# Monthly Coverage Dossier September 2018



#### IIT-M will be on the next 'eminence' list: Ramamurthi

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### NTU Singapore, IIT-M to offer joint PhD programme

CONTRIBUTEAU:

Indian Institute of Inchesiology, Madica, Inc., joined hands with the Narsyang Dechnological University (NIU), Simpapore, to offer a joint fill) programme. Individual Colombia fill of the Colombia f

R. Nightajam, Amerina Commutary Chair Professor, IE-M, Said in a poets release, NTU in sending a faculty delegation for a Research Collaboration Workshop is shop. A reciproral workshop is planned at NiII in early 2018. Soch insulations will attempt to get five PhD carefunders for the your programme during 2018.

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## IIT-M, Dvara sign pact to address low-income group

THE ROBERT BOSCH Centre for Data
Science and Artificial Intelligence
(RBC-DSAI) at IIT Madras has entered
into an MoU with the Dvara Group
(formerly IFMR Trust). The pact would
see the Dvara group entities — Dvara
Trust, Dvara KGFS and Dvara Research
— jointly work with IIT Madras on
initiatives that aim to advance financial access to low-income households.

#### Prepared by



# **IIT Madras A Campus of Choice**

Date: 5th September 2018 Publication: The Times of India

Edition: Chennai Page No: 3 Journalist: NA

Headline: IIT-M at 60 Institute sets goals plan series of events

URL: https://timesofindia.indiatimes.com/city/chennai/iit-m-at-60-institute-sets-goals-plans-series-of-

events/articleshow/65680035.cms

# IIT-M at 60: Institute sets goals, plans series of events

TIMES NEWS NETWORK

Chennai: As IIT Madras steps into its 60th year, the institute is marking its Diamond Jubilee with a series of events lasting through the year. The events include 'Technology Summits' showcasing its R&D and innovations in various countries including US, Canada and UK. 'Thematic Conclaves' will be held in Chennai, Mumbai, Delhi and Bangalore while 'Campus Congresses' would be hosted to bring together academic leaders from around the world.

The institute has also planned a 'Technology Day' on campus to celebrate the institute's startups and applied R&D centres.

Inaugurated on July 30, 1959 by then Union minister for scientific research and cultural affairs Humayun Kabir. IIT-M started with a batch of 120 students and was declared an Institution of National Importance in 1961.

The institute shared some of its future objectives including producing MS and PhD graduates with high employer reputation, achieving a PhD + MS graduation rate of 0.8, publishing more papers in top journals with peers in top universities and establishing two or three research centres of excellence each year.

"We have taken great strides since our Golden Jubilee in 2008 by which one may choose to measure our institute's growth and performance," director of IIT-MBhaskar Ramamurthi said.

"As we enter the Diamond Jubilee year, we are confident that we will accelerate even further and scale new heights in research, teaching, and innovation." he added.

Date: 5th September 2018

**Publication: India Education Diary** 

Edition: Online Journalist: NA

Professor: Prof Bhaskar Ramamurthi

Headline: IIT Madras enters its Diamond Jubilee year of pioneering Academic Excellence, Innovation &

cutting-edge Research

URL: <a href="http://indiaeducationdiary.in/iit-madras-enters-diamond-jubilee-year-pioneering-academic-">http://indiaeducationdiