academics, and
(vi) Addressing grand challenge topics of practical importance

Speaking about his experience working with NCCRD, Sundar Krishnaswami, Consulting Engineer, GE Aviation, said, "GE Aviation Technology team has been working with NCCRD on a couple of projects. This partnership helps us tap into their state-of-the-art experimental facilities, optical diagnostic equipment, and talent pool of the Institution. The collaboration has helped us gain valuable insights that further advance GE's technology and thought leadership in low emission combustion technology for gas turbines."

Date: 11th October 2017
Publication: UNI
Edition: Online
Journalist: NA
Professor: Prof Satyanarayanan Chakravarthy
Headline: IIT-M to host World's largest Combustion Research Centre on Oct 13
URL: http://www.uniindia.com/iit-m-to-host-world-s-largest-combustion-research-centre-on-oct-13/states/news/1013968.html

IIT-M to host World's largest Combustion Research Centre on Oct 13

Chennai, Oct 10- (UNI) The Indian Institute of Technology, Madras (IIT-M) would host the world's largest Combustion Research Centre at its campus to address the twin challenges of alternative energy and environmental protection afflicting a modern emerging economy such as India by focussing on effective utilization of combustion as a means of thermo-chemical energy conversion.

Established at a total cost of Rs 90 crore, the National Centre for Combustion Research and Development (NCCRD) would be inaugurated on October 13. The Research Centre was supported by Science and Engineering Research Board, Department of Science and Technology (DST). A similar centre has also been established at the Indian Institute of Science, Bangalore (IISc).

With over 30 faculty members from six Departments of IIT-M working on the project, this would the largest grouping of academic combustion researchers globally.

In addition, the infrastructure facilities were also the largest for any combustion research centre in an academic setting, globally.

The NCCRD will develop state-of-the-art capabilities in combustion research involving experts in the country, a release from IIT-M today said.

Prof Satyanarayanan Chakravarthy, Professor In-charge, NCCRD, IIT-M said "the emphasis at NCCRD is to work on the industry-relevant problems of the future in close collaboration with organisations in application sectors of automotive, aerospace, thermal power, process industry and fire protection."

The research interests were in three major application sectors that included automotive, Thermal Power, and Aerospace Propulsion, besides fire research and microgravity combustion to minor extent.

The goals of the NCCRD included providing state-of-the-art facilities for research, create knowledge network among other institutional combustion researchers, manpower development at the master's and Ph.D levels, industry collaboration, continuing education for young industry professionals and academics, and addressing grand challenge topics of practical importance.

Date: 11th October 2017
Publication: India Education Diary
Edition: Online
Journalist: NA
Professor: Prof. Satyanarayanan Chakravarthy
Headline: IIT Madras to host the World's Largest Combustion Research Centre
URL: http://indiaeducationdiary.in/iit-madras-host-worlds-largest-combustion-research-centre/

IIT Madras to host the World's Largest Combustion Research Centre

Chennai: Indian Institute of Technology Madras is going to host the world's largest Combustion Research Centre. It will address the twin challenges of Alternative Energy and Environmental Protection afflicting a modern emerging economy such as India by focussing on effective utilization of combustion as a means of thermo-chemical energy conversion.

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partnership helps us tap into their state-of-the-art experimental facilities, optical diagnostic equipment, and talent pool of the Institution. The collaboration has helped us gain valuable insights that further advance GE's technology and thought leadership in low emission combustion technology for gas turbines."

The NCCRD is located in a five-storey building at IIT Madras Campus which also hosts separate smaller structures for propellant combustion, fire research, and air storage. Many industrial and R&D organizations are working closely with the NCCRD. They include Mahindra, TVS, AVL, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet.

The NCCRD pursues grand challenges:

(i) High-efficiency IC engine technologies such as Gasoline direct injection,
(ii) Flame Stability in High-speed Combustion involving sub-topics such as for low emissions and mitigating combustion instability in gas turbines, and improved fuel-air mixing in supersonic combustors,
(iii) Clean coal technologies such as high-ash coal gasification

Ahead of the inauguration, the NCCRD is also organizing a one-day workshop at IIT Madras on Thursday, 12th October 2017, focusing on Automotive Combustion.

It aims to update participants about the Automotive Research Facilities available within NCCRD at IIT Madras and IISc Bangalore, Summarize current research activities conducted at NCCRD and deliverables achieved and its impact. The participants will also be briefed on the procedures for using the facilities at NCCRD and its benefits to other academic institutions, R&D labs and Industry

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Publication: The Hindu Business Line
Edition: Chennai/Delhi/Mumbai/Pune/Bangalore/Hyderabad/Kolkata/Kochi/Ahmedabad
Page no.: 12
Journalist: TV Jayan
Professor: Prof. Karthik Raman
Alumni/student: Aravind Sankar
Headline: IIT researchers develop tool to synthesise new molecules
URL: http://www.thehindubusinessline.com/news/science/iit-researchers-develop-tool-to-synthesise-new-molecules/article9896254.ece

IIT researchers develop tool to synthesise new molecules

TV JAYAN

New Delhi, October 10

In what could be considered a boon for the pharma and other chemistry-driven industries, researchers from the Indian Institutes of Technology in Delhi and Madras have developed a machine learning tool that can fish out new ways of synthesising novel molecules.

"Suppose you want to synthesise a new molecule and you know its structure from other studies, but not its potential method of synthesis, our tool lets you know whether an organism can help you make it or not," said IIT Madras biotechnologist Karthik Raman.

The algorithm that Raman and IIT Delhi computer scientist Sayan Ranu have created does this by mining the repertoire of biochemical reactions available in public databases, maintained by research groups across the world. The scientists, who recently reported their work in the journal *Bioinformatics*, have aptly named the software tool Reactionminer.

Aravind Sankar, a dual degree student in IIT Madras' Computer Science Department, also contributed to the work.

"Given that so much information about different types of biochemical reactions in a variety of organisms is already available in the public domain, the knowledge captured in these repositories can be exploited to predict how a new compound can be made," said Raman, who is also with the Bhupat and Jyoti Mehta School of Biosciences at IIT Madras.

The tool would be particularly useful for chemical and pharma companies, as well as for biologists, who would like to explore why a biochemical reaction happens in a particular way when dozens of different chemical routes exist, said Ranu, who was with IIT Madras till December last year.

"The system that we developed offers [bio] chemists a way to play around and explore different options available to them. Typically, all such predictions are currently done by humans who depend heavily on what they have learned right from their school chemistry classes and go on to base themselves on intuition," said Ranu.

"With this tool, they can do it on a scale. They do not have to limit themselves to just one option or two. It is capable of giving them a number of options," he said.

To develop this software tool,the researchers used graph theory – a mathematical theory which in simple terms breaks down information into points and lines nodes – and is commonly used by social scientists. The scientists used this to understand how chemical bonds are broken and formed to make new molecules, and how enzymes act upon different classes of molecules.

Date: 11th October 2017
Publication: BL on Campus
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi, Prof. B Ravindran
Headline: IIT Madras showcases award-winning projects
URL: http://www.bloncampus.com/news-wrap/iit-madras-showcases-awardwinning-projects/article9898289.ece

IIT Madras showcases award-winning projects

IIT-M's Centre for Innovation held an open house featuring over 40 acclaimed projects

The Indian Institute of Technology, Madras showcased student projects that have garnered international recognition in the recent months at the Centre for Innovation's (CFI) Open House on October 8.

CFI, a student-run lab that encourages engineers to apply theoretical knowledge to find solutions to real-world problems, organises the Open House annually to demonstrate its work to the public.

This year, over 40 projects were presented, including Team Anveshak's Mars rover, which qualified for the finals of the University Rover Challenge; Team Raftar's Formula race car, which is built from scratch

and is driven by the students of IIT-M at Formula SAE; and Team Abhiyaan's autonomous vehicle, which qualified for the Intelligent Ground Vehicle Competition.

Other competitive teams such as Team Amogh, whose paper on design and motion control of autonomous underwater vehicles was published in IEEE Xplore; and Team Adhira, which created the institute's first electric vehicle for Formula Student Electric, also demonstrated their models to the eager public, industry persons and potential investors.

In addition, the various clubs – such as aero, analytics, astro and physics, 3D printing, and electronics – of IIT Madras showcased their projects.

Work in progress

A winner of the James Dyson Award, the Railroad Fault-Detection Robot was another attraction at the event. While there are fault-detection mechanisms already in place, this robot can do the job without disrupting the train schedule. And since there have been several Railway mishaps in recent past, some caused by damaged or misaligned tracks, this project becomes all the more relevant.

Though the team hasn't yet tested the robot out on an actual railway track, they are hopeful of its future.

The 3D printing club had quite a few visitors because of its social venture. In an attempt to help the animals of IIT, which get injured from time to time, they have come up with a 3D-printed limb replacement system. They have currently tied up with Bengaluru-based group People for Animals to test one such plastic limb on an amputee monkey. If they get positive results after the trial period, they plan to improve the invention.

A birthplace of start-ups

Speaking about CFI at the inauguration of the Open House, Bhaskar Ramamurthi, Director, IIT Madras, said, "CFI, now nearly a decade old, is a model for similar labs across institutes in the country. Student groups have won several prizes in international competitions and many start-ups have emerged from the projects undertaken here."

In fact, it's not uncommon for alumni to revisit their former clubs and teams during placement season. Third-year B.Tech (electrical engineering) student Raghav Vaidyanathan, who heads the branding and engagement at CFI, said that no matter how far-fetched an idea may seem, CFI is always willing to encourage students and help them develop their product, if they are enthusiastic.

Peer-to-peer learning

CFI not only encourages experiential learning but also gives space to peer-to-peer education. Every club, project and team is a potpourri of students in their under-graduate, post-graduate and research levels.

Professor B Ravindran, Faculty-in-Charge, CFI, IIT Madras, said that CFI has become an integral part of student life on campus, with a vast majority of them undertaking some project at CFI during their tenure at the institute. “This serves as an introduction to the vibrant entrepreneurial eco-system in IIT Madras and several successful start-ups have been incubated from projects started at CFI,” he added.

Freshers and seniors alike spend hours at CFI on their projects. Talking about their routine, Raghav said, “We wake up, finish class by 5 in the evening, head to CFI to work on our projects, have dinner and come back to the Centre. Sometimes we sleep over there, too!”

The Open House also saw active participation from the students of IIT Tirupati and IIT Palakkad, who are being mentored by IIT Madras under their mentorship programme, Vistaar.

Date: 11th October 2017
Publication: Bio Spectrum
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: IIT-M gets a new biotechnology block
URL: https://www.biospectrumindia.com/news/68/9635/iit-m-gets-a-new-biotechnology-block.html

IIT-M gets a new biotechnology block

Indian Institute of Technology Madras' Biotechnology Department has got new state-of-the-art research facilities with the inauguration of a new Block recently.

The Block-2 of Bhupat and Jyoti Mehta School of Biosciences, Department of Biotechnology, IIT Madras, was inaugurated by Ms. Jyoti Mehta in the presence of Dr. Soumya Swaminathan, Director General, Indian Council of Medical Research (ICMR), Prof. Bhaskar Ramamurthi, Director, IIT Madras, Mr. Rahul Mehta, CEO, The Mehta Family Foundation, and other faculty.

The Mehta Family Foundation, Houston, Texas has sponsored the Block-2, which will enable the expansion of Department of Biotechnology, IIT Madras, and accommodate special facilities such as an Animal House and a Cancer Tissue Bank. They had earlier sponsored construction of Block 1 of Bhupat and Jyoti Mehta School of Biosciences, and it now houses the Department of Biotechnology.

The major additions in Block 2 are the National Cancer Tissue Biobank (NCTB) and the Animal House. The NCTB, a state-of-the-art non-profit community based tissue bank, is a joint initiative of Department of Science and Technology (DST), Govt of India, and IIT Madras. It will collect cancer tissue samples with consent from patients diagnosed with cancer. Information about the previous medical history and treatment of the donors is also documented along with the tissue samples.

Date: 12th October 2017
Publication: The Economic Times
Edition: Kolkata
Page no.: 6
Journalist: Bharani Vaitheesvaran
Professor: Prof. R Raghunathan Rengaswamy
Headline: IIT-Madras has an Algorithm to Fix Factory Woes
URL: http://economictimes.indiatimes.com/tech/software/improving-plant-productivity-quality-iit-madras-has-an-algorithm-to-fix-factory-woes/articleshow/61013284.cms

IIT-Madras has an Algorithm to Fix Factory Woes

Bharani.Vaitheesvaran
@timesgroup.com

Chennai: Scientists at IIT-Madras have written a code that can help factories spot performance-dragging parameters — or why the output shot up suddenly on a particular day — by just studying patterns from large, unstructured historical data sets and producing analyses that offer rare insight to help improve productivity and quality at the plants of automotive majors like Tata Motors. The algorithm can learn at work, too.

With iterations, their intelligence grows to the point where the inferences, in some test cases, have astounded the professors with uncanny predictions. Taking into account hundreds of variables from weather patterns to attendance data to acidity levels (pH) in input raw material, the software, say professors, has drawn cause-effect relations that have missed the eye of experienced plant operators. "I would draw a parallel to how computers get to beat the Grandmasters at chess. While it is humans who are making software more and more intelligent, their capacity for growth can outstrip our own," said R Raghunathan Rengaswamy, professor at the Chemical Engineering department at IIT Madras, and a director at Gyan Data, the startup that licenses this technology to be used by corporations.

The algorithm was originally fed notions of high-performance, based on which it will scrounge the data sets for parameters that are indispensable for high output and accuracy in manufacturing.

The software, built on general-purpose computing languages like Python and Java, has mathematical models as driving fundamentals. It will find application wherever control valves — used widely in industrial machinery — are used. It can detect malfunctions in control valves effectively by studying frictional data and flag discrepancies. Internet of Things (IoT) will add another dimension to the algorithm as plants would analyse historical data along with real-time feed from IoT-enabled electronics placed inside the factories.

Internet of Things (IoT) will add another dimension to the algorithm

Gyan Data is a data mining startup incubated at IIT-Madras to turn research into products. It holds the technology which has been licensed out for royalty. As of now three founders including Ashok Leyland and Tata Motors, four cement manufacturers, and one fertiliser plant of The Murugappa Group have benefitted from the algorithm, according to Rengaswamy who said two US-based manufacturers have begun dialogue to explore utilising the software.

At the Tata Motors Jamshedpur plant, said foundry head Aditya Singha, any refinement in manufacturing had always been made on pure instinct. "In a foundry, there are no direct equations available for any change one would make in the process. There is an error rate of about 30%. Now, this technology has stabilised our process parameters. This has helped bring down costs and the casting moulds have even surfacing."

The Big Data

- **The algorithm** studies patterns from large, unstructured historical data sets and produces analyses that offer rare insight to help improve productivity and quality of the plants
- **The software has mathematical models as driving fundamentals**

- **Internet of** Things (IoT) will add another dimension to the algorithm
- **Plants would** analyse historical data along with real-time feed from IoT-enabled electronics placed inside the factories

Date: 12th October 2017
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Page no.: 7
Journalist: NA
Headline: Sensitising govts to healthcare will top Soumya Swaminathan's agenda at WHO
URL: http://www.thehindubusinessline.com/news/sensitising-govts-to-healthcare-will-top-soumya-swaminathans-agenda-at-who/article9901394.ece

Sensitising govts to healthcare will top Soumya Swaminathan's agenda at WHO

OUR BUREAU

Chennai, October 11

Soumya Swaminathan, the current Director-General of the Indian Council of Medical Research, will be the first Indian to take on the role of the Deputy Director-General of the World Health Organisation (WHO) at Geneva in November.

Swaminathan, a daughter of the 'Father of Indian Green Revolution' MS Swaminathan, is a paediatrician and has worked extensively in the field of tuberculosis. She will be working with Tedros Adhanom Ghebreyesus, the new Director-General of WHO, in realising the agenda set by the organisation.

"It is indeed a highly distinguished position and I'm excited because it is the highest thing you can aspire in global health. But at the same time, it is going to be challenging," she says, as she sipped tender coconut water to beat the Chennai heat. Swaminathan was in Chennai recently to inaugurate a biosciences lab at the Indian Institute of Technology, Madras.

"As a global organisation it has priorities that are ambitious like universal health coverage, tackling non-communicable diseases, preventing outbreaks and epidemics, and strengthening health systems. It is my responsibility to make sure that it is possible at the ground level. And that is not going to be easy," said Swaminathan.

Soumya Swaminathan, Deputy Director General, WHO

For one she needs to take a 360 degree approach to healthcare, which looks at environment and social factors like drinking water, sanitation, safety at the workplace and in schools and not just medical. "So it is the issue of making people aware of the determinants of health and also making it a priority," Swaminathan said.

This means that she will be required to work closely with health ministries world over to bring health to the centre stage. "This is where the challenge lies since for most governments health takes low priority when it comes to policies," she said.

Swaminathan states that one of the reasons for this could be that unlike economic or infrastructure development, health is invisible. "But if the governments do not take preventive healthcare seriously, we will be burdened by growing non-communicable diseases that are already increasing at a rapid pace," she adds.

Mental health

Another area that needs focus is mental health, which is the major cause of suicides among 15-29 year-olds. Stating that India lacks mental health professionals, Swaminathan says the need of the hour is a model that will involve community health providers, nurses and other allied healthcare providers, who can actively and effectively screen and provide care for people affected by mental health problems.

According to Swaminathan, the biggest challenge might be bringing access to medicines.

While India is at the forefront in bringing medical access to many developing countries through cost-effective generics, more work should be done on the Intellectual Property (IP) rights to better the access.

"It is the question of finding the balance between IP rights and access and how one could do it," she says.

It would involve reworking the research and development framework, negotiations and consensus between countries. Swaminathan said, "This is not going to be easy but this is where WHO can play an important role."

"But I think my experience and passion for public health will be something that will drive me over the next couple of years," she adds, as she heads off to take a look around the new lab.

Date: 13th October 2017
Publication: The Hindu
Edition: Chennai
Page no.: 5
Journalist: NA
Headline: General- Indian Institute of Technology

GENERAL

Ministry of Earth Sciences: Inauguration of India International Science Festival - 2017, Union Ministers Harsh Vardhan; Y.S. Chowdary; Bangladesh Minister Yeafesh Oman; Afghnaistan Minister Abdul Latif Roshan and Minister K.P. Anbalagan participates, Anna University, Sardar Patel Rd., Guindy, 10 a.m.

The Administrator General and Official Trustee of Tamil Nadu: Rajah Sir Ramasamy Mudaliar 177th birth anniversary celebrations, Balavihar, Halls Rd., Kilpauk, 8.30 a. m.

Mission Sunehra Kal - ITC Ltd. and Exnora International: Inauguration of conference on 'Community Owned Decentralized Waste Management for Sustainability', Hotel My Fortune, 10 a.m.

Indian Institute of Technology: Inauguration of the National Centre for Combustion R & D, IIT Madras and panel discussion on 'Industrial Utilization of Combustion R&D', NCCRD Building, IIT Madras, 5 p.m.

SRM University: Honouring ceremony of Campus 2 Corporate, Kattankulathur, 11.30 a.m.

Date: 14th October 2017
Publication: The New Indian Express
Edition: Chennai
Page no.: 2
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: Energy research facility opens at IIT-M
URL: http://www.newindianexpress.com/cities/chennai/2017/oct/14/energy-research-facility-opens-at-iit-m-1673825.html

Energy research facility opens at IIT-M

World's largest centre for study of combustion set up at cost of ₹90 cr to serve several industries

The NCCRD lab at the IIT-Madras campus in Chennai | MARTIN LOUIS

EXPRESS NEWS SERVICE @ Chennai

THE INDIAN Institute of Technology (IIT)-Madras has become home for another cutting-edge research centre.

On Friday, National Centre for Combustion Research and Development (NCCRD), which is the world's largest combustion research centre built at a cost of ₹90 crore, was inaugurated by VK Saraswat, member, NITI Aayog.

Saraswat said the NCCRD is one of the premier centres in the country. The objective is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors. This is one of the best diagnostic centres in the country to understand combustion.

Further, he said specific programs like coal gasification, alternative energies and others would also be introduced. Saraswat said the NCCRD has been set up as a Nodal Centre in the region. Any institute and industry can work with NCCRD as it is totally IT-enabled and possesses a strong simulation facility. The establishment of the centre will be a major boost to the Indian scientific community and will provide an impetus to research in Alternative Energy and Environmental Protection by focussing on effective utilisation of combustion as a means of thermo-chemical energy conversion. The centre is supported by Science and Engineering Research Board, Union Department of Science and Technology (DST).

This research has applications in many industries, ranging from automotive to thermal power, coal combustion, aerospace propulsion and so on. With over 30 faculty members from six departments of IIT Madras working on this project, this is the largest grouping of academic combustion researchers globally.

Meanwhile, IIT Madras director Bhaskar Ramamurthi said, "Energy, emission of carbon dioxide and pollutant gases have become very important. This centre will play a pivotal role in making sure that India has access to the latest technologies in all these areas."

Date: 14th October 2017
Publication: The New Indian Express
Edition: Bangalore
Page no.: 4
Journalist: NA
Headline: IIT-M gets largest combustion research centre

IIT-M gets largest combustion research centre

PTI @Chennai

THE world's largest combustion research centre which will impart a major boost to the Indian scientific community was inaugurated at the Indian Institute of Technology, Madras on Friday.

The National Centre for Combustion Research and Development (NCCRD) was inaugurated by NITI Aayog member V K Saraswat in the presence of Prof Ashutosh Sharma, Secretary, Department of Science and Technology, a release by the Indian Institute of Technology, Madras (IIT-M) said.

This is the world's largest combustion research centre, it said.

"With over 30 faculty members from six departments of IIT-M working on the project, this is the largest grouping of academic combustion researchers globally," it said.

"In addition, the infrastructure facilities are also the largest for any combustion research centre in an academic setting globally."

Date: 14th October 2017
Publication: Deccan Chronicle
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Page no.: 4
Journalist: NA
Headline: World's largest combustion research centre at IIT-M

WORLD'S LARGEST COMBUSTION RESEARCH CENTRE AT IIT-M

DC CORRESPONDENT
CHENNAI, OCT. 12

The world's largest combustion research centre, which will impart a major boost to the Indian scientific community, was inaugurated at the Indian Institute of Technology, Madras on Friday.

The National Centre for Combustion Research and Development (NCCRD) was inaugurated by NITI Aayog member V. K. Saraswat in the presence of Prof Ashutosh Sharma, secretary, department of science and technology, a release by the Indian Institute of Technology, Madras (IIT-M) said.

This is the world's largest combustion research centre, it said. — *PTI*

Date: 14th October 2017
Publication: DT Next
Edition: Chennai
Page no.: 3
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: World's largest combustion centre comes up at IIT-M

World's largest combustion centre comes up at IIT-M

CHENNAI: The world's largest combustion research centre which will impart a major boost to the Indian scientific community was inaugurated at the Indian Institute of Technology, Madras, on Friday.

The National Centre for Combustion Research and Development (NCCRD) was inaugurated by NITI Aayog member VK Saraswat in the presence of Prof Ashutosh Sharma, Secretary, Department of Science and Technology, a release by the Indian Institute of Technology, Madras (IIT-M) said. This is the world's largest combustion research centre, it said.

"With over 30 faculty members from six departments of IIT-M working on the project, this is the largest grouping of academic combustion researchers globally. In addition, the infrastructure facilities are also the largest for any combustion research centre in an academic setting globally," it said.

NCCRD's research interests will cover automotive, thermal power and aerospace propulsion, besides fire research and microgravity combustion to minor extent, the release said. "The

Inauguration of the combustion research centre at the IIT-M

NCCRD has been established at a total cost of Rs 90 crore. It will develop state-of-the-art capabilities in combustion research involving experts in the country," it said. "The establishment of the centre will impart a major boost to the Indian scientific community and will provide an impetus to research in 'Alternative Energy and Environmental Protection' by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion," the release said. NCCRD is supported by the state-run Science and Engineering Research Board of Department of Science and Technology (DST), it said.

Saraswat was quoted as saying that NCCRD was one of the premier centres in the country. "The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors. This is one of the best diagnostic centres in the country to understand combustion," he said. NCCRD has been set up as a nodal centre in the region and any institute and industry can work with it as it is totally IT-enabled and possesses a strong simulation facility, the NITI Ayog member said.

IIT-M director Bhaskar Ramamurthi said energy, emission of carbon dioxide and pollutant gases have become very important due to climate change, global warming and other impact that combustion has. "This centre will play a pivotal role in making sure that India has access to the latest technologies in all these areas," he said. Many industrial and R&D organisations like Mahindra, TVS, AVL, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet are working closely with NCCRD, the release added.

Date: 14th October 2017
Publication: The Times of India
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: World's largest combustion research centre at IIT Madras
URL: https://timesofindia.indiatimes.com/business/india-business/worlds-largest-combustion-research-centre-at-iit-madras/articleshow/61071404.cms

World's largest combustion research centre at IIT Madras

Chennai, Oct 13 () The world's largest combustion research centre which will impart a major boost to the Indian scientific community was inaugurated at the Indian Institute of Technology, Madras today.

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"The NCCRD has been established at a total cost of Rs 90 crore. It will develop state-of-the-art capabilities in combustion research involving experts in the country," it said.

"The establishment of the centre will impart a major boost to the Indian scientific community and will provide an impetus to research in 'Alternative Energy and Environmental Protection' by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion," the release said. NCCRD is supported by the state-run Science and Engineering Research Board of Department of Science and Technology (DST), it said.

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"This centre will play a pivotal role in making sure that India has access to the latest technologies in all these areas," he said. Many industrial and R&D organisations like Mahindra, TVS, AVL, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet are working closely with NCCRD, the release added.

Date: 14th October 2017
Publication: Deccan Herald
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: World's largest combustion research centre at IIT Madras
URL: http://www.deccanherald.com/content/637656/worlds-largest-combustion-research-centre.html

World's largest combustion research centre at IIT Madras

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"The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors. This is one of the best diagnostic centres in the country to understand combustion," he said. NCCRD has been set up as a nodal centre in the region and any institute and industry can work with it as it is totally IT-enabled and possess a strong simulation facility, the NITI Ayog member said.

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BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet are working closely with NCCRD, the release added.

Date: 14th October 2017
Publication: Business Standard
Edition: Online
Journalist: NA
Headline: Centre for combustion research set up in IIT-Madras
URL: http://www.business-standard.com/article/news-ians/centre-for-combustion-research-set-up-in-iit-madras-117101301045_1.html

Centre for combustion research set up in IIT-Madras

The National Centre for Combustion Research and Development (NCCRD), said to be the world's largest, was opened at the Indian Institute of Technology-Madras (IIT-M) here on Friday.

The Rs 90 crore centre was inaugurated by V.K. Saraswat, member, Niti Aayog, according to a statement issued here by IITM.

"The NCCRD is one of the premier centres in the country. The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors," Saraswat said.

"This is the one of the best diagnostic centres in the country to understand combustion."

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The establishment of the centre will give a major boost to the Indian scientific community and will provide an impetus to research in alternative energy and environmental protection by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion.

The centre is supported by the Science and Engineering Research Board, Department of Science and Technology (DST), Government of India, the IITM statement said.

The NCCRD will develop state-of-the-art capabilities in combustion research involving experts in the country. The research interests are in three major application sectors -- automotive, thermal power and aerospace propulsion, besides fire research and microgravity combustion to a minor extent.

Date: 14th October 2017
Publication: ANS
Edition: Online
Journalist: NA
Headline: World's largest combustion research centre inaugurated at IIT Madras
URL: http://asiannewsservice.in/en/education-n-jobs/worlds-largest-combustion-research-centre-inaugurated-at-iit-madras/

World's largest combustion research centre inaugurated at IIT Madras

The world's largest combustion research centre was inaugurated at the Indian Institute of Technology, Madras in Tamil Nadu yesterday. A release by the IIT Madras said that the National Centre for Combustion Research and Development (NCCRD) was inaugurated by NITI Aayog member VK Saraswat in the presence of Prof Ashutosh Sharma, Secretary, Department of Science and Technology.

The establishment of the centre will give a major boost to the Indian scientific community and will provide an impetus to research in 'Alternative Energy and Environmental Protection' by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion.

Date: 14th October 2017
Publication: Zee News
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: World's largest combustion research centre at IIT Madras
URL: http://www.zeebiz.com/agencies/worlds-largest-combustion-research-centre-at-iit-madras-27871

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NCCRD has been set up as a nodal centre in the region and any institute and industry can work with it as it is totally IT-enabled and possess a strong simulation facility, the NITI Ayog member said.

IIT-M director Bhaskar Ramamurthi said energy, emission of carbon dioxide and pollutant gases have become very important due to climate change, global warming and other impact that combustion has.

"This centre will play a pivotal role in making sure that India has access to the latest technologies in all these areas," he said.

Many industrial and R&D organisations like Mahindra, TVS, AVL, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet are working closely with NCCRD, the release added.

Date: 14th October 2017
Publication: All India Radio
Edition: Online
Journalist: NA
Headline: World's largest combustion research centre inaugurated at IIT Madras
URL: http://airworldservice.org/english/archives/56348

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The establishment of the centre will give a major boost to the Indian scientific community and will provide an impetus to research in 'Alternative Energy and Environmental Protection' by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion.

Date: 14th October 2017
Publication: ETCIO
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: World's largest combustion research centre at IIT Madras
URL: http://cio.economictimes.indiatimes.com/news/strategy-and-management/worlds-largest-combustion-research-centre-at-iit-madras/61076838

World's largest combustion research centre at IIT Madras

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NCCRD's research interests will cover automotive, thermal power and aerospace propulsion, besides fire research and microgravity combustion to minor extent, the release said.

"The NCCRD has been established at a total cost of Rs 90 crore. It will develop state-of-the-art capabilities in combustion research involving experts in the country," it said.

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NCCRD is supported by the state-run Science and Engineering Research Board of Department of Science and Technology (DST), it said.

Saraswat was quoted as saying that NCCRD was one of the premier centres in the country.

"The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors. This is one of the best diagnostic centres in the country to understand combustion," he said.

NCCRD has been set up as a nodal centre in the region and any institute and industry can work with it as it is totally IT-enabled and possess a strong simulation facility, the NITI Ayog member said.

IIT-M director Bhaskar Ramamurthi said energy, emission of carbon dioxide and pollutant gases have become very important due to climate change, global warming and other impact that combustion has.

"This centre will play a pivotal role in making sure that India has access to the latest technologies in all these areas," he said. Many industrial and R&D organisations like Mahindra, TVS, AVL, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet are working closely with NCCRD, the release added

Date: 14th October 2017
Publication: India Today
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: World's largest combustion research centre at IIT Madras
URL: http://indiatoday.intoday.in/story/worlds-largest-combustion-research-centre-at-iit-madras/1/1068392.html

World's largest combustion research centre at IIT Madras

Chennai, Oct 13 (PTI) The worlds largest combustion research centre which will impart a major boost to the Indian scientific community was inaugurated at the Indian Institute of Technology, Madras today.

The National Centre for Combustion Research and Development (NCCRD) was inaugurated by NITI Aayog member V K Saraswat in the presence of Prof Ashutosh Sharma, Secretary, Department of Science and Technology, a release by the Indian Institute of Technology, Madras (IIT-M) said.

This is the worlds largest combustion research centre, it said. "With over 30 faculty members from six departments of IIT-M working on the project, this is the largest grouping of academic combustion researchers globally. In addition, the infrastructure facilities are also the largest for any combustion research centre in an academic setting globally," it said.

NCCRDs research interests will cover automotive, thermal power and aerospace propulsion, besides fire research and microgravity combustion to minor extent, the release said.

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IIT-M director Bhaskar Ramamurthi said energy, emission of carbon dioxide and pollutant gases have become very important due to climate change, global warming and other impact that combustion has. "This centre will play a pivotal role in making sure that India has access to the latest technologies in all

these areas," he said. Many industrial and R&D organisations like Mahindra, TVS, AVL, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet are working closely with NCCRD, the release added.

Date: 14th October 2017
Publication: Skill Outlook
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: The world's largest combustion research centre established at IIT Madras
URL: http://skilloutlook.com/education/worlds-largest-combustion-research-centre-established-iit-madras

The world's largest combustion research centre established at IIT Madras

Chennai, 13 October 2017: The World's largest Combustion Research Centre was inaugurated today (13th October 2017) at the Indian Institute of Technology Madras (IIT Madras). The National Centre for Combustion Research and Development (NCCRD) was inaugurated by Dr. V.K. Saraswat, Member, NITI Aayog, in the presence of Prof. Ashutosh Sharma, Secretary, Department of Science and Technology, Government of India, Prof. Bhaskar Ramamurthi, Director, IIT Madras, and others.

Inaugurating the Centre, Dr. Saraswat said, "The NCCRD is one of the premier Centres in the country. The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors. This is the one of the best diagnostic centres in the country to understand combustion."

Further, he said that specific programs like Coal Gasification, Alternative energies and others would also be set up. The Twin Centres located at IIT Madras & IISc would complement each other well.

Dr. Saraswat said that the NCCRD has been set up as a Nodal Centre in the region. Any institute and industry can work with NCCRD as it is totally IT-enabled, possesses a strong simulation facility.

"I hope it'll become an internationally renowned centre. We've a lot of collaboration with international organisations," added Dr. Saraswat.

The establishment of the Centre will impart a major boost to the Indian Scientific Community and will provide an impetus to research in Alternative Energy and Environmental Protection by focusing on effective utilization of combustion as a means of thermo-chemical energy conversion. The Centre is supported by Science and Engineering Research Board, Department of Science and Technology (DST), Government of India.

Elaborating on the importance of this Combustion Research Centre, Prof. Ashutosh Sharma said, "Combustion is an extraordinary science with length and time scales varying from large and small. This field has the potential to be hugely translational."

This research has applications in many industries, ranging from automotive to thermal power, coal combustion, aerospace propulsion and so on.

With over 30 faculty members from six departments of IIT Madras working on this project, this is the largest grouping of academic combustion researchers globally. In addition, the infrastructure facilities are also the largest for any combustion research centre in an academic setting globally.

"We're proud of this facility. It has the strongest group of experts working on Combustion and will create a Strong Foundation in this important area. This has to be sustained, for which the Centre should work together with large stakeholders to diffuse the benefits to many areas," added Prof. Ashutosh Sharma.

Speaking on occasion, Prof. Bhaskar Ramamurthi remarked, "Energy, Emission of Carbon Dioxide and pollutant gases have become very important due to climate change, global warming and other impact that combustion has. This Centre will play a pivotal role in making sure that India has access to the latest technologies in all these areas."

Further, he said, "We're very excited to have this Centre at IIT Madras because it gives us opportunity for students and faculty from various Departments to work together to solve the challenges that the nation faces."

The inauguration was followed by a panel discussion on 'Industrial Utilization of Combustion R&D', which was participated by eminent members from the academia and industry, working in the field.

The NCCRD has been established at a total cost of Rs. 90 crore. It will develop state-of-the-art capabilities in combustion research involving experts in the country. The research interests are in 3 major application sectors: Automotive, Thermal Power, and Aerospace Propulsion, besides fire research and microgravity combustion to minor extent.

The NCCRD is located in a five-storey building at IIT Madras Campus which also hosts separate smaller structures for propellant combustion, fire research, and air storage. Many industrial and R&D organizations are working closely with the NCCRD. They include Mahindra, TVS, AVL, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet.

Date: 14th October 2017
Publication: Etemaad Daily
Edition: Online
Journalist: NA
Headline: World's largest combustion research centre inaugurated at IIT Madras
URL: http://www.en.etemaaddaily.com/world/national/worlds-largest-combustion-research-centre-inaugurated-at-iit-madras:35410

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The establishment of the centre will give a major boost to the Indian scientific community and will provide an impetus to research in 'Alternative Energy and Environmental Protection' by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion.

Date: 14th October 2017
Publication: Odisha TV
Edition: Online
Journalist: NA
Headline: Centre For Combustion Research Set Up In IIT-Madras
URL: http://odishatv.in/education/centre-for-combustion-research-set-up-in-iit-madras-248341/

Centre For Combustion Research Set Up In IIT-Madras

Chennai: The National Centre for Combustion Research and Development (NCCRD), said to be the world's largest, was opened at the Indian Institute of Technology-Madras (IIT-M) here on Friday.

The Rs 90 crore centre was inaugurated by V.K. Saraswat, member, Niti Aayog, according to a statement issued here by IITM.

"The NCCRD is one of the premier centres in the country. The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors," Saraswat said.

"This is the one of the best diagnostic centres in the country to understand combustion."

He said the NCCRD has been set up as a nodal centre in the region. Any institute and industry can work with NCCRD as it is totally IT-enabled and possesses a strong simulation facility.

The establishment of the centre will give a major boost to the Indian scientific community and will provide an impetus to research in alternative energy and environmental protection by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion.

The centre is supported by the Science and Engineering Research Board, Department of Science and Technology (DST), Government of India, the IITM statement said.

The NCCRD will develop state-of-the-art capabilities in combustion research involving experts in the country. The research interests are in three major application sectors — automotive, thermal power and aerospace propulsion, besides fire research and micro gravity combustion to a minor extent.

Date: 14th October 2017
Publication: Newsient
Edition: Online
Journalist: Akansha Ojha
Professor: Prof. Bhaskar Ramamurthi
Headline: IIT Madras with the largest combustion research center
URL: https://www.newsient.com/iit-madras-largest-combustion-research-center/7763

IIT Madras with the largest combustion research center

Now Chennai has the world's largest combustion research center which is made to impart a boost to the Indian scientific community. The research center was inaugurated in the Indian Institute of Technology, on the October 13. NITI Aayog member, V K Saraswat, in the presence of the Secretary Department of Science Prof Ashutosh Sharma. This research center is one of the largest centers in the world.

The NCCRD research covers the interest in thermal power, automotive, aerospace propulsion, and microgravity combustion to a minor extent. The total cost of the NCCRD has come up to about Rs 90 crores. The research center has state of the art facilities involving combustion research. This establishment will help the Indian researchers to research in Alternative Energy and Environmental Protection and will be able to focus on effective utilization of combustion as a thermochemical energy conversion.

NCCRD will be supported by the Science and Engineering Research Board of Department of Science and Technology which is run by the state itself. NCCRD has been successful in setting up a nodal center in the region so that any industry or institute can work with it as it is enabled by IT and has a strong simulation facility.

The director of Indian Institute of Technology Madras Bhaskar Ramamurthi have always described energy, and all the emission of carbon dioxide and pollutant gases are very much dependent on the weather change and the global warming. The center will play a very important role in research. The center will help a lot of industries to do their research. All kinds of industries and Research and Development industries are working closely with the NCCRD. The companies that are working with NCCRD are TVs, Mahindra, GE, GAIL, BHEL, Shell, NAL, DRDO (GTRE, DRDL, CFEES), ISRO, Siemens, Forbes-Marshall, FM Global, Cummins, Valmet, VTT.

The opening of the largest research center for combustion center in India shows that how much India is spending money on research and development. India being a developing nation is spending money on research for the innovation and growth of science in the country. Now this research center will be used to make research on combustion, and there will be a lot of work on the Alternate source of energy which according to experts will be the next big thing. The makers of the combustion research center have made it very specific that most of the concentration will be on Environmental Protection with Alternate Energy.

Date: 14th October 2017
Publication: Medicalphysicsweb
Edition: Online
Journalist: NA
Headline: Magnetic field fluctuations detect arterial pulse
URL: http://medicalphysicsweb.org/cws/article/research/70197

Magnetic field fluctuations detect arterial pulse

Researchers from the Indian Institute of Technology Madras have proposed a magnet-based sensor that would allow scientists to measure the velocity of blood pulse waves within the carotid artery. Each heart beat pumps blood at a high pressure through the arteries, and parameters such as the pulse speed provide useful pathophysiological information (IEEE Trans. Biomed. Circuits Syst. 11 1065).

Pulse wave velocity (PWV) – the velocity of blood propagating through the arterial tree – is a strong indicator of cardiovascular events. Calculation of blood pressure using PWV, based on the fundamental biomechanical equations, holds true only for smaller sections of an artery. But existing cuffless blood pressure monitoring technologies measure PWV across a large arterial section. Current techniques for measuring local PWV, such as Doppler ultrasound and MRI, are expensive and operator dependant.

Magnet-based sensor

To determine PWV from small arterial sections, the electrical and biomedical engineering researchers propose a magnetic plethysmograph (MPG) transducer, based on the modulated magnetic signature of blood (MMSB) principle, to measure blood pulse velocity across small sections of arteries. This consists of a permanent magnet producing an ambient field and a Hall-effect sensor that provides a voltage measurement corresponding to volumetric change in the artery.

When the transducer is placed on the skin above an artery, the magnetic sensor measures magnetic fluctuations due to skin surface motion caused by the pulsatile blood flow. Analysis of the arterial blood pulse is possible because the output voltage of the sensor is directly proportional to the amplitude of the pulse. After the acquisition and digitization process, the data are analysed by custom designed algorithms to identify characteristic points in each waveform and calculate the local PWV.

Transducer validation

The researchers performed in vitro studies using the MPG transducer with an arterial flow phantom. The phantom represented an arm, allowing the researchers to validate the system by obtaining measurements over the radial artery. The phantom experiments demonstrated that the new MPG prototype could obtain measurements that determined the PWV of small arterial segments.

The team also performed in vivo measurements under two physical conditions (physically relaxed and post-exercise) on a group of 20 healthy volunteers. They obtained blood pressure and local PWV measurements from the left carotid artery by placing the MPG probe on the neck.

The study demonstrated the ability to obtain continuous arterial MPG data with a signal-to-noise ratio of approximately 28 dB. The study results, of carotid pulse detection and local PWV measurement, proved the efficiency of the proposed technique, which provides a promising approach for cuffless blood pressure measurements.

About the author

Zaibaa Patel is a PhD student contributor to medicalphysicsweb, working in the Research Centre for Biomedical Engineering at City, University of London. She is working on the development of an intra-luminal optical sensor for continuous monitoring of intestinal viability for colorectal cancer surgeries.

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Professor: Prof. B Ravindran
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URL: http://www.thehindu.com/sci-tech/science/iit-madras-develops-algorithms-that-learn-like-humans/article19861866.ece

IIT Madras develops algorithms that learn like humans

Deep reinforcement learning is a way for AI to learn from its mistakes

SHUBASHREE DESIKAN

It is known that DeepMind, the company which was acquired by Google, produced an algorithm called AlphaGo that beat the world's number one at the Go game. One of the methods behind the success of AlphaGo, called deep reinforcement learning, is being further developed by IIT Madras researchers to construct their own algorithm to play not just the Go game, but for more complex tasks.

What they build into the algorithm is not just learning, but learning from mistakes as well.

"There are two parts to engineering this – one involves incorporating features into the neural network that will get the program to recognize parts of the screen [when playing a game]. The other part involves making associations between utilities and action – for instance deciding whether to move left or right based on a specific pattern on the screen," explains Prof. B Ravindran who heads the Robert Bosch Centre for Data Science and Artificial Intelligence, at IIT Madras.

Careful AI: "We are planning to build in concepts of risk-awareness through deep reinforcement learning," says Ravindran. •SPECIAL ARRANGEMENT

The team trained the algorithm using "experts" that were basically programs that had mastered a method of playing the game. Apart from this, the algorithm was also made to learn "from scratch" – that is, without the intervention of experts.

Not just this, the manner of learning mimics humans. For instance, humans don't change their strategy too fast, usually. So if the player [a bot or an algorithm] takes a left turn, it continues to do that for a predetermined time. This incorporated smoothness into the decision making. "When we came up with algorithms that incorporated this, we observed improvement by several thousand per cent in the learning performance," says Prof. Ravindran.

Squash to tennis

If a player knew how to play squash, can she use that knowledge to play tennis? This is known as transfer learning. Within this there are various things to contend with – selective transfer, which is, in the example of tennis, akin to learning the forehand of one player and the backhand of another player. This sort of hybrid-making can come of use when the machine learns from different "experts" with different skills.

Another ability built into the program was a tendency to avoid negative transfer. That is, if the "expert" that the program was learning from is actually bad at the game, the algorithm stops following this expert and chooses a different option – which may be following another expert or learning from scratch by itself. Prof. Ravindran explains by showing a graph in which relative performances of various programs that have been tutored with and without these features have been mapped out. The results clearly demonstrate the usefulness of incorporating the selective transfer and avoidance of negative transfers.

Having worked on the relatively simple arcade games , the team now plans to move on to more complex tasks involving higher-level skills. Humans operate at different levels of granularity in decision making, also we incorporate memory easily into learning. Can this be taught to machines?

They could be working on self-driving cars very soon: "We are planning to build in concepts of risk-awareness through deep reinforcement learning. To apply these ideas to robotics and, say, self-driving cars, there needs to be safety and risk-awareness built in. So we are working on this," he says.

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Headline: World's Largest Combustion Research Centre established at IIT Madras
URL: http://indiaeducationdiary.in/worlds-largest-combustion-research-centre-established-iit-madras/

World's Largest Combustion Research Centre established at IIT Madras

Chennai, 13th October 2017: The World's largest Combustion Research Centre was inaugurated today (13th October 2017) at the Indian Institute of Technology Madras (IIT Madras). The National Centre for Combustion Research and Development (NCCRD) was inaugurated by Dr. V.K. Saraswat, Member, NITI Aayog, in the presence of Prof. Ashutosh Sharma, Secretary, Department of Science and Technology, Government of India, Prof. Bhaskar Ramamurthi, Director, IIT Madras, and others.

Inaugurating the Centre, Dr. Saraswat said, "The NCCRD is one of the premier Centres in the country. The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors. This is the one of the best diagnostic centres in the country to understand combustion."

Further, he said that specific programs like Coal Gasification, Alternative energies and others would also be set up. The Twin Centres located at IIT Madras & IISc would complement each other well.

Dr. Saraswat said that the NCCRD has been set up as a Nodal Centre in the region. Any institute and industry can work with NCCRD as it is totally IT-enabled, possesses a strong simulation facility.

“I hope it’ll become an internationally renowned centre. We’ve a lot of collaboration with international organisations,” added Dr. Saraswat.

The establishment of the Centre will impart a major boost to the Indian Scientific Community and will provide an impetus to research in Alternative Energy and Environmental Protection by focusing on effective utilization of combustion as a means of thermo-chemical energy conversion. The Centre is supported by Science and Engineering Research Board, Department of Science and Technology (DST), Government of India.

Elaborating on the importance of this Combustion Research Centre, Prof. Ashutosh Sharma said, “Combustion is an extraordinary science with length and time scales varying from large and small. This field has the potential to be hugely translational.”

This research has applications in many industries, ranging from automotive to thermal power, coal combustion, aerospace propulsion and so on.

With over 30 faculty members from six departments of IIT Madras working on this project, this is the largest grouping of academic combustion researchers globally. In addition, the infrastructure facilities are also the largest for any combustion research centre in an academic setting globally.

“We’re proud of this facility. It has the strongest group of experts working on Combustion and will create a Strong Foundation in this important area. This has to be sustained, for which the Centre should work together with large stakeholders to diffuse the benefits to many areas,” added Prof. Ashutosh Sharma.

Speaking on occasion, Prof. Bhaskar Ramamurthi remarked, “Energy, Emission of Carbon Dioxide and pollutant gases have become very important due to climate change, global warming and other impact that combustion has. This Centre will play a pivotal role in making sure that India has access to the latest technologies in all these areas.”

Further, he said, “We’re very excited to have this Centre at IIT Madras because it gives us opportunity for students and faculty from various Departments to work together to solve the challenges that the nation faces.”

The inauguration was followed by a panel discussion on ‘Industrial Utilization of Combustion R&D’, which was participated by eminent members from the academia and industry, working in the field.

The NCCRD has been established at a total cost of Rs. 90 crore. It will develop state-of-the-art capabilities in combustion research involving experts in the country. The research interests are in 3 major application sectors: Automotive, Thermal Power, and Aerospace Propulsion, besides fire research and microgravity combustion to minor extent.

The NCCRD is located in a five-storey building at IIT Madras Campus which also hosts separate smaller structures for propellant combustion, fire research, and air storage. Many industrial and R&D organizations are working closely with the NCCRD. They include Mahindra, TVS, AVL, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet.

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Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: World's largest combustion research centre at IIT Madras
URL: http://www.domain-b.com/organisation/Indian_Institutes_Technology/20171014_inauguration.html

World's largest combustion research centre at IIT Madras

The Indian Institute of Technology, Madras on Friday announced the inauguration of the world's largest combustion research centre, which could give a big boost to the Indian scientific community.

NITI Aayog member V K Saraswat inaugurated the National Centre for Combustion Research and Development (NCCRD) in the presence of Prof Ashutosh Sharma, secretary, Department of Science and Technology.

A release by the Indian Institute of Technology, Madras (IIT-M) said this is the world's largest combustion research centre.

"With over 30 faculty members from six departments of IIT-M working on the project, this is the largest grouping of academic combustion researchers globally. In addition, the infrastructure facilities are also the largest for any combustion research centre in an academic setting globally," it said.

NCCRD will develop state-of-the-art capabilities in combustion research involving experts in the country. The research interests are in three major application sectors - automotive, thermal power and aerospace propulsion, besides fire research and microgravity combustion to a minor extent.

"The NCCRD has been established at a total cost of Rs90 crore. It will develop state-of-the-art capabilities in combustion research involving experts in the country," it said.

"The establishment of the centre will impart a major boost to the Indian scientific community and will provide an impetus to research in 'Alternative Energy and Environmental Protection' by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion," the release said.

NCCRD is supported by the state-run Science and Engineering Research Board of Department of Science and Technology (DST), it said.

"The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors. This is one of the best diagnostic centres in the country to understand combustion," he said.

NCCRD has been set up as a nodal centre in the region and any institute and industry can work with it as it is totally IT-enabled and possess a strong simulation facility, the NITI Aayog member said.

IIT-M director Bhaskar Ramamurthi said energy, emission of carbon dioxide and pollutant gases have become very important due to climate change, global warming and other impact that combustion has.

"This centre will play a pivotal role in making sure that India has access to the latest technologies in all these areas," he said. Many industrial and R&D organisations like Mahindra, TVS, AVL, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet are working closely with NCCRD, the release added.

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Headline: Centre for combustion research set up in IIT-Madras
URL: http://auto.economictimes.indiatimes.com/news/industry/centre-for-combustion-research-set-up-in-iit-madras/61082167

Centre for combustion research set up in IIT-Madras

The National Centre for Combustion Research and Development (NCCRD), said to be the world's largest, was opened at the Indian Institute of Technology-Madras (IIT-M) here on Friday.

Chennai: The National Centre for Combustion Research and Development (NCCRD), said to be the world's largest, was opened at the Indian Institute of Technology-Madras (IIT-M) here on Friday.

The Rs 90 crore centre was inaugurated by V.K. Saraswat, member, Niti Aayog, according to a statement issued here by IITM.

"The NCCRD is one of the premier centres in the country. The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors," Saraswat said.

"This is the one of the best diagnostic centres in the country to understand combustion."

He said the NCCRD has been set up as a nodal centre in the region. Any institute and industry can work with NCCRD as it is totally IT-enabled and possesses a strong simulation facility.

The establishment of the centre will give a major boost to the Indian scientific community and will provide an impetus to research in alternative energy and environmental protection by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion.

Also Read: IITians working on replacing diesel engines with CNG

The centre is supported by the Science and Engineering Research Board, Department of Science and Technology (DST), Government of India, the IITM statement said.

The NCCRD will develop state-of-the-art capabilities in combustion research involving experts in the country. The research interests are in three major application sectors -- automotive, thermal power and aerospace propulsion, besides fire research and microgravity combustion to a minor extent.

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Publication: Chennai Patrika
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Professor: Prof. Bhaskar Ramamurthi
Headline: World's Largest Combustion Research Centre established at IIT Madras
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World's Largest Combustion Research Centre established at IIT Madras

V.K. Saraswat (3rd from left), Member, NITI Aayog, at the National Centre for Combustion Research and Development (NCCRD) facility at IIT Madras on Friday, 13th October 2017.'

Chennai, 13th October 2017: The World's largest Combustion Research Centre was inaugurated today (13th October 2017) at the Indian Institute of Technology Madras (IIT Madras). The National Centre for Combustion Research and Development (NCCRD) was inaugurated by Dr. V.K.Saraswat, Member, NITI Aayog, in the presence of Prof. Ashutosh Sharma, Secretary, Department of Science and Technology, Government of India, Prof. Bhaskar Ramamurthi, Director, IIT Madras, and others.

Inaugurating the Centre, Dr. Saraswat said, "The NCCRD is one of the premier Centres in the country. The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors. This is the one of the best diagnostic centres in the country to understand combustion."

Further, he said that specific programs like Coal Gasification, Alternative energies and others would also be set up. The Twin Centres located at IIT Madras & IISc would complement each other well.
Dr. Saraswat said that the NCCRD has been set up as a Nodal Centre in the region. Any institute and industry can work with NCCRD as it is totally IT-enabled, possesses a strong simulation facility.

“I hope it'll become an internationally renowned centre. We've a lot of collaboration with international organisations,” added Dr. Saraswat.

The establishment of the Centre will impart a major boost to the Indian Scientific Community and will provide an impetus to research in Alternative Energy and Environmental Protection by focusing on effective utilization of combustion as a means of thermo-chemical energy conversion. The Centre is supported by Science and Engineering Research Board, Department of Science and Technology (DST), Government of India.

Elaborating on the importance of this Combustion Research Centre, Prof. Ashutosh Sharma said, “Combustion is an extraordinary science with length and time scales varying from large and small. This field has the potential to be hugely translational.”

This research has applications in many industries, ranging from automotive to thermal power, coal combustion, aerospace propulsion and so on.

With over 30 faculty members from six departments of IIT Madras working on this project, this is the largest grouping of academic combustion researchers globally. In addition, the infrastructure facilities are also the largest for any combustion research centre in an academic setting globally.

“We're proud of this facility. It has the strongest group of experts working on Combustion and will create a Strong Foundation in this important area. This has to be sustained, for which the Centre should work together with large stakeholders to diffuse the benefits to many areas,” added Prof. Ashutosh Sharma.

Speaking on occasion, Prof. Bhaskar Ramamurthi remarked, “Energy, Emission of Carbon Dioxide and pollutant gases have become very important due to climate change, global warming and other impact that combustion has. This Centre will play a pivotal role in making sure that India has access to the latest technologies in all these areas.”

Further, he said, "We're very excited to have this Centre at IIT Madras because it gives us opportunity for students and faculty from various Departments to work together to solve the challenges that the nation faces."

The inauguration was followed by a panel discussion on ‘Industrial Utilization of Combustion R&D’, which was participated by eminent members from the academia and industry, working in the field.

The NCCRD has been established at a total cost of Rs. 90 crore. It will develop state-of-the-art capabilities in combustion research involving experts in the country.The research interests are in 3 major application

sectors: Automotive, Thermal Power, and Aerospace Propulsion, besides fire research and microgravity combustion to minor extent.

The NCCRD is located in a five-storey building at IIT Madras Campus which also hosts separate smaller structures for propellant combustion, fire research, and air storage. Many industrial and R&D organizations are working closely with the NCCRD. They include Mahindra, TVS, AVL, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet.

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Journalist: NA
Headline: India sets up world's largest combustion research facility in IIT-Madras
URL: http://energy.economictimes.indiatimes.com/news/power/india-sets-up-worlds-largest-combustion-research-facility-in-iit-madras/61087065

India sets up world's largest combustion research facility in IIT-Madras

The establishment of the centre will provide an impetus to research in alternative energy and environmental protection by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion.

Chennai: The National Centre for Combustion Research and Development (NCCRD), said to be the world's largest, was opened at the Indian Institute of Technology-Madras (IIT-M) here on Friday.

The Rs 90 crore centre was inaugurated by V.K. Saraswat, member, Niti Aayog, according to a statement issued here by IITM.

"The NCCRD is one of the premier centres in the country. The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors," Saraswat said.

"This is the one of the best diagnostic centres in the country to understand combustion."

He said the NCCRD has been set up as a nodal centre in the region. Any institute and industry can work with NCCRD as it is totally IT-enabled and possesses a strong simulation facility.

The establishment of the centre will give a major boost to the Indian scientific community and will provide an impetus to research in alternative energy and environmental protection by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion.

The centre is supported by the Science and Engineering Research Board, Department of Science and Technology (DST), Government of India, the IITM statement said.

The NCCRD will develop state-of-the-art capabilities in combustion research involving experts in the country. The research interests are in three major application sectors -- automotive, thermal power and aerospace propulsion, besides fire research and microgravity combustion to a minor extent.

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Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: IIT-M gets new facility

IIT-M gets new facility

IIT-M GETS NEW FACILITY

❑ World's largest combustion research centre inaugurated

NT Bureau

Chennai, Oct 15:

The world's largest combustion research centre which will impart a major boost to the Indian scientific community was inaugurated at the Indian Institute of Technology, Madras on Friday.

The National Centre for Combustion Research and Development (NCCRD) was inaugurated by NITI Aayog member V K Saraswat in the presence of Prof Ashutosh Sharma, Secretary, Department of Science and Technology, a release by the Indian Institute of Technology, Madras (IIT-M) said.

This is the world's largest combustion research centre, it said.

'With over 30 faculty members from six departments of IIT-M working on the project, this is the largest grouping of academic combustion researchers globally. In addition, the infrastructure facilities are also the largest for any combustion research centre in an academic setting globally,' it said.

NCCRD's research interests will cover automotive, thermal power and aerospace propulsion, besides fire research and microgravity combustion to minor extent, the release said.

'The NCCRD has been established at a total cost of Rs 90 crore. It will develop state-of-the-art capabilities in combustion research involving experts in the country,' it said.

'The establishment of the centre will impart a major boost to the Indian scientific community and will provide an impetus to research in 'Alternative Energy and Environmental Protection' by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion,' the release said.

NCCRD is supported by the state-run Science and Engineering Research Board of Department of Science and Technology (DST), it said.

Saraswat was quoted as saying that NCCRD was one of the premier centres in the country. 'The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors. This is one of the best diagnostic centres in the country to understand combustion,' he said.

NCCRD has been set up as a nodal centre in the region and any institute and industry can work with it as it is totally IT-enabled and possess a strong simulation facility, the NITI Ayog member said.

IIT-M director Bhaskar Ramamurthi said energy, emission of carbon dioxide and pollutant gases have become very important due to climate change, global warming and other impact that combustion has.

'This centre will play a pivotal role in making sure that India has access to the latest technologies in all these areas,' he said.

Many industrial and R&D organisations like Mahindra, TVS, AVL, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), NAL, ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet are working closely with NCCRD, the release added.

NCCRD's research interests will cover automotive, thermal power and aerospace propulsion, besides fire research and microgravity combustion to minor extent

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Professor: Prof. Satyanarayanan Chakravarthy
Headline: World's largest combustion research centre at IIT Madras
URL: http://www.financialexpress.com/education-2/iit-madras-set-to-get-this-worlds-largest-centre-this-is-what-it-will-deal-with/895836/

World's largest combustion research centre at IIT Madras

Will deal with challenges of alternative energy and environmental protection

FE BUREAU

THE INDIAN INSTITUTE of Technology Madras now hosts world's largest combustion research centre. It will address the twin challenges of alternative energy and environmental protection afflicting an emerging economy such as India by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion.

The National Centre for Combustion Research and Development (NCCRD), inaugurated on October 13, is supported by the Science and Engineering Research Board, Department of Science and Technology. A similar centre has been established at the Indian Institute of Science Bangalore (IISc).

With over 30 faculty members from six departments of IIT Madras working on this project, this is the largest grouping of academic combustion researchers, globally. The infrastructure facilities are also the largest for any combustion research centre in an academic setting, globally. The NCCRD has been set up at a cost of Rs 90 crore and will develop state-of-the-art capabilities in combustion research involving experts in the country.

Satyanarayanan Chakravarthy, professor in-charge, NCCRD, said, "The emphasis is to work on the industry-relevant problems of the future in collaboration with organisations in application sectors of automotive, aerospace, thermal power, process industry and fire protection." The research interests are in three major application sectors: automotive, thermal power and aerospace propulsion, besides fire research and microgravity combustion to a minor extent.

The NCCRD is located in a five-storey building at the IIT Madras campus, which also hosts separate smaller structures for propellant combustion, fire research and air storage. Many industrial and R&D organisations are working closely with the NCCRD.

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Professor: Prof. Bhaskar Ramamurthi
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आईआईटी-मद्रास में बनाया गया सबसे बड़ा दहन अनुसंधान केंद्र

MUKESH SHARMA
Publish: Oct, 15 2017 09:09:10 (IST)
CHENNAI, TAMIL NADU, INDIA

भारतीय प्रौद्योगिकी संस्थान, मद्रास (आईआईटी-एम) में शनिवार को दुनिया के सबसे बड़े दहन अनुसंधान केंद्र का शुभारंभ हुआ। 90 करोड़ रुपए की लागत से तैयार य

चेन्नई।भारतीय प्रौद्योगिकी संस्थान, मद्रास (आईआईटी-एम) में शनिवार को दुनिया के सबसे बड़े दहन अनुसंधान केंद्र का शुभारंभ हुआ। 90 करोड़ रुपए की लागत से तैयार यह केंद्र वैज्ञानिकों के शोध एवं अनुसंधान कार्यों में सहायक होगा। इसका उद्घाटन आईआईटी-एम के विज्ञान और प्रौद्योगिकी विभाग के प्रोफेसर आशुतोष शर्मा की उपस्थिति में नीति आयोग के सदस्य वीके सारस्वत ने किया। आईआईटी-एम के छह विभागों के 30 से अधिक फैकल्टी सदस्य इस वैश्विक प्रोजेक्ट पर काम कर रहे हैं। इसके तहत ऑटोमोटिव, थर्मल पावर, एयरोस्पेस, अग्निशमन अनुसंधान और माइक्रोग्रेविटी, थर्मो-रासायनिक ऊर्जा रूपांतरण में दहन का उपयोग और 'वैकल्पिक ऊर्जा व पर्यावरण संरक्षण' पर शोध होगा।

सभी कंपनियों के साथ होगा काम

आईआईटी-एम के निदेशक भास्कर राममूर्ति ने कहा कि जलवायु परिवर्तन, ग्लोबल वार्मिंग और सीओ२ और अन्य प्रदूषक गैसों का उत्सर्जन चिंताजनक है। यह केंद्र सभी क्षेत्रों में महिंद्रा, टीवीएस, गेल, शैल, भेल, डीआरडीओ, इसरो, एनएएल, एवीएल, एफएम ग्लोबल,फोब्र्स-मार्शल,सीमेंस, थर्मैक्स, कमिंस, टाटा, वीटीटी जैसे आर एंड डी संगठनों के साथ काम करेगा।

जीयू सिंडीकेट ने रैगिंग मामले में तीनों छात्रों को होस्टल से निकाला

गुजरात विश्वविद्यालय के के.एस.स्कूल ऑफ बिजनेस मैनेजमेंट के तीन सीनियर विद्यार्थियों पर लगे रैगिंग के आरोपों को गंभीरता से लेते हुए जीयू सिंडीकेट की शनिवार को हुई बैठक में इन तीनों ही विद्यार्थियों को छात्र होस्टल से तत्काल कमरा खाली करने का निर्देश दिया गया है। रैगिंग की घटना होस्टल में ही बनी होने के चलते इन्हें तत्काल होस्टल से निकालने के निर्णय को सिंडीकेट ने बहाली दी है। इसके अलावा इन तीनों ही विद्यार्थियों को दोबारा कोई गलती नहीं करने की चेतावनी दी है। दोबारा छोटी सी भी शिकायत मिलने पर इनका प्रवेश भी रद्द किया जा सकता है।

सिंडीकेट की बैठक में जीयू के विभिन्न भवनों में जारी भर्ती प्रक्रिया के तहत १४ प्राध्यापकों की नियुक्ति को सिंडीकेट की बैठक में मंजूरी दी गई। कॉलेजों में भी नियुक्त किए गए प्राध्यापकों की मान्यता को भी सिंडीकेट ने मंजूरी दी।

Date: 16th October 2017
Publication: The Hindu
Edition: Hyderabad/Chennai/Delhi
Page no.: 24
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: IITM's innovations

IITM's innovations

Indian Institute of Technology Madras students recently demonstrated projects that won international acclaim, during the Centre for Innovation open house. Bhaskar Ramamurthi, director, who inaugurated the open house, said the motto of CFI is, "Walk in with an idea and walk out with a product." There were a number of award-winning projects on display, as well as innovative products ripe for launch by startups.

Date: 17th October 2017
Publication: The Hindu
Edition: Delhi/Kolkata/Mumbai/Hyderabad/Chennai/Kochi
Page no.: 11
Journalist: Shubashree Desikan
Headline: Observations confirm neutron star merger

Observations confirm neutron star merger

Indian scientists play a significant role in source modelling

SHUBASHREE DESIKAN
CHENNAI

The announcement of the neutron star merger, detected on August 17 by the LIGO-VIRGO collaboration of gravitational wave detectors, has been reinforced by the observation of short gamma ray (light waves) bursts almost simultaneously by other space and earth-based observatories.

"This discovery is so fundamental that it is definitely a strong candidate for another Nobel prize," K.G. Arun, who was part of the team that studied the astrophysical implications of the joint detection, said in a press release from the Indian Institute of Technology- Madras.

Dr. Arun is one of nearly 40 members of the LIGO-VIRGO scientific collaboration who have contributed to the source modelling, developing the algorithms that search for binary mergers amid noisy data from many detectors, testing Einstein's theory and separating signals from experimental and environmental artefacts. The second part of the discovery – the observation of Gamma ray bursts by several telescopes – includes the observations by the Giant Metrewave Radio Telescope (GMRT), the Himalayan Chandra Telescope (HCT) and AstroSat.

Cataclysmic collision: An illustration of two merging neutron stars. • NSF/LIGO/SONOMA STATE UNIVERSITY/A. SIMONNET

The sensitive CZTI instrument on AstroSat helped narrow down the location of the gamma-ray flashes. The HCT obtained optical images at locations of neutrinos detected by other telescopes at the same time as the burst, and showed that they were unrelated to the gravitational-wave trigger. The GMRT played a key role in understanding jet physics and refining models of radio emission from the remnant formed by the merging neutron stars.

P. Ajith of ICTS-TIFR, Bengaluru, one of the leading scientists in the LIGO-VIRGO collaboration, on the importance of the discovery, said: "Neutron-star mergers are incredibly rich and complex phenomena. Virtually every area of physics and astrophysics can learn something from this unique laboratory set up by nature!"

Date: 17th October 2017
Publication: The Hindu Business Line
Edition: Online
Journalist: Dr T V Venkateswaran
Professor: Prof. C K Mishra
Headline: New flavour of gravitational waves detected
URL: http://www.thehindubusinessline.com/news/science/new-flavour-of-gravitational-waves-detected/article9909804.ece

New flavour of gravitational waves detected

NEW DELHI/BERLIN, OCTOBER 16:
(India Science Wire): Within twenty months after announcement of the first confirmed detection of gravitational waves and within two weeks of the discovery winning the Nobel Prize, the LIGO-Virgo collaboration - that includes 40 odd scientists from 13 Indian institutions - has announced once again a breathtaking discovery - first ever direct observation of gravitational waves emerging from the merger of two neutron stars. Earlier detections were black hole -black hole mergers.

The announcement was made in a simultaneous worldwide press conference by the participating institutes coinciding the publication of results in the journal Physical Review Letters.

David Reitze, executive director, LIGO Laboratory, Caltech announced that the US-based Laser Interferometer Gravitational-Wave Observatory (LIGO) and the Europe-based Virgo have detected the fifth gravitational wave on August 17, 2017, which is a result of a collision of two neutron stars. While the last four discoveries were the result of the merger of two black holes for the first time astronomers have seen the merger of two neutron stars.

Rumours were circulating for more than a month that something huge has been discovered by the LIGO-Virgo collaboration, and finally, the discovery was announced on Monday in the US. In India, Dr. Tarun Souradeep, LIGO-India spokesperson made the announcement at the Inter-University Centre for Astronomy and Astrophysics (IUCAA) in Pune. “Gravitational Wave detection of a binary neutron star merger, together with confirmation and identifying the location of the optical counterpart by conventional telescopes completes the integration of gravitational waves into astronomy,” said Dr. Souradeep.

When two black holes collide, we cannot see anything in any type of telescope, but when neutron stars bump into each other, they radiate in almost all wavelengths. “For the first time we were able to observe the afterglow of the event and make many inferences,” says Dr. Dipankar Bhattacharya of IUCAA, Pune, a lead institution from India participating in LIGO collaboration. The collision took place in the modest elliptical galaxy NGC4993 just 130 million light-years away in the Hydra constellation. This was the nearest gravitational source detected so far and hence was also the strongest.

The event

When massive stars reach the end of their life, they explode spectacularly into a supernova, and the core of the star becomes highly dense neutron star. Massive than Sun, but the size just 20 kilometres across, neutron stars are the densest objects in the universe. A teaspoon of material would weight whole of Mount Everest.

Two neutron stars with 1.1 to 1.6 times the mass of the sun, tangoed around each other for about 100 seconds as they spiralled towards each and bumped into each other. The cataclysmic collision resulted in the generation of mighty gravitational waves, and emission of powerful gamma-ray burst, and energy in practically all over the electromagnetic spectrum. In addition to gravitational wave detectors, traditional telescopes could observe the event.

“In this event named GW170817, the binary neutron stars have merged most likely into a black hole as the conserved mass after the collision is perhaps greater than the upper limit for a neutron star,” says Dr. Bhattacharya. “Unlike the collision of a black hole, which leaves practically no afterglow, when neutron stars collide, they emit radiation at all electromagnetic wavelengths that helps us investigate how matter behaves in extreme conditions such as neutron stars,” says Samir Dhurde, Science Educator and Astronomer from IUCAA. “This is precisely the kind of signal that can significantly improve our understanding of the true nature of gravity and can provide new insights into the physics of ultra-dense matter”, says Dr. C K Mishra from IIT Madras.

Indian contribution

“AstroSAT was occulted by Earth and hence could not pinpoint the gamma-ray burst, but Indian telescopic assets like Himalayan Chandra Telescope and GMRT Pune played a significant role in the discovery,” says Dr. Bhattacharya. However, in the classical Sherlock Holmes style, ‘why the dog did not bark’, the non-detection of gamma rays by AstroSAT and the non-detection of gravitational waves by the third detector, Virgo, at Europe meant they were in the blind spots. Using this information, astronomers were able to infer that the location of the source of the gravitational wave was in the blind spots of both these detectors and hence they could easily pinpoint the location in the sky.

Along with Fermi space telescope, Chandra X-ray Telescope, the Hubble Space Telescope and the Gemini South optical/infrared telescope, Indian astronomical assets were swung into action. “The Himalayan Chandra Telescope at Hanle, Ladakh, quickly ruled out any connection between the neutrinos observed from the same direction of the sky by the Ice Cube observatory in Antarctica. Further, observations with the GMRT radio telescope in Pune found that the emission from the GRB jet is weaker than normal, suggesting a wider spread of material” says Dr. Bhattacharya.

“The Indian instruments significantly contributed to understanding the event” added Dr Tarun Souradeep. He is hopeful that that planned LIGO-India detector, jointly funded by the Department of Atomic Energy (DAE) and the Department of Science & Technology (DST), “will increase the sensitivity of the international gravitational-wave network and help pinpoint the exact location of the gravitational wave event”.

“This discovery so fundamental that it is definitely a strong candidate for another Nobel prize!” says Dr. Arun,Chennai Mathematical Institute, who was part of the team that studied the astrophysical

implications of the joint detection. “The prospects for future is even more exciting. During next observation runs, these events may become routine and we may be up for many surprises. This is the true power of multi-messenger astronomy” he adds.

What does this discovery tell us?

Initially, gamma ray telescopes were sent in spacecraft to identify clandestine nuclear weapons tests, but the scientists were puzzled by the sudden high energetic burst of gamma rays from deep space. Each of these gamma-ray bursts (GRBs) spewed energy equal to energy radiated by the sun in 10 billion years which in a matter of seconds. Convinced that these GRBs could not be the telltale signature of atomic bomb explosions, astronomers looked for a different explanation. It was speculated that GRBs were results of collision of two neutron stars, but until now lacked direct evidence. The present discovery offers “first conclusive evidence that short gamma-ray bursts, often seen by orbiting satellites, are indeed created by colliding neutron stars” says Niruj Ramanujam, chairperson of POEC, Astronomical Society of India.

While Hydrogen, Helium with a small amount of lithium were created from the process of big-bang, elements such as oxygen, carbon were formed in the nucleosynthesis in ordinary stars like our Sun. It is the process of the conversion of one element into another, through nuclear fusion that generates energy in stars and makes it glow. However, computations showed that only elements up to Iron in the periodic table could be cooked inside the stellar core. How does gold, platinum, and other higher elements are formed was a mystery. Astronomers claimed that higher elements were created in the cataclysmic events like ‘kilonova,' a collision of two neutron stars. Spectral study of the afterglow of this event has shown that gold, platinum, and other higher elements were indeed formed, as computed, as an after effect of the collision. “We may have just discovered the source of the cosmic gold that adorns every piece of jewellery and ornament on Earth” said Dibyendu Nandi IISER Kolkata, a member of the team.

Near-simultaneous detection of the gravitational waves and gamma rays indicate that gravitational waves travel at the speed of light as predicted by Einstein. Until now there was no direct evidence.

Measurements from this event also has provided an entirely new measurement of the rate at which the universe is expanding. Called Hubble constant this number is important to determine the age of the universe, make sense of dark matter and dark energy. Until now other means off determining this constant has been dogged in controversy and the rate was thought to be anywhere between 67 to 72 kilometres per second per megaparsec. Gravitational waves is one of the cleanest way to compute the number and preliminary computation from LIGO data yields a value of 70 kilometres per second per megaparsec.

What are gravitational waves

The universe painted by the Newtonian gravity is placid; two perfectly stable masses could orbit their center of gravity for eternity. But General Relativity tells us that slight amount of energy would be lost when each of the masses is accelerated as they pass through the respective gravitational field. This energy is radiated into space as gravitational wave predicted Einstein about a century ago. Slowly and steadily,

over a period of time, the system will decay, and both masses will come closer and closer, finally swirl rapidly, close to the speed of light, and end in a collision. The gravitational waves generated during the death dance would be stronger and would have detectable disturbances in the space-time fabric millions of light years away.

As the oscillation of electric charge in the magnetic field produce electromagnetic waves, oscillation of masses in a gravitational field, Einstein said, would produce gravitational waves. The energy carried by the gravitation wave is so small, Einstein was skeptical if ever we could detect them. Physicists Rainer Weiss, Kip Thorne, and Barry Barish were awarded this year's Noble prize was designing, constructing and demonstrating a viable gravitational detector that is so sensitive that even a change of length of one atom size between Earth and Sun could be detected using sophisticated interferometry and complex computer programmes to detect the true fingerprint of gravitational wave from astounding background noise.

(India Science Wire)

Date: 17th October 2017
Publication: The Times of India
Edition: Chennai
Page no.: 4
Journalist: NA
Professor: Prof. C K Mishra
Headline: Chennai scientists help detect waves from star collision

Chennai scientists help detect waves from star collision

TIMES NEWS NETWORK

Chennai: Scientists at IIT-Madras and the Chennai Mathematical Institute (CMI) played a role in identifying electromagnetic waves from the collision of neutron stars detected by US-based Laser Interferometer Gravitational-Wave Observatory (LIGO) and the Europe-based Virgo on August 17. The announcement of the strongest gravitational-wave signal detected from the collision that took place 130 million light years from the earth was made on Monday.

In a statement, IIT-M said the scientists are actively involved in computing the precise shapes of the signals expected from collisions of neutron stars or black holes.

"Waveform modelling of binary neutron stars played a crucial role in the detection and understanding of the observed event and contributions to this by K G Arun of CMI and C K Mishra of IIT-M are prominently cited in this historic discovery paper," says Bala Iyer, currently a visiting professor at ICTS-TIFR, Bangalore and the chair of the IndIGO consortium.

"This is precisely the kind of signal that can significantly improve our understanding of the true nature of gravity and can provide new insights into the physics of ultra-dense matter", said Mishra in the statement.

Arun, who was part of the team that studied the astrophysical implications of the joint detection, said "The prospects for future is even more exciting. During next observation runs, these events may become routine and we may be up for many surprises. This is the true power of multi messenger astronomy".

Current understanding of these signals is a result of three decades of global efforts, including those by Bala Iyer and his group at the Raman Research Institute, Bangalore.

This is the first conclusive evidence that short gamma ray bursts, often seen by orbiting satellites, are indeed created by colliding neutron stars — something that had only been speculated for decades.

Date: 17th October 2017
Publication: The New Indian Express
Edition: Chennai
Page no.: 20
Journalist: NA
Professor: Prof. CK Mishra
Headline: International community recognises Chennai scientists' role

International community recognises Chennai scientists' role

COSMIC FIREWORKS

CHENNAI: The planned Laser Interferometer Gravitational-wave Observatory (LIGO) India project has got a major boost with the international community recognising Indian scientists' role in the LIGO-Virgo experiment, whose results were published in journals like *Nature*, *Science* and *Astrophysical Journal Letters* on Monday.

A major breakthrough was achieved in astronomy, when gravitational waves from a pair of colliding neutron stars were detected for the first time by US-based LIGO and Europe-based Virgo in August. For the first time, the discovery draws on not just gravitational wave data, but also observations made using a range of different types of light.

Indian scientists have made pioneering contributions to the gravitational-wave science over the last three decades. 40 scientists from 13 Indian institutions are part of the LIGO-Virgo discovery paper. Among the Indian team, scientists from IIT Madras and Chennai Mathematical institute (CMI) were actively involved in computing the precise shapes of signals from collisions of neutron stars and/or black holes, a release from IIT Madras on Monday said.

Research that Dr KG Arun (CMI) and Dr CK Mishra (IIT Madras) did was critical in the detection of gravitational waves and the characterization of the associated astronomical events.

Prof BS Sathyaprakash

"Research that Dr KG Arun (CMI) and Dr CK Mishra (IIT Madras) did was critical in the detection of gravitational waves and the characterization of the associated astronomical events. Additionally, they proposed completely novel ways of testing Einstein's theory of gravity, which have been part of the publications, resulting from these detections. It is truly amazing to see their work directly impacting the Nobel-prize winning discoveries," says Prof BS Sathyaprakash of Pennsylvania State University and Cardiff University, a senior member of the LIGO scientific collaboration.

Current understanding of these signals is a result of three decades of global efforts, including those by Prof Bala Iyer and his group at the Raman Research Institute, Bangalore. Some of the recent developments in this direction by members at IIT Madras and CMI played critical role in identifying the observed signal. "Waveform modelling of binary neutron stars played a crucial role in the detection and understanding of the observed event and contributions to this by Dr Arun and Dr Mishra are prominently cited in this historic discovery paper," says Bala Iyer, currently a visiting Professor at ICTS-TIFR, Bangalore and the chair of the IndIGO consortium.

"This is precisely the kind of signal that can significantly improve our understanding of the true nature of gravity and can provide new insights into the physics of ultra-dense matter," says Mishra of IIT Madras.

"This discovery is so fundamental that it is definitely a strong candidate for another Nobel prize," says Arun, who was part of the team that studied the astrophysical implications of the joint detection. **ENS**

Date: 17th October 2017
Publication: India.com
Edition: Online
Journalist: NA
Professor: Prof. Bhaskar Ramamurthi
Headline: World's Largest Combustion Research Centre Inaugurated at IIT Madras
URL: http://www.india.com/education/nccrd-worlds-largest-combustion-research-centre-inaugurated-at-iit-madras-major-boost-to-indian-scientific-community-2535962/

World's Largest Combustion Research Centre Inaugurated at IIT Madras

Chennai, October 13: The world's largest combustion research centre, National Centre for Combustion Research and Development (NCCRD) was inaugurated at the Indian Institute of Technology, Madras. This centre will reportedly impart a major boost to the Indian scientific community.

According to an official statement released by the Indian Institute of Technology, Madras, NCCRD was inaugurated by NITI Aayog member V K Saraswat in the presence of Professor Ashutosh Sharma, Secretary, Department of Science and Technology.

The statement also said that NCCRD's research interests will cover automotive, thermal power and aerospace propulsion, besides fire research and microgravity combustion to minor extent.

"With over 30 faculty members from six departments of IIT-M working on the project, this is the largest grouping of academic combustion researchers globally. In addition, the infrastructure facilities are also the largest for any combustion research centre in an academic setting globally," the press release said.

NCCRD is supported by the state-run Science and Engineering Research Board of Department of Science and Technology (DST).

"The NCCRD has been established at a total cost of Rs 90 crore. It will develop state-of-the-art capabilities in combustion research involving experts in the country," PTI quoted the statement.

"The establishment of the centre will impart a major boost to the Indian scientific community and will provide an impetus to research in 'Alternative Energy and Environmental Protection' by focusing on effective utilisation of combustion as a means of thermo-chemical energy conversion," the release said.
"The intention is to make it a knowledge base in areas like gasification, combustion, propulsion and automotive sectors. This is one of the best diagnostic centres in the country to understand combustion," he said.

VK Saraswat said the NCCRD has been set up as a nodal centre in the region. He also added that any institute and industry can work with it as it is totally IT-enabled and possess a strong simulation facility.
IIT-M director Bhaskar Ramamurthi said energy, emission of carbon dioxide and pollutant gases have become very important due to climate change, global warming and other impact that combustion has.

“This centre will play a pivotal role in making sure that India has access to the latest technologies in all these areas,” he added.

According to the release, several industrial and R&D organisations like Mahindra, TVS, GAIL, GE, Shell, BHEL, DRDO (DRDL, GTRE, CFEES), ISRO, Forbes-Marshall, Siemens, Thermax, Cummins, FM Global, Tata Power, VTT and Valmet are working closely with NCCRD.

Date: 17th October 2017
Publication: Outlook
Edition: Online
Journalist: Dr T V Venkateswaran
Professor: Prof. C K Mishra
Headline: For First Time LIGO Discovers Merger Of Two Neutron Stars 1.6 Times The Mass Of Sun
URL: https://outlookindia.com/website/story/for-first-time-ligo-discovers-merger-of-two-neutron-stars-16-times-the-mass-of-s/303124

For First Time LIGO Discovers Merger Of Two Neutron Stars 1.6 Times The Mass Of Sun

Indian telescopic assets Himalayan Chandra Telescope and GMRT Pune play a significant role in the discovery of gravitational waves resulting from the merger

T V VENKATESWARAN

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Indian contribution

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Page no.: 13
Journalist: NA
Headline: New research centre at IIT Madras

নতুন : আইআইটি মাদ্রাজে নতুন গবেষণাকেন্দ্র

কী হল: বিজ্ঞান গবেষণাকে আরও এগিয়ে দিতে বিশ্বের সবচেয়ে বড় কম্বাস্‌শন রিসার্চ সেন্টার চালু হল আইআইটি মাদ্রাজে। এই গবেষণাকেন্দ্রটি বানাতে খরচ পড়ল ৯০ কোটি টাকা।

Date: 18th October 2017
Publication: India Science Wire
Edition: Online
Journalist: Dr T V Venkateswaran
Professor: Prof. C K Mishra
Headline: New flavour of gravitational waves detected; India's contribution to new LIGO discovery
URL: http://vigyanprasar.gov.in/isw/ligodiscovery_story.html

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"Gravitational Wave detection of a binary neutron star merger, together with confirmation and identifying the location of the optical counterpart by conventional telescopes completes the integration of gravitational waves into astronomy," said Dr. Souradeep.

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Professor: Prof. C K Mishra
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Professor: Prof. C K Mishra
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Professor: Prof. S.A. Sannasiraj
Headline: IIT Madras helps protect the Vanishing Vaan Island of the Tamil Nadu Coast
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Self-taught program beats humans at Go game

Go is a traditional Chinese board game played on a checkerboard with 'stones' of two colours

SHUBASHREE DESIKAN

Researchers at DeepMind, a company that specialises in developing artificial intelligence, have succeeded in developing a program – AlphaGoZero – that can beat human players at the Go game. Now that itself does not sound new – it is well known that earlier versions of AlphaGo have beaten world champions at the game. What is new is that, using the method of deep reinforcement learning, the program has actually learnt the game all by itself – with no human inputs – from scratch, tabula rasa!

The Go game is a Chinese board game played on a checkerboard with 'stones' of two colours. The name translates into 'the encircling game' and the aim of each player would be to surround as much territory as possible.

The system starts with a neural network that knows nothing about the game. This plays against itself, combining the neural network with a search algorithm. The network is updated to predict the next move as well as the prospective winner. The updated neural network and the search algorithm are combined to produce a new version of AlphaGoZero. The process is then repeated to build better program at the end of each iteration.

Thus, in just a few days, over millions of games against itself, the program learnt the Go game from scratch. It was interesting that the game not only learnt human strategies but also gained new types of knowledge which were unconventional for humans.

After three hours of training, AlphaGoZero played like a human beginner foregoing long term advantages in favour of capturing as many stones as possible; after 19 hours it mastered advanced strategies such as life-and-death, influence and strategy; in 70 hours, it played at a superhuman level, with a game involving multiple challenges across the board.

Backgammon and Go

"It's a powerful method," says Professor B Ravindran, head of Robert Bosch Centre for Data Science and Artificial Intelligence, at IIT Madras, who was not involved in this research. He recalls that in the 1990s Gerald Tesauro, IBM Research, used reinforcement learning to master the backgammon game. "Go is several orders more complex. There was no player [AI] until the deep neural networks came in. The search technique is about 15 years old and in conjunction with the neural network it is powerful," he says.

While David Silver, corresponding author of the *Nature* paper, was unavailable to comment on the work, Demis Hassabis, co-founder and CEO, DeepMind, said in an email: "It's amazing to see just how far AlphaGo has come in only two years. AlphaGo Zero is now the strongest version of our program and shows how much progress we can make even with less computing power and zero use of human data. Ultimately we want to harness algorithmic breakthroughs like this to help solve all sorts of pressing real world problems like protein folding or designing new materials. If we can make the same progress on these problems that we have with AlphaGo, it has the potential to drive forward human understanding and positively impact all of our lives."

Date: 26th October 2017
Publication: The Times of India
Edition: Online
Journalist: U Tejonmayam
Professor: Prof. S A Sannasiraj
Headline: Two-day workshop on coastal hazards held at IIT-Madras
URL: https://timesofindia.indiatimes.com/city/chennai/two-day-workshop-on-coastal-hazards-held-at-iit-madras/articleshow/61227576.cms

Two-day workshop on coastal hazards held at IIT-Madras

CHENNAI: Students and experts discussed topics like toxic floods and their effects on urban resilience during a two-day workshop on coastal hazards that concluded here on Wednesday.

The Indo-German workshop -- 'Coastal Hazards and Coastal Water management, vulnerability and sustainability' -- was held at Indian Institute of Technology - Madras.

The workshop, divided into four sessions, mainly focussed on the knowledge on geo-scientific and chemical issues, engineering and water management as well as eco-toxicological aspects combined with cultural belongings on land use.

The four sessions in the workshop were urban and coastal water engineering, coastal hazards and climate change, bio and eco-hazards and societal impact and urban resilience.

Speaking during the workshop, Prof S A Sannasiraj, head of ocean engineering department, IIT-M said, "To cope with climate change, our coastal adaptation strategies should be planned more towards n atural means with so-called artificial structures."

Prof Klaus Richerter from RWTH Aachen University, Germany, spoke about the need for integrated approach on dealing with coastal hazards.

Date: 26th October 2017
Publication: Chennai Patrika
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Journalist: NA
Professor: Prof. S A Sannasiraj
Headline: IIT Madras conducts Indo-German workshop on Coastal Hazards
URL: http://news.chennaipatrika.com/post/2017/10/25/IIT-Madras-conducts-Indo-German-workshop-on-Coastal-Hazards.aspx

IIT Madras conducts Indo-German workshop on Coastal Hazards

Chennai, 25th October 2017: Indian Institute of Technology Madras conducted a two-day Indo-German workshop on 'Coastal Hazards and Coastal Water Management, Vulnerability and Sustainability' on 24th and 25th October 2017. The objective was to discuss, exchange knowledge, and investigate coastal hazards including toxic floods and their effects on urban resilience.

The workshop was inaugurated by Prof Nagarajan, Dean (International and Alumni Relations), IIT Madras, and Indo-German Centre coordinators from both countries, Prof. B.S. Murty and Prof Rafig Azzam.

Around 1.2 billion people in the world are currently living within 100 km of coastal zones of the Earth, and especially in tropical and subtropical regions. Population growth within the coastal zone is expected to be more rapid than in other areas in the near future. By the Year 2030, more than 50 percent of the world's population were likely to reside in coastal areas.

The Intergovernmental Panel on Climate Change (IPCC) in 2014 reported that Climate Change induced a higher frequency of extreme Weather and Climate Events since the 1950s, and that this will "reveal significant vulnerability and exposure of coastal cities" to "current climate variability".

Further, it added, climate change also affects Monsoonal patterns, which seem to cause an intensification of Seasonal Rainfall that fortifies inundation/flooding in India regularly during the last years. Furthermore, the Indian coast is prone to tsunamis, as the Makran Subduction Zone may cause tsunami genic earthquakes affecting the Indian west coast.

In 2004, the East Coast was affected by the Sumatra Tsunami inducing a 7 m-wave south of Chennai, Tamil Nadu. Besides the primary destructive effects, the widespread contamination of coastal areas due to the pulsed transport of immense pollutant loads during the flooding may seriously affect the coastal ecosystems. This clearly counters increasing population and urbanization in particular along coastlines.

The workshop was divided into four major sessions:

1. Urban and Coastal Water Engineering
2. Coastal Hazards and Climate Change
3. Bio- And Eco-Hazards
4. Societal Impact and Urban Resilience

Prof. S.A. Sannasiraj, Head, Department of Ocean Engineering, IIT Madras and Prof. Klaus Reicherter from RWTH Aachen University, Germany, coordinated the workshop with lectures from both the institutes in

addition to invited lectures from University of Bonn and Stratigraphy, Germany; Complutense Universidad, Madrid, Spain; and, ICMAM, University of Kerala, CUSAT, NIO, ISR from India.

The workshop focussed on the knowledge on geoscientific and chemical issues, engineering and water management, as well as ecotoxicological aspects combined with cultural belongings on land use.

Speaking during the workshop Prof. S.A. Sannasiraj said, “Coping with climate change, our coastal adaptation strategies should be planned more towards natural means with so-called artificial structures”.

Further, Prof Klaus Richerter spoke about the need for integrated approach on dealing coastal hazards both geo-physical and biological issues.

Date: 26th October 2017
Publication: The Hindu- Tamil
Edition: Chennai
Page no.: 3
Journalist: NA
Professor: Prof. S A Sannasiraj
Headline: By 2030, the population will increase to 50% in coastal areas

2030-ம் ஆண்டுக்குள்

கடலோர பகுதிகளில் மக்கள் தொகை 50 சதவீதம் வரை அதிகரிக்கும்

● ஐஐடியில் நடந்த பயிலரங்கில் தகவல்

சென்னை

கடலோர பகுதிகளில் மக்கள் தொகை 2030-ம் ஆண்டுக்குள் 50 சதவீதம் அளவுக்கு அதிகரிக்கும் என்று சென்னை ஐஐடியில் நடந்த பயிலரங்கில் தெரிவிக்கப்பட்டது.

கடலோர ஆபத்துகள், கடலோர நீர் மேலாண்மை பற்றிய 2 நாள் இந்திய - ஜெர்மானிய பயிலரங்கம், சென்னை ஐஐடியில் நடைபெற்றது. இந்த பயிலரங்கை ஐஐடி மன் (சர்வதேச மற்றும் முன்னாள் மாணவர் விவகாரங்கள்) பேராசிரியர் நாகராஜன் தொடங்கிவைத்தார்.

பெருவெள்ளங்கள், நகர்ப்புற விரிவாக்கத்தில் அவற்றின் தாக்கங்கள் உள்ளிட்ட கடலோர ஆபத்துகள் குறித்து விவாதிக்கவும், கருத்துகளை பரிமாறிக் கொள்ளவும் இந்த பயிலரங்குக்கு ஏற்பாடு செய்யப்பட்டது. தற்போது உலக அளவில் சுமார் 120 கோடி பேர் கடலோர பகுதியில் இருந்து 100 கி.மீட்டர் தொலைவில் வசித்து வருவதாகவும் 2030-ம் ஆண்டுக்குள் கடலோர பகுதியில் மக்கள் தொகை 50 சதவீதம் அதிகரிக்கும் என்றும் பயிலரங்கில் தெரிவிக்கப்பட்டது.

ஐஐடி கடல் பொறியியல் துறையின் தலைவர் பேராசிரியர் எஸ்.ஏ.சன்னாசிராஜ், ஜெர்மனியின் ஆச்சென் பல்கலைக் கழக பேராசிரியர் கிலாஸ் ரெய்ச் செட்டர் ஆகியோர் பயிலரங்கை நெறிப்படுத்தினர். பயிலரங்க தொடக்க நிகழ்ச்சியில் இந்திய-ஜெர்மானிய மைய ஒருங்கிணைப்பாளர்கள் பேராசிரியர் பி. எஸ்.மூர்த்தி, பேராசிரியர் ரபீக் அசாம் உள்ளிட்டோர் கலந்துகொண்டனர்.

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Page no.: 14
Journalist: R. Prasad
Professor: Prof. T. Pradeep
Headline: IIT Madras develops extremely water-repellent coating
URL: http://www.thehindu.com/sci-tech/science/iit-madras-develops-extremely-water-repellent-coating/article19939618.ece

IIT Madras develops extremely water-repellent coating

The material can be coated on a variety of surfaces including glass and paper

R. PRASAD

Nanocellulose-based liquid dispersion that renders the coated surface extremely water repellent – superhydrophobic with water contact angle more than 160 degrees – has been developed by a team of researchers led by Prof. T. Pradeep from the Department of Chemistry at the Indian Institute of Technology (IIT) Madras.

The material can be coated on a variety of surfaces including glass and paper. It has several distinct properties such as high mechanical durability and chemical stability. Like other superhydrophobic materials, the dispersion-coated surface exhibits microbial resistance thus preventing biofouling.

The researchers used cellulose nanofibres (5-20 nm wide and more than 500 nm in length) and functionalised them with fluorosilane in water over six-seven hours at room temperature. The linkage of fluorosilane with cellulose happens through the hydroxyl groups present on cellulose.

The functionalisation makes the long fibres of cellulose, resembling bamboo poles of molecular dimensions, to be covered with fluoroalkyl groups. This reduces the surface energy of cellulose fibres. Low surface energy together with enhanced surface roughness at nanoscale renders the coated surface highly water-repellent. Tiny water droplets dropped from a height bounced off the coated surface attesting the extreme water-repellence. Other tests too confirmed superhydrophobicity.

"The functionalisation process avoids the use of organic solvents. This makes it safe and eco-friendly," says Pradeep (second from right).

"The functionalisation process avoids the use of organic solvents. This makes it safe and eco-friendly," says Pradeep from IIT Madras. ▪

Superior durability

The coating exhibited superior mechanical durability even when subjected to a variety of abrasion tests – scratches using a knife, peel-off test and sand paper abrasion. "There was negligible reduction in water repellence even when subjected to wear and tear. The covalent linkages between the cellulose fibres provide superior mechanical stability to the coating," Prof. Pradeep says. The coating also strongly adheres to the surface.

Even when exposed to organic solvents such as hexane and ethanol, the coating exhibited chemical stability and retained its extreme water-repelling property. "The coating absorbs organic solvents. Once the coating dries, which happens very quickly, the water-repelling property returns," says Avijit Baidya from the Department of Chemistry, IIT Madras and the first author of the paper published in the journal *ACS Nano*.

"The coating remained stable even when subjected to extreme temperatures of 200 degree and -80 degree and exposed to direct sunlight," says Baidya. "The longevity was also tested for two years under laboratory conditions."

Despite the extreme water repelling property, coated paper absorbs organic components. "Since ink has organic components, the coating allows the ink to diffuse. Unlike normal paper where the ink washes off when exposed to water, the ink on the coated paper remained intact even when in contact with water," says Baidya.

Though the coating strongly adheres to glass and exhibits all the desirable properties, light transmission gets compromised as the coating turns the glass white. "This material is truly not for glass. Better applications will be in paints and for coating the paper used for printing currency," says Baidya.

The team is already working to address the issue of light transmission by using a starting material other than cellulose. "We have nearly developed a superhydrophobic material that remains transparent once coated," says Prof. Pradeep, who is the corresponding author.

"We are willing to commercialise the product either through a start-up or by licensing it. We have already filed for a patent," he says.

IIT Madras is an innovation and entrepreneurship hub

Date: 10th October 2017
Publication: The New Indian Express
Edition: Chennai
Page no.: 5
Journalist: Sinduja Jane
Professor: Prof. Guhan Jayaraman
Headline: Mosquitoes must weather IIT startup's device for existence
URL: http://www.newindianexpress.com/states/tamil-nadu/2017/oct/10/mosquitoes-must-weather-iit-startups-device-for-existence-1669353.html

Mosquitoes must weather IIT startup's device for existence

SINDUJA JANE @Chennai

DENGUE TRAPPER

Guhan Jayaraman, Professor, Dept of Biotechnology said that the trapper will help to get rid of mosquitoes, while repellent only chase it away. They are testing the device in the IIT campus.

THE Indian Institute of Technology, Madras, incubated startup firm has developed a device that might help control mosquitoes in the entire city.

The MGH Labs, which functions on the campus, has developed a mosquito trapper, Bog Orchid, which uses chemicals that mimics human odour. "This is non-toxic and attracts the female mosquitoes to the device. The device will catch mosquitoes and kill them. Its efficacy has been proven on Aedes mosquitoes, the dengue-spreading ones," said lab founder Gokul Rajasekaran.

The IIT-M had lost one student to dengue two weeks ago.

The City Corporation, faced with the dengue challenge, is now field testing the device in the city. "We did trails on Greenways Road, Zone 1,8 and 10. It has trapped menace-causing mosquitoes like Culex and also trapped Aedes ones. Once we complete our trials, we will give our findings for upgrading the device," said a Corporation health official.

The company has developed two versions of the device - indoor and outdoor.

"Body odour, temperature and exhale carbondioxide attract the mosquitoes to the human body. So, we have used Pheromone in the solution to mimic human body odour, carbondioxide and also LED lights to create human body-like heat," said Rajasekaran.

"Once trails are over, we will mass produce it and commercialise," Rajesekaran said. He also has plans to instal the device across the IIT-M campus to make it a mosquito-free zone.

Date: 12th October 2017
Publication: Malai Sudar
Edition: Chennai
Page no.: 3
Journalist: NA
Headline: A new device to eradicate mosquito

ஐஐடியில் கள ஆய்வுக்கு பிறகு அறிவிப்பு

கொசுக்களை ஒழிக்க புதிய கருவி கண்டுபிடிப்பு

விரைவில் சென்னையில் பயன்பாட்டுக்கு வரும்

சென்னை, அக்.10:

டெங்குவை பரப்பும் கொசுக்களை கவர்ந்து இழுத்து அழிக்கும் கருவியை ஐஐடி வல்லுநர்கள் கண்டுபிடித்துள்ளனர். இந்த நவீன கருவி விரைவில் சென்னை மாநகராட்சியின் பயன்பாட்டுக்கு கொண்டு வரப்பட உள்ளது.

டெங்கு கொசுக்களை கட்டுப்படுத்துவதற்கான புதிய கருவியை சென்னை இந்திய தொழில்நுட்ப நிறுவனம் (ஐஐடி) உருவாக்கியுள்ளது. விரைவில் சென்னை மாநகராட்சியின் பயன்பாட்டிற்கு கொண்டுவரப்பட உள்ளது.

இந்த கருவியை அதிகளவில் இருப்பு வைத்து கொள்ளவும் சென்னை ஐஐடி திட்டமிட்டுள்ளது. கருவியின் சிறப்பம்சம் மற்றும் செயல்பாடுகள் குறித்து எம்.ஜி.எச். ஆய்வகத்தின் நிறுவனர் கோகுல் ராஜசேகரன் அளிக்கும் விளக்கம் பின்வருமாறு: ஒரு தூக்குவாளி போல் செயல்படும் இந்த கருவியில், மனித வாசனை போன்ற ஒரு கெமிக்கல் புகுத்தப்பட்டுள்ளது. நச்சு அல்லாத இந்த கெமிக்கல்

மூலம், நோய்களை பரப்பும் பெண் கொசுக்கள் கவரப்பட்டு, கருவியினுள் இழுக்கப்பட்டு உடனடியாக அழிக்கப்படுகின்றன. சாதாரண கொசுக்களை மட்டுமல்லாது உயிர்கொல்லி நோயான டெங்குவை பரப்பும் கொசுக்களை அழிக்கவும் இந்த கருவி மிகுந்த பயனுள்ளது. கடந்த 2 வாரங்களுக்கு முன் ஐஐடி மாணவர் ஒருவர் டெங்குவால் பாதிக்கப்பட்டு உயிரிழந்தார்.

பொதுவாக மனித உடல் வாசனை, வெப்பநிலை மற்றும் கார்பனை-ஆக்ஸைடு வெளியேற்றம் போன்ற காரணிகளால் மனித உடல் கொசுக்களை ஈர்க்கிறது. இந்த காரணிகளை அடிப்படையாகக்கொண்டு உட்புறம் மற்றும் வெளிப்புறம் என இருவகையில் அறிமுகமாகும் இந்த கருவியில், மனித வாசனை போன்ற பிம்பத்தை உருவாக்க "பேரோமோன்" எனப்படும் திரவம், வெப்பநிலை உணர்வதற்காக எல்.இ.டி. விளக்குகளும் பொருத்தப்பட்டுள்ளன. பரிசோதனைக்குபின், கருவியின் உற்பத்தியை பெருகி வணிகமயமாக்கவும், ஐஐடி வளாகம் முழுவதும் இந்த கருவியை உபயோகித்து கொசு இல்லா வளாகமாக மாற்றவும் திட்டமிட்டுள்ளோம். இவ்வாறு அவர் கூறினார்.

மாநகராட்சி சுகாதாரத்துறை அதிகாரி இது குறித்து கூறுகையில், ஐஐடி வளாகம் மற்றும் கிண்டி சாலையின் 1, 8 மற்றும் 10-வது மண்டலங்களில் இந்த கருவிகளை ஆய்வுக்கு உட்படுத்தப்பட்டு பரிசோதனை மேற்கொள்ளப்பட்டுவருகிறது. களஆய்விற்குபின் அதன் நிறை, குறைகள் கண்டறியப்பட்டு கருவியின் செயல்பாட்டை மேம்படுத்தி விரைவில் மாநகராட்சியின் பயன்பாட்டிற்கு கொண்டுவரப்பட உள்ளது என்றார்.

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Edition: Online
Journalist: Sinduja Jane
Professor: Prof. Guhan Jayaraman
Headline: Startup in IIT Madras has new device that mimics body odour to trap Dengue-carrying mosquitoes
URL: http://www.edexlive.com/campus/2017/oct/11/startup-in-iit-madras-has-new-device-that-mimics-body-odor-to-trap-dengue-carrying-mosquitoes-1324.html

Startup in IIT Madras has new device that mimics body odour to trap Dengue-carrying mosquitoes

Dengue is on the rise and while The Indian Institute of Technology (IIT), Madras, just lost a student to dengue, a startup incubated on campus has developed a device that might help control mosquitoes in Chennai. The MGH Labs has developed a mosquito trapper, Bog Orchid, which uses chemicals that mimic human odour.

"This is non-toxic and attracts female mosquitoes to the device which will then catch and kill them. Its efficacy is proven on Aedes mosquitoes, the dengue-spreading mosquitoe," said Gokul Rajasekaran, founder of the lab. The city corporation, faced with the dengue challenge, is now field testing the device in the city.

"We did trails on Greenways Road, Zone 1,8 and 10. It has trapped menace causing mosquitoes like Culex and also trapped Aedes mosquitoes. Once we complete our trials, we will submit our findings to upgrade the device," said a corporation health official. The company has developed an indoor and an outdoor version of the device. Guhan Jayaraman, Professor, Department of Biotechnology said, "Many mosquito repellents are available in the market but not mosquito trappers. The trapper will help get rid of the mosquitoes, while the repellent only temporarily chases it away. They are testing the device in the IIT campus and the trail is on.

Only female mosquitoes bite human being for protein in blood so that they can lay eggs. One female mosquito can lay over 3,000 eggs
"Body odour, temperature and exhaled carbon dioxide attract the mosquitoes, so, we have used pheromone in the solution to mimic human body odour, carbon dioxide and LED lights to create human body-like heat," said Gokul Rajasekaran. He adds that all the chemicals used are non-toxic.

The research was funded by the Department of Science and Technology and IIT-M. The product is also tested for efficacy by the TATA Institute in Bangalore. "Once trails are over, we will mass produce it and commercialise," Gokul Rajesekaran said. He also has plans to install the device across IIT Madras campus to make it a mosquito-free zone.

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Publication: The Economic Times
Edition: Mumbai/Delhi/Pune/Bangalore/Hyderabad/Chennai/Kolkata/Kochi/Ahmedabad
Page no.: 20
Journalist: Hari Pulakkat
Alumni: Sailaja Nori, Nelson Vadasseri, Sayash Kumar & Sowmya Balendiran
Headline: The Ocean Economy Startup
URL: https://economictimes.indiatimes.com/small-biz/startups/how-a-seaweed-is-providing-sea6-energy-and-its-four-founders-from-iit-madras-with-opportunities/articleshow/61313118.cms

The Ocean Economy Startup

How a seaweed is providing Sea6 Energy and its four founders from IIT-Madras with multiple business opportunities

From left: Sea6 Energy's Sailaja Nori, Shrikumar Suryanarayan, Sowmya Balendiran, Sayash Vadasseri

:: Hari Pulakkat

The founders of Sea6 Energy know in their bones that the company owes its existence to a series of coincidences early in its history. The first of these was in 2009, when founders Sailaja Nori, Nelson Vadasseri, Sayash Kumar and Sowmya Balendiran were students at IIT-Madras. They were trying to raise funds for an international competition, and one of their professors had told them to meet Shrikumar Suryanarayan, former R&D head of Biocon and then a visiting professor at IIT-Madras. When the students walked into his room, their best hope was to raise ₹1 lakh for buying chemicals. They walked out three minutes later with a cheque for ₹5 lakh.

Sea6 is now based at the Centre for Cellular and Molecular Platforms (C-Camp), the Bengaluru-based incubator built by the Department of Biotechnology (DBT). Two and a half years after it raised ₹35 crore from Tata Capital, Sea6 claims to have broken even and its founders are confident of becoming profitable next year. Very few biotech companies in the country have been able to reach profitability so quickly. In fact, one has to search hard to find even a few successful Indian biotech product startups in the last decade. "Sea6 has gone through a startup lifecycle that many entrepreneurs have not been able to," says Ramaswamy Subramanian, the first CEO of C-Camp and now a professor at the Institute of Stem Cell Biology and Regenerative Medicine (inStem).

"Sea6 has gone through a startup lifecycle that many entrepreneurs have not been able to"
Ramaswamy Subramanian, professor at inStem and first CEO of C-Camp

Sea6 developed a process for converting seaweed into sugars, which could be converted into fuel. The founders realised that the process was not cost-effective at low oil prices. The company had to develop other products to survive till the technology was fully developed

In 2009, when the students wanted to apply for iGEM – a worldwide synthetic biology competition – starting up was the last thing on their minds. They had planned a regular academic career for themselves, with a PhD abroad the next step after IIT. The iGEM competition was being held at the Massachusetts Institute of Technology (MIT) in the US, and is the most challenging student competition in synthetic biology.

For the competition, the students had to build genetically engineered systems that could solve real-world problems. For third-year biotechnology students at IIT Madras, it was a serious challenge. "Now everybody is doing it," says Mukund Thattai, professor at the National Centre for Biological Sciences (NCBS). "At that time the students needed to be motivated." Thattai has been helping students for the competition since 2006.

The IIT-Madras team was denied a visa to go to MIT, but they won a prize after making a presentation through video-conferencing. Suryanarayan then took them out dinner at the Marriott in Chennai and kept listening to their conversation. "I realised that my job was done if I could hand-hold seven or eight of them," says Suryanarayan. At that time, biotech start-

Sea6 Energy, founded in July 2010 with ₹**8 crore** from investors, including Kiran Mazumdar-Shaw and Shrikumar Suryanarayan, former R&D head of Biocon

BREAKTHROUGH
Developed a process to convert **seaweed into liquid fuel**

THE BIG MOVE
From IIT-Madras to C-Camp, the Bengaluru-based incubator built by the Department of Biotechnology (DBT)

PARTNERSHIPS
With the help of scientists from the University of Agricultural Sciences on the C-Camp campus, Sea6 standardised a plant growth stimulant that is now being marketed by Mahindra Agri Business

FINANCIALS
Claims to have broken even and is confident of turning profitable next year

News on QS Asian University ranking 2018

Date: 17th October 2017
Publication: The Indian Express
Edition: Online
Journalist: NA
Headline: QS Asia university rankings: IIT-Bombay among top 50, IISc slides
URL: http://indianexpress.com/article/education/qs-asia-university-rankings-2017-iit-bombay-iit-delhi-and-iit-madras-among-top-50-iisc-slides/

QS Asia university rankings: IIT-Bombay among top 50, IISc slides

In the latest Quacquarelli Symonds (QS) Asia University Rankings, the Indian Institute of Technology Bombay (IIT Bombay), IIT Delhi and IIT Madras figure in the list of Asia's top 50 universities. However, no Indian University managed to come under the top 10 slot.

IISc, which was placed 33 last year, had failed to grab position under the top 50. Its ranking has fallen to one position (51) this year. View | QS world university rankings 2017: Top 10 universities in Asia, click here The results of Asia University Rankings were released on Monday, October 16, 2017 by QS, a British company. Nanyang Technological University (NTU) was placed number 1, ahead of NUS and the Hong Kong University of Science and Technology (HKUST).

Meanwhile, IIT-Bombay has moved one position up from 35 last year to 34 this year. Overall, the Institution improved on its 2016/17 performance by one place.

The Institute has score of 88.1 in academic reputation, 97.5 in employer reputation, 44.5 in faculty-student ration, 96.3 in staff with PhD, 89.6 in papers per faculty, 9.7 in international faculty, 6.3 in international students, 10.9 in inbound exchange students, 9.1 in outbound exchange students, and 41.4 in citations per paper. Among these 10 parameters, Employer Reputation indicated the strongest one for IIT Bombay with a rank of 21 globally.

IIT-Delhi is at 41 rank while IIT-Madras stands at 48.

Here are the top 10 best universities in Asia
1) Nanyang Technological University, Singapore (NTU)
2) National University of Singapore (NUS)
3) The Hong Kong University of Science and Technology
4) KAIST – Korea Advanced Institute of Science & Technology
5) The University of Hong Kong
6) Tsinghua University
7) Fudan University
8) City University of Hong Kong
9) Peking University
10) The Chinese University of Hong Kong (CUHK)

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Publication: Zee News
Edition: Online
Journalist: Ipsita Sarkar
Headline: IIT Bombay, Delhi, Madras among top 50 Asian institutions, IISc slides
URL: http://zeenews.india.com/india/iit-bombay-delhi-madras-among-top-50-asian-institutions-iisc-slides-qs-asia-university-rankings-2018-2050640.html

IIT Bombay, Delhi, Madras among top 50 Asian institutions, IISc slides

MUMBAI: Three Indian Institutes of Technology (IITs) – Bombay, Delhi, Madras – made it to the top 50 Asian universities ranking. The Quacquarelli Symonds (QS) Asia University Rankings 2018, released on Monday, ranks IIT Bombay at 35th position, IIT Delhi at 41, and IIT Madras at 48.

The Indian Institute of Science, Bangalore, which ranked at 33 in 2017, dropped to 51st position this year.

IIT Bombay emerged as the top Indian institute with an overall score of 75.7 out of 100 and a high employee reputation index of 97.5. The institute, which ranked at 35 last year, has improved by one place score.

"The Institute performed among the top 8% in the QS Asia University Rankings. Considering there are approximately 11,900 universities globally, this made IIT Bombay one of the top 1.0% universities in Asia," said the institute.

The top five Asian institutes as per the rankings are:

1. Nanyang Technological University (NTU), Singapore
2. National University of Singapore (NUS), Singapore
3. The Hong Kong University of Science and Technology, Hong Kong
4. KAIST - Korea Advanced Institute of Science & Technology, South Korea
5. The University of Hong Kong, Hong Kong

The QS Rankings takes in to account 10 factors or index: Academic reputation, employer reputation, faculty student ration, staff with PhD, faculty, international faculty, international students, inbound exchange students, outbound exchange students and citations per paper.

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Publication: Scroll
Edition: Online
Journalist: NA
Headline: Three IITs among top 50 institutions in QS Asia university rankings
URL: https://scroll.in/latest/854415/three-iits-among-top-50-institutions-in-qs-asia-university-rankings

Three IITs among top 50 institutions in QS Asia university rankings

The Indian Institutes of Technology in Bombay, Delhi and Madras are among the top 50 Asian universities in Quacquarelli Symonds World University Rankings 2018. The rankings were released on Monday. Singapore's Nanyang Technological University and National University Singapore have been placed at first and second spots, respectively.

No Indian university has made it to the top 10. Among the Indian universities, IIT-Bombay was the best performer, ranked at 34. While IIT-Delhi features at the 41st position, IIT-Madras is at 48.

Six other Indian universities made it to the top 100 list. The Indian Institute of Science, Bangalore, was ranked 51, followed by IIT-Kanpur (59), IIT-Kharagpur (62), University of Delhi (72), IIT-Roorkee (93) and IIT-Guwahati (98).

The Quacquarelli Symonds World University Rankings 2018 were released in June. For the first time in 14 years, India had three institutes in the top 200 list.

How are they ranked?
The list this year features more than 400 universities. It was compiled assessing universities on 10 indicators, including the number of academic staff qualified up to PhD level, the proportion of inbound and outbound exchange students, academic and employer reputation and student-teacher ratio, among others.

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Publication: Mint
Edition: Online
Journalist: Prashant K. Nanda
Headline: Asian University Rankings 2018: IIT Bombay top among Indian universities, IISc slips
URL: http://www.livemint.com/Home-Page/aDHSHVuomLuAeF6KK1Of4H/Asian-University-Rankings-2018-IIT-Bombay-top-among-Indian.html

Asian University Rankings 2018: IIT Bombay top among Indian universities, IISc slips

New Delhi: Indian Institute of Technology (IIT) Bombay emerged the best Indian university in the Quacquarelli Symonds (QS) Asian University Rankings for 2018, which saw most of the top Indian schools slipping in their rankings in Asia.

IIT Bombay was ranked 34th in Asia, followed by IIT Delhi (41), IIT Madras (48) and Indian Institute of Science, Bengaluru (IISc) at 51. The 2018 rankings by QS made available to public on Tuesday showed that IISc, which was the best institution from India in 2016 and 2017, slipped the most among top Indian schools.

Among the top 10 Indian schools, all except IIT Bombay lost their ground. While IISc dropped 18 ranks, Calcutta University dropped 17 places to 125th in Asia. IIT Roorkee slipped 15 places to be ranked at the 93rd position. Top IITs, including Delhi, Madras and Kanpur, slipped between 5th and 11th ranks in the 2018 rankings as against their performance in the previous year.

IIT Bombay said on Tuesday that it has scored an overall 75.7 out of 100 in the Asian rankings. "The Institute has score of 88.1 in academic reputation, 97.5 in employer reputation, 44.5 in faculty student ration, 96.3 in staff with PhD, 89.6 in papers per faculty, 9.7 in international faculty, 6.3 in international students, 10.9 in inbound exchange students, 9.1 in outbound exchange students, and 41.4 in citations per paper. Among these ten parameters, Employer Reputation indicated the strongest one for IIT Bombay with a rank of 21 globally," the IIT said in a statement.

"This is a reflection of the excellent work being done by faculty and students of the Institute," IIT Bombay director Devang Khakhar said.

The Singapore-based Nanyang Technological University (NTU) climbed two places to be the best university in Asia, overtaking the National University of Singapore which has now slipped to the second place. The Hong Kong University of Science and Technology has been ranked third, followed by Korea Advanced Institute of Science & Technology of South Korea and University of Hong Kong (HKU).

This year's ranking features over 400 universities and was compiled by assessing universities across 10 different indicators, including academic and employer reputation, the proportion of PhD qualified academic staff, and the proportion of inbound and outbound exchange students at the university, the British raking agency said.

Tsinghua University in the sixth place is China's leading institution and Japan's top university continues to be the University of Tokyo, ranked 13th, the QS said in a posting in its website.

Date: 18th October 2017
Publication: India.com
Edition: Online
Journalist: NA
Headline: IIT-Bombay, IIT-Madras, IIT-Delhi Feature Among List of Top 50 Asian University
URL: http://www.india.com/education/iit-bombay-iit-madras-iit-delhi-among-list-of-top-50-asian-university-quacquarelli-symonds-ranking-report-2538069/

IIT-Bombay, IIT-Madras, IIT-Delhi Feature Among List of Top 50 Asian University

New Delhi, October 17: Indian Institute of Technology (IIT) Bombay, Madras and Delhi featured in the list of top 50 Asian university in a report released by Quacquarelli Symonds (QS). While these premiere technology institute figured in the category under 50, no Indian institute managed to come under the top 10 slot.

In the ranking report released on Monday, IIT-Bombay held the 34th rank, IIT-Delhi held the 41st and IIT-Madras held the 48th position. The first position was secured by Nanyang Technological University followed by NUS and the Hong Kong University of Science and Technology (HKUST).

IIT-Bombay showed a positive development, as it ascended from the 35th to the 34th position.

According to The Indian Express, IIT-B scored 88.1 in academic reputation and 97.5 in employer reputation. Among other parameters, the institute scored 44.5 in faculty-student ratio and 96.3 in staff with PhD. In papers per faculty it scored 89.6 and in international faculty it scored 9.7.

In terms of international students it scored 6.3 in international students, 10.9 in inbound exchange students and in outbound exchange students it scored 9.1. Also it scored 41.4 in citations per paper. Among these 10 parameters, the strongest one for IIT Bombay is Employer Reputation with a rank of 21 globally.

Date: 18th October 2017
Publication: News Nation
Edition: Online
Journalist: NA
Headline: IIT Delhi, Madras make in top 50 list of Quacquarelli Symonds Asia University rankings
URL: http://www.newsnation.in/education/higher-studies/quacquarelli-symonds-asia-university-rankings-iit-delhi-and-madras-makes-it-to-top-50-article-184495.html

IIT Delhi, Madras make in top 50 list of Quacquarelli Symonds Asia University rankings

New Delhi :
The Indian Institute of Technology (IIT) Delhi and Madras have finally made it to the list of Asia's top 50 universities in the latest Quacquarelli Symonds (QS) Asia University rankings.

IIT-Delhi is at 41 rank while IIT-Madras stands at 48.

The Bangalore based Indian Institute of Science (IISc) failled to make it to the top 50 which was at 33 last year. No Indian University has made it to the top 10.

The Nanyang Technological University (NTU) of Singapore has been placed at number one followed by the National University of Singapore (NUS) and The Hong Kong University of Science and Technology.

Quacquarelli Symonds ('QS') is a leading global higher education company, with over 250 employees across 5 continents speaking over 25 languages.

QS is best known for publishing the QS World University Rankings, which is considered as one of the most popular and authentic university ranking system.

Below are the top 10 best universities in Asia:

1) Nanyang Technological University, Singapore (NTU)
2) National University of Singapore (NUS)
3) The Hong Kong University of Science and Technology
4) KAIST – Korea Advanced Institute of Science & Technology
5) The University of Hong Kong
6) Tsinghua University
7) Fudan University
8) City University of Hong Kong
9) Peking University
10) The Chinese University of Hong Kong (CUHK)

Date: 18th October 2017
Publication: DNA
Edition: Mumbai
Page no.: 4
Journalist: NA
Headline: IIT-B moves up in QS Asia rankings
URL: http://www.dnaindia.com/mumbai/report-iit-b-moves-up-in-qs-asia-rankings-2553716

IIT-B moves up in QS Asia rankings

The rankings were released on Monday and had three IITs within the top 50 universities

DNA correspondent
correspondent@dnaindia.net

Quacquarelli Symonds (QS) Asia University Rankings 2018 was released on Monday, which had three IITs within the top 50. Indian Institute of Technology Bombay (IIT-B) ranked 34th this year, up from last year's 35th.

IIT-Delhi ranked 41st and IIT Madras was 48th.

The QS University Ranking, Asia, was first published in 2009.

This year's ranking features more than 400 universities and was compiled by assessing universities across 10 different indicators, like academic and employer reputation, the proportion of PhD qualified academic staff, and the proportion of inbound and outbound exchange students at the university.

Indian Institute of Technology, Bombay

IIT Bombay ranks first in India, with an overall score of 75.7 out of 100. The institute has a score of 88.1 in academic reputation, 97.5 in employer reputation, 44.5 in faculty student ration, 96.3 in staff with PhD, 89.6 in papers per faculty, 9.7 in international faculty, 6.3 in international students, 10.9 in inbound exchange students, 9.1 in outbound exchange students, and 41.4 in citations per paper. Among these 10 parameters, employer reputation indicated the strongest one for IIT-Bombay with a global rank of 21, according to the statement released by IIT-B.

"I am glad that IIT-B continues to rise in the rankings. This is a reflection of the excellent work by us," IIT-B, Director Professor, Devang Khakhar said.

IIT NUMBERS

- IIT Bombay ranks first in India, with an overall score of 75.7 out of 100.
- **The institute has a score of 88.1 in academic reputation, 97.5 in employer reputation, 44.5 in faculty student ration, 96.3 in staff with PhD, 89.6 in papers per faculty.**

Date: 18th October 2017
Publication: The Times of India
Edition: Delhi/Kolkata/Pune/Bangalore/Chennai
Page no.: 15
Journalist: NA
Headline: IIT-Bombay ranking rises to 34 from 35 on QS Asia charts
URL: https://timesofindia.indiatimes.com/city/mumbai/iit-b-ranking-rises-to-34-from-35-on-qs-asia-charts/articleshow/61121563.cms

IIT-B ranking rises to 34 from 35 on QS Asia charts

TIMES NEWS NETWORK

Mumbai: First the good news. This year, Indian Institute of Technology-Bombay (IIT-B) has risen by a point — to 34 from 35 last year — on the Asian charts of the Quacquarelli Symonds (QS) University Rankings. On the other hand, though, the city's other public institution, the University of Mumbai, has slid to the 801-1,000 range from the 701-750 bracket.

Globally, California Institute of Technology has pipped University of Cambridge to occupy the fourth position in the QS rankings. The other Ivy Leagues — MIT, Stanford, Harvard — maintain their top places.

Locally, besides IIT-B, IIT Delhi and IIT Madras figure on the list of Asia's Top 50 universities. No Indian university, though, has managed to occupy a position in the Top 10. Indian Institute of Science (IISc), which was placed 33 last year, has fallen to 51 this time. IIT-Delhi is at 41 from 36 last year while IIT-Madras stands at 48 from 43 last year.

Speaking on the performance of the institute, director Devang Khakhar said, "I am glad that IIT-Bombay continues to rise in the rankings. This is a reflection of the excellent work being done by the faculty and students of the institute."

IIT-Bombay was among the top 8% performers in the Asian charts of the Quacquarelli Symonds University Rankings

However, IIT-Delhi, IIT-Madras, IISC, Mumbai University and others have seen marginal drop in rankings compared with last year

The institute was among the top 8% performers in the QS Asia University Rankings. Considering that there are approximately 11,900 universities globally, this brings IIT-B among the top 1% universities in Asia.

This time around, Savitribai Phule Pune University is stable at 207 and Mumbai University has dropped from 145 to 181 in the Asian rankings. In the same region, Nanyang Technological University (NTU) was ranked number one, ahead of NUS and Hong Kong University of Science and Technology (HKUST).

Overall, IIT-B has improved on its 2016-17 performance by one place.

It is ranked number one in India, with an overall score of 75.7 out of 100. The institute has a score of 88.1 in academic reputation, 97.5 in employer reputation, 44.5 in faculty student ration, 96.3 in staff with PhD, 89.6 in papers per faculty, 9.7 in international faculty, 6.3 in international students, 10.9 in inbound exchange students, 9.1 in outbound exchange students, and 41.4 in citations per paper. Among these 10 parameters, employer reputation of IIT-B was the strongest at 21 globally.

Date: 18th October 2017
Publication: Mumbai Mirror
Edition: Mumbai
Page no.: 4
Journalist: NA
Headline: QS Asia top 50 - IIT-B climbs a spot in Asian institution rankings
URL: https://mumbaimirror.indiatimes.com/mumbai/other/qs-asia-top-50-iit-b-climbs-a-spot-in-asian-institution-rankings/articleshow/61126176.cms?

QS Asia top 50

IIT-B climbs a spot in Asian institution rankings

The Indian Institute of Technology, Bombay (IIT-B) in a surprise sweep, beat Indian Institute of Science, Bengaluru (IISc) and climbed one spot up on the list of top 50 educational institutions in Asia, according to the Quacquarelli Symonds (QS) Asia University Rankings for 2018 which was released on Tuesday.

It was step up for IIT-B from last year's 35th in Asia to 34th this year. Earlier in June, the institute's rank was pegged at 179 in the QS World University Rankings, a considerable improvement of 40 places. In the latest figures, the IIT-B is among the top 8 per cent in the rankings, which features over 400 varsities from the Asian continent.

Speaking on the performance of the institute, IIT-B director Devang Khakhar said: "I am glad that IIT, Bombay, continues to rise in the rankings. This is a reflection of the excellent work being done by the faculty and students of the institute".

"Considering there are approximately 11,900 universities globally, this made IIT, Bombay, one of the top 1.0 per cent universities in Asia," a statement said.

IIT, Bombay, secured an overall score of 75.7 out of 100."Among these ten parameters, Employer Reputation indicated the strongest one for IIT, Bombay, with a rank of 21 globally," read the statement.

The latest rankings saw most of the top institutions flounder in their rankings with the exception of IIT, Bombay. The most notable among them was IISc which dropped a staggering 18 places to settle at 51. It was the top-ranked institute for the past two years.

Among top ten institutes in the country, IIT, Delhi, came in at 41; IIT, Madras at 48; IISc at 51; IIT, Kanpur at 59. The University of Mumbai was ranked 181.

Singapore-based Nanyang Technological University (NTU) climbed two places to be the best university in Asia, overtaking the National University of Singapore which has now slipped to the second place. The Hong Kong University of Science and Technology has been ranked third, followed by Korea Advanced Institute of Science & Technology of South Korea and University of Hong Kong (HKU).

This year's ranking was compiled by assessing universities across 10 different indicators, including academic and employer reputation, the proportion of PhD qualified academic staff, and the proportion of inbound and outbound exchange students at the university, the British ranking agency said on its website.

—Mumbai Mirror Bureau

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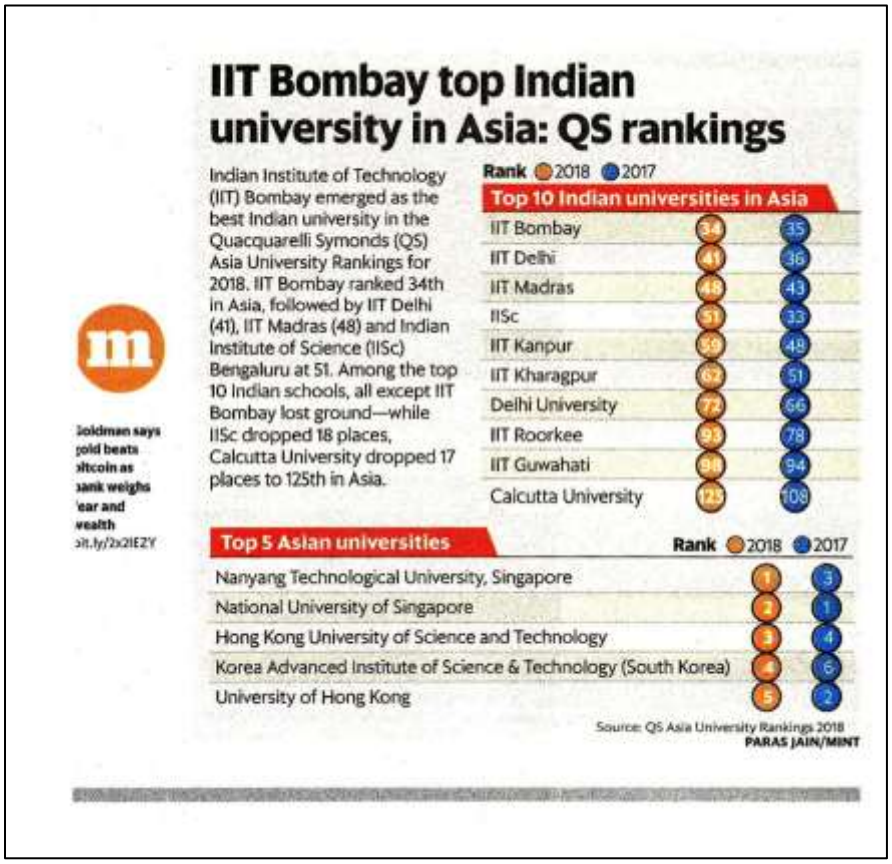
Edition: Delhi/Mumbai/Pune/Bangalore/Hyderabad/Chennai/Kolkata/Ahmedabad
Page no.: 1
Journalist: NA
Headline: IIT Bombay top Indian university in Asia: QS rankings



IIT Bombay top Indian university in Asia: QS rankings

Indian Institute of Technology (IIT) Bombay emerged as the best Indian university in the Quacquarelli Symonds (QS) Asia University Rankings for 2018. IIT Bombay ranked 34th in Asia, followed by IIT Delhi (41), IIT Madras (48) and Indian Institute of Science (IISc) Bengaluru at 51. Among the top 10 Indian schools, all except IIT Bombay lost ground—while IISc dropped 18 places, Calcutta University dropped 17 places to 125th in Asia.

Top 10 Indian universities in Asia

	Rank 2018	Rank 2017
IIT Bombay	34	35
IIT Delhi	41	36
IIT Madras	48	43
IISc	51	33
IIT Kanpur	59	48
IIT Kharagpur	62	51
Delhi University	72	66
IIT Roorkee	93	78
IIT Guwahati	98	94
Calcutta University	125	108

Top 5 Asian universities

	Rank 2018	Rank 2017
Nanyang Technological University, Singapore	1	3
National University of Singapore	2	1
Hong Kong University of Science and Technology	3	4
Korea Advanced Institute of Science & Technology (South Korea)	4	6
University of Hong Kong	5	2

Source: QS Asia University Rankings 2018
PARAS JAIN/MINT

Date: 18th October 2017
Publication: The Indian Express
Edition: Delhi/Kolkata/Mumbai
Page no.: 11
Journalist: NA
Headline: IISC Bengaluru, IIT Bombay in top 200 engineering institutes
URL: http://indianexpress.com/article/education/iisc-iit-bombay-among-worlds-top-200-for-engineering/

TIMES HIGHER EDUCATION RANKINGS

IISC Bengaluru, IIT Bombay in top 200 engineering institutes

EXPRESS NEWS SERVICE
NEW DELHI, OCTOBER 17

THE INDIAN Institute of Science (IISc) in Bengaluru and IIT Bombay are among the world's top 200 institutions for engineering and computer science, the Times Higher Education subject-wise rankings have found.

While IISc occupied the 89th spot, IIT Bombay was pegged in the 126-150 category, globally. IITs in Delhi, Kanpur and Kharagpur were placed in the 201-250 band, in that order, and IIT Madras and IIT Roorkee in the 251–300 category.

Meanwhile, IIT Guwahati was among institutes in the 301–400 ranks and Jadavpur University, NIT Rourkela and Tezpur University were pegged in the 401 to 500 band.

The rankings, which were released on Tuesday night, scored 500 institutions worldwide, as opposed to 100 last year, on performance parameters such as industry income, international outlook, teaching and research. It highlights the educational institutions that are leading in electrical, mechanical, civil, chemical and general engineering courses.

Overall, Stanford University is number one, followed by California Institute of Technology, Oxford University, Massachusetts Institute of Technology and Cambridge University. While India has a total of 11 institutions in the rankings, China has 35 institutions, which is more than any other country in Asia.

China's Peking University and National University of Singapore are among the top 10 and top performers from Asia.

Date: 18th October 2017
Publication: Business Standard
Edition: Mumbai/Pune/Bangalore/Chennai/Kochi/Ahmedabad/Delhi
Page no.: 24
Journalist: Vinay Umarji
Headline: IIT-B top Indian institute in QS Asia ranking
URL: http://www.business-standard.com/article/current-affairs/iit-bombay-top-ranked-indian-institute-in-qs-asia-university-rankings-2018-117101700363_1.html

IIT-B top Indian institute in QS Asia ranking

Premier education centre the only Indian institute to improve performance among the top 100

VINAY UMARJI
Ahmedabad, 17 October

The Indian Institute of Technology-Bombay (IIT-B) rose one position to the 34th rank in the Quacquarelli Symonds (QS) Asia University Rankings 2018.

It was the only Indian institute to better its performance among the top 100 and was also the top-ranked Indian institute in the QS Asia University Rankings.

This year, IIT-B saw its best position in the past three years since its 46th rank in 2016. Earlier this year, IIT-B was ranked 179th in the QS World University Rankings, showing an improvement in its 2017 performance by 40 places.

Other Indian institutes on the Asian list were IIT-Delhi (41), IIT-Madras (48), Indian Institute of Science (IISc)-Bangalore (51), IIT-Kanpur (59), IIT-Kharagpur (62), University of Delhi (72), IIT-Roorkee (93) and IIT-Guwahati (98). All these have slipped in their rankings from last year. The IISc registered the biggest decline by 18 places, down from 33 in 2017.

According to IIT-B, the institute made an overall score of 75.7 out of 100. In terms of parameters, IIT-B scored 88.1 in academic reputation, 97.5 in employer reputation, 44.5 in faculty student ration, 96.3 in staff with PhD, 89.6 in papers per faculty, 9.7 in international faculty, 6.3 in international students, 10.9 in inbound exchange students, 9.1 in outbound exchange students, and 41.4 in citations per paper.

Among the 10 parameters, employer reputation was the strongest for IIT-B with a rank of 21 globally.

"This is a reflection of the excellent work being done by the faculty and students of the institute," said Devang Khakhar, director, IIT-B. The institute was among the top 8 per cent in the QS Asia University Rankings. Considering there are approximately 11,900 universities globally, this made IIT-B among the top one per cent universities in Asia.

Overall, the QS Asia University Rankings 2018 saw Nanyang Technological University of Singapore topping the list, followed by the National University of Singapore. The Hong Kong University of Science and Technology, Korea Advanced Institute of Science and Technology, and The University of Hong Kong were at the third, fourth and fifth slots, respectively.

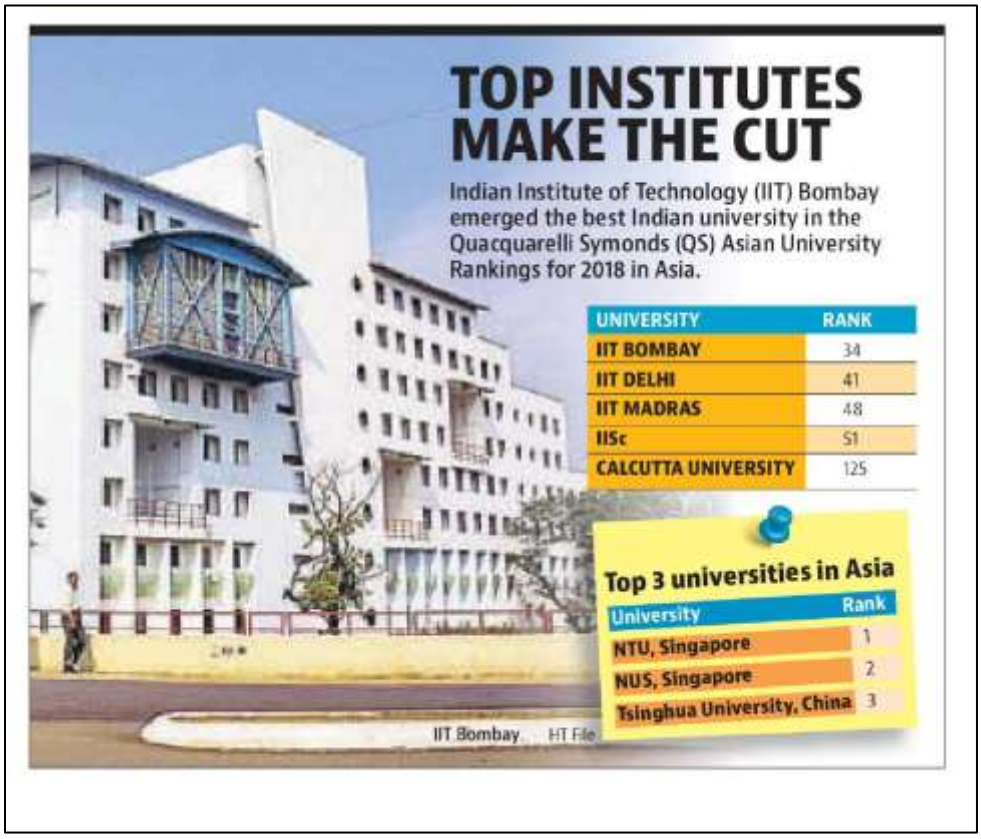
EXCELLENCE IN EDUCATION

Indian institutes in QS Asia University Rankings 2018

Institute	2016	2017	2018	Institute	2016	2017	2018
IIT-Bombay	46	35	34	University of Delhi	91	66	72
IIT-Delhi	42	36	41	IIT-Roorkee	93*	78	93
IIT-Madras	56*	43	48	IIT-Guwahati	98	94	98*
IISc-Bangalore	74	33	51	Jadavpur University	NR	NR	125*
IIT-Kanpur	58*	48	59	University of Calcutta	149*	108	125*
IIT-Kharagpur	67	51	*61	Amrita University	NR	169*	168*

*: Rank shared with another institute; NR: Not ranked
Source: QS Asia University Rankings

Date: 18th October 2017
Publication: Hindustan Times
Edition: Mumbai
Page no.: 8
Journalist: NA
Headline: Top Institutes Make the Cut



Date: 18th October 2017
Publication: NDTV
Edition: Online
Journalist: Shihabudeen Kunju S
Headline: QS Asia University Rankings 2018: IIT Bombay, IIT Delhi, IIT Madras Ranked Among Top 50
URL: https://www.ndtv.com/education/qs-asia-university-rankings-2018-iit-bombay-iit-delhi-iit-madras-ranked-among-top-50-1764465

QS Asia University Rankings 2018: IIT Bombay, IIT Delhi, IIT Madras Ranked Among Top 50

MUMBAI, OCTOBER 17:: Indian Institute of Technology Bombay (IIT Bombay) has moved one step up from 35th rank last year to 34th rank this year in the Quacquarelli Symonds (QS) Asia University Rankings. Among the top 50, Overall, the Institution improved on its 2016/17 performance by one place. Indian Institute of Technology (IIT) Delhi was ranked 41 and IIT Madras was placed in rank 48 in the QS Asia University Rankings 2018. IISc Bangalore, IIT Kanpur, IIT Kharagpur, University of Delhi, IIT Roorkee and IIT Guwahati also found their place in to 100 this year.

Earlier in June this year, the IIT Bombay was ranked 179th in the QS World University Rankings, showing an improvement in its 2017 performance by 40 places.

The results of Asia University Rankings were release on Monday, October 16, 2017 by QS, a British company.

IIT Bombay ranks one in India, with an overall score of 75.7 out of 100. The Institute has score of 88.1 in academic reputation, 97.5 in employer reputation, 44.5 in faculty student ration, 96.3 in staff with PhD, 89.6 in papers per faculty, 9.7 in international faculty, 6.3 in international students, 10.9 in inbound exchange students, 9.1 in outbound exchange students, and 41.4 in citations per paper. Among these ten parameters, Employer Reputation indicated the strongest one for IIT Bombay with a rank of 21 globally.

"I am glad that IIT Bombay continues to rise in the rankings. This is a reflection of the excellent work being done by faculty and students of the Institute," Director of the Instituet Prof. Devang Khakhar said.

Considering there are approximately 11,900 universities globally, this made IIT Bombay one of the top 1.0% universities in Asia.

In QS Ranking 2018, which was released in June this year, IIT Delhi had dethroned IISc Bengaluru. In the 2017 rankings, it was IISC which was placed highest among the Indian institute which had managed to rank in the top 200. IISc had featured at the 152nd rank in the 2017 rankings.

Nanyang Technological University, Singapore (NTU Singapore) is Asia's top university, according to the QS in its Asia University.

NTU, which is renowned for being among the world's best universities for engineering and technology, rose two spots from last year to be placed in the leading position of the QS Asia University league table ahead of 400 universities in Asia.

"NTU has made fantastic progress, having risen from No. 14 when the QS Asian rankings began in 2009. The latest rankings are an outstanding achievement and strong endorsement of NTU's excellent reputation built up over the years, and I wish to thank the entire NTU community for their contributions," NTU President, Professor Bertil Anderson said.

Universities from Singapore, Hong Kong and China dominated the rankings:

1. Nanyang Technological University (NTU), Singapore
2. National University of Singapore (NUS)
3. The Hong Kong University of Science and Technology, Hong Kong
4. KAIST - Korea Advanced Institute of Science & Technology, South Korea
5. The University of Hong Kong, Hong Kong
6. Tsinghua University, China
7. Fudan University, China
8. City University of Hong Kong, Hong Kong
9. Peking University, China
10. The Chinese University of Hong Kong (CUHK)

Date: 18th October 2017
Publication: Money Control
Edition: Online
Journalist: NA
Headline: QS Asian University Rankings 2018: IIT-Bombay ranked the best in India
URL: http://www.moneycontrol.com/news/india/qs-asian-university-rankings-2018-iit-bombay-ranked-the-best-in-india-2415569.html

QS Asian University Rankings 2018: IIT-Bombay ranked the best in India

Indian Institute of Technology (IIT) Bombay was pegged as the best Indian university in the 2018 Quacquarelli Symonds (QS) University Rankings for Asia, where most of the prominent Indian educational institutes slid from their past ranks.

IIT Bombay is presently ranked at 34th among 400 Asian universities assessed in the list by British organisation QS.

IIT Bombay is followed by IIT Delhi (41), IIT Madras (48), and Indian Institute of Science (IISc), Bengaluru (51).

As per the QS rankings which were published on Monday, IISc's rank has dropped the most among Indian institutes. It was at the top in India and at the 33rd position in 2017. Since then, it has slipped by 18 ranks.

IIT Bombay has an overall score of 75.7 based on indicators such as academic reputation, employer reputation, faculty to student ratio, papers attributable to per Faculty (Data from Scopus) and so on.

In terms of academic and employer reputation, IIT Bombay maintained high scores of 88.1 and 97.5 respectively. It is the only one among top institutes that has somewhat maintained its position, going up by one rank from last year.

"Employer Reputation indicated the strongest one for IIT Bombay with a rank of 21 globally," IIT Bombay said in a statement on Tuesday.

The top three universities in Asia are National University of Singapore, University of Hong Kong, and Nanyang Technological University, Singapore.

Neighbouring China has its Tsinghua University in fifth place, followed by Peking University at ninth.

Date: 18th October 2017
Publication: Business Standard- Hindi
Edition: Delhi
Page no.: 14
Journalist: Vinay Umarji
Headline: IIT-B top Indian institute in QS Asia ranking
URL: http://www.business-standard.com/article/current-affairs/iit-bombay-top-ranked-indian-institute-in-qs-asia-university-rankings-2018-117101700363_1.html

क्यूएस की रैंकिंग में शीर्ष पर आईआईटी बंबई

विनय उमरजी

क्वाकरैली साइमंड्स (क्यूएस) एशिया यूनिवर्सिटी रैंकिंग, 2018 में भारतीय प्रौद्योगिकी संस्थान, बंबई 35वें पायदान से एक अंक ऊपर छलांग लगा कर 34वें स्थान पर पहुंच गया है। यह एकमात्र ऐसा भारतीय संस्थान है, जो रैंकिंग में सर्वोच्च शीर्ष 100 संस्थानों में अपना प्रदर्शन सुधारने में सफल रहा है।

क्यूएस एशिया यूनिवर्सिटी रैंकिंग में भारतीय संस्थानों में शीर्ष स्थान पर रहने वाला आईआईटी बंबई 2016 में 46वें स्थान पर रहने के बाद लगातार अपना प्रदर्शन सुधार रहा है। इसी साल जून में आईआईटी बंबई को क्यूएस वर्ल्ड यूनिवर्सिटी रैंकिंग्स में 179वें स्थान पर रखा गया था। इस तरह, यह 2017 के प्रदर्शन के मुकाबले अपनी स्थिति 40 सुधारने में सफल रहा है।

दूसरी तरफ दूसरे संस्थान जैसे आईआईटी दिल्ली (41), आईआईटी मद्रास (48), इंडियन इंस्टीट्यूट ऑफ साइंस, बेंगलूरु (51), आईआईटी कानपुर (59), आईआईटी खड़गपुर (62), दिल्ली विश्वविद्यालय (72), आईआईटी रुड़की (93) और आईआईटी गुवाहाटी (98) की रैंकिंग में पिछले साल के मुकाबले कमी आई है। उदाहरण के लिए, 2016 में आईआईटी दिल्ली 36 वें पायदान पर था जबकि आईआईटी मद्रास 43वें स्थान पर रहा। सबसे अधिक निराशा आईआईएससी की रैंकिंग में आई।

आईआईटी बंबई के अनुसार संस्थान 100 में 75.7 अंक प्राप्त करने में सफल रहा। विभिन्न मानदंडों की बात करें तो संस्थान को शैक्षणिक साख में 88.1, नियोक्ता के लिहाज से 97.5, संकाय-छात्र अनुपात के लिहाज से 44.5, पीएचडी वाले कर्मचारी में 96.33, प्रति संकाय पत्र में 89.6, विदेशी संकाय के मामले में 9.7, विदेशी छात्रों के मामले में 6.3 अंक मिले। कुल मिलाकर 10 मानदंडों में आईआईटी बंबई की निरंतरता के रूप में साख काफी मजबूत रही। संस्थान के निदेशक देवांग खाखर कहते हैं, 'यह रैंकिंग संस्थान के संकाय और यहां के छात्रों द्वारा किए जाने वाले शानदार कार्यों का संकेत है। संस्थान क्यूएस एशिया यूनिवर्सिटी रैंकिंग्स में शीर्ष 8 प्रतिशत में शुमार रहा। दुनिया भर में करीब 11,900 विश्वविद्यालय हैं, जिनके लिहाज आईआईटी बंबई एशिया के शीर्ष 1 प्रतिशत विश्वविद्यालयों में शामिल है।'

क्यूएस एशिया यूनिवर्सिटी रैंकिंग्स 2018 में नयांग टेक्नोलॉजिकल यूनिवर्सिटी ऑफ सिंगापुर शीर्ष स्थान पर रहा। इसके बाद नेशनल यूनिवर्सिटी ऑफ सिंगापुर, द हांगकांग यूनिवर्सिटी ऑफ साइंस ऐंड टेक्नोलॉजी का स्थान रहा।

आईआईटी बंबई 35वें से 34वें पायदान पर आया

Date: 19th October 2017
Publication: Gizmodo
Edition: Online
Journalist: Rajat Kabade
Headline: IIT Bombay Ranks 34th Among Top Universities in Asia
URL: http://www.gizmodo.in/techgig/iit-bombay-ranks-34th-among-top-universities-in-asia/articleshow/61143658.cms

IIT Bombay Ranks 34th Among Top Universities in Asia

The Indian Institute of Technology Bombay (IIT Bombay) is among the top 100 Indian institute in the latest Quacquarelli Symonds (QS) Asia University Rankings 2018. Three Indian Institutes have made it to the list.

IIT Bombay has seen its best position at 34th rank in the last three years. Other Indian institutes like IIT Delhi ranked at 41, IIT Madras at 48, Indian Institute of Science (IISc) Bangalore at 51, IIT Kanpur at 59, IIT Kharagpur at 62, the University of Delhi at 71, IIT Roorkee at 93 and IIT Guwahati at 98 have made their mark on the list.

QS Asia University Ranking report is published annually to rank the universities around the world. The list features more than 400 universities. The institutes are assessed based on 10 indicators including the staff qualification up to the PhD level, the proportion of exchange students, academic and employer reputation and student-teacher ratio.

While Indian institutes have never been able to make it to the top 10, the country still contributes the majority number of institutes in top 200 universities in the QS Asia University Rankings. Compared to the last year's performance, IIT-Bombay has moved one position up from 35 last year. IISc has moved to the 51st position from 33rd. Institutes like IIT Delhi, IIT Madras, IIT Kanpur were earlier among top 50, have lost their position among top 50 in this year's list.

IIT-Bombay has clocked a good score in all parameters. The institute has a score of 88.1 in academic reputation, 97.5 in employer reputation, 44.5 in faculty-student ratio and 96.3 in staff with PhD. Among the ten parameters, the institute has the highest employer reputation with the global rank of 21.

Date: 21st October 2017
Publication: Aaj Tak
Edition: Online
Journalist: NA
Headline: QS Asian University ranking 2018
URL: http://aajtak.intoday.in/gallery/education-qs-asian-university-ranking-2018-iit-delhi-bombay-madras-in-top-asian-university-tedu-1-15537.html

एशिया की टॉप यूनिवर्सिटी में भारत के तीन विश्वविद्यालय, ये हैं टॉप-10

क्वाकरली सायमंस (क्यूएस) एशिया यूनिवर्सिटी ने एशिया के टॉप 50 विश्वविद्यालयों की रैंकिंग की घोषणा कर दी है. इस साल भारत की तीन यूनिवर्सिटी ने इस लिस्ट में अपना स्थान हासिल किया है. आइए जानते हैं भारत की कौन-सी तीन यूनिवर्सिटी ने इसमें स्थान हासिल किया है और एशिया की टॉप 10 यूनिवर्सिटी कौनसी है।

रैंकिंग 2018 में इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी बॉम्बे (आईआईटी बॉम्बे), इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी दिल्ली (आईआईटी दिल्ली) और आईआईटी मद्रास ने जगह हासिल की है.

आईआईटी बॉम्बे ने पिछले साल 35वीं रैंक से एक कदम बढ़ाकर इस साल 34वां स्थान हासिल किया है. टॉप 50 में संस्थान ने अपने 2016/17 के प्रदर्शन को एक स्थान बेहतर किया है. वहीं आईआईटी दिल्ली 41वें और आईआईटी मद्रास 48वें स्थान पर रहे.

इस साल टॉप 100 में आईआईएससी बैंगलोर, आईआईटी कानपुर, आईआईटी खड़गपुर, दिल्ली विश्वविद्यालय, आईआईटी रुड़की और आईआईटी गुवाहाटी ने भी जगह बनाई है.

इससे पहले इस साल जून में आईआईटी बॉम्बे क्यूएस वर्ल्ड यूनिवर्सिटी रैंकिंग में 179वीं स्थान पर रही थी, जिसमें 2017 के प्रदर्शन में यह 40 स्थान ऊपर आया था.

इस रैंकिंग को जारी करते हुए एकेडमिक रेप्युटेशन, एम्प्लॉयर रेप्युटेशन, फैकल्टी, स्टॉफ, पेपर आदि चीजों को ध्यान में रखा गया है.

विश्वभर में लगभग 11,900 विश्वविद्यालय हैं. इस साल जून में जारी QS Ranking 2018 के अनुसार आईआईटी दिल्ली ने आईआईएससी बैंगलोर का स्थान ले लिया है. 2017 की रैंकिंग में आईआईएससी टॉप 200 में रैंक पाने में सफल रहे भारतीय संस्थान के बीच सबसे ऊंचे स्थान पर था.

क्यूएस एशिया यूनिवर्सिटी के अनुसार, नानयांग टेक्नोलोजिकल यूनिवर्सिटी, सिंगापुर (एनटीयू सिंगापुर) एशिया की टॉप यूनिवर्सिटी है. रैंकिंग में सिंगापुर, हांगकांग और चीन के विश्वविद्यालयों का वर्चस्व है.

इसके बाद सिंगापुर के राष्ट्रीय विश्वविद्यालय (NUS), हांगकांग विज्ञान और प्रौद्योगिकी विश्वविद्यालय, हांगकांग, काईस्ट - कोरिया उन्नत विज्ञान और प्रौद्योगिकी संस्थान, दक्षिण कोरिया, हांगकांग विश्वविद्यालय, हांगकांग, सिंघुआ विश्वविद्यालय, चीन, फूडन यूनिवर्सिटी, चीन, हांगकांग के सिटी यूनिवर्सिटी, हांगकांग, पेकिंग यूनिवर्सिटी, चीन, चीनी विश्वविद्यालय हांगकांग (सीयूएचके) का नाम टॉप स्थान पर है.

Date: 21st October 2017
Publication: Hindustan Times
Edition: Delhi
Page no.: 12
Journalist: NA
Headline: Asian University Rankings 2018: IIT Bombay Top In Indian Universities, IISC Slips

ASIAN UNIVERSITY RANKINGS 2018: IIT BOMBAY TOP IN INDIAN UNIVERSITIES, IISC SLIPS

Indian Institute of Technology (IIT) Bombay emerged the best Indian university in the Quacquarelli Symonds (QS) Asian University Rankings for 2018, which saw most of the top Indian schools slipping in their rankings in Asia.

IIT Bombay was ranked 34th in Asia, followed by IIT Delhi (41), IIT Madras (48) and Indian Institute of Science, Bengaluru (IISc) at 51. The 2018 rankings by QS made available to public on Tuesday showed that IISc, which was the best institution from India in 2016 and 2017, slipped the most among top Indian schools.

Among the top 10 Indian schools, all except IIT Bombay lost their ground. While IISc dropped 18 ranks, Calcutta University dropped 17 places to 125th in Asia. IIT Roorkee slipped 15 places to be ranked at the 93rd position.

Top IITs, including Delhi, Madras and Kanpur, slipped between 5th and 11th ranks in the 2018 rankings as against their performance in the previous year. IIT Bombay said on Tuesday that it has scored an overall 75.7 out of 100 in the Asian rankings. *(bit.ly/2xarWGG)*

Date: 24th October 2017
Publication: The Siasat Daily
Edition: Online
Journalist: NA
Headline: IIT Bombay ranked 34th in Asian, Top in India
URL: https://www.siasat.com/news/iit-bombay-ranked-34th-asian-top-india-1246245/

IIT Bombay ranked 34th in Asian, Top in India

New Delhi: Indian Institute of Technology IIT Bombay emerged the best Indian university in the Quacquarelli Symonds (QS) Asian University Rankings for 2018, which saw most of the top Indian schools slipping in their rankings in Asia.

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Among the top 10 Indian schools, all except IIT Bombay lost their ground. While IISc dropped 18 ranks, Calcutta University dropped 17 places to 125th in Asia. IIT Roorkee slipped 15 places to be ranked at the 93rd position. Top IITs, including Delhi, Madras and Kanpur, slipped between 5th and 11th ranks in the 2018 rankings as against their performance in the previous year.

The Singapore-based Nanyang Technological University (NTU) climbed two places to be the best university in Asia, overtaking the National University of Singapore which has now slipped to the second place. The Hong Kong University of Science and Technology has been ranked third, followed by Korea Advanced Institute of Science & Technology of South Korea and University of Hong Kong (HKU).

This year's ranking features over 400 universities and was compiled by assessing universities across 10 different indicators, including academic and employer reputation, the proportion of PhD qualified academic staff, and the proportion of inbound and outbound exchange students at the university, the British raking agency said.

Tsinghua University in the sixth place is China's leading institution and Japan's top university continues to be the University of Tokyo, ranked 13th, the QS said in a posting in its website.

Date: 25th October 2017
Publication: QS Wow News
Edition: Online
Journalist: NA
Headline: IIT Bombay, IIT Delhi, IIT Madras ranked among Top 50 QS Asia University Rankings 2018
URL: http://qswownews.com/iit-bombay-among-top-50/

IIT Bombay, IIT Delhi, IIT Madras ranked among Top 50 QS Asia University Rankings 2018

Indian Institute of Technology Bombay (IIT Bombay) demonstrated improvement as it moves up from the 35th to 34th place in the QS Asia University Rankings. The Indian Institute of Technology (IIT) Delhi claimed the 41st position while IIT Madras came in at 48th. IISc Bangalore, IIT Kharagpur, University of Delhi, IIT Roorkee and IIT Guwahati also made it to the top 100 universities.

In addition, IIT Bombay demonstrated a great leap forward as it was ranked 179th in the recent QS World University Rankings, moving up by a total of 40 places. Taking into account an approximate 11, 900 universities worldwide, this makes IIT Bombay one of the top 1.0% universities in Asia.

Prof Devang Khakhar, Director of the Instituet, expressed his delight as he said "I am glad that IIT Bombay continues to rise in the rankings. This is a reflection of the excellent work being done by faculty and students of the Institute".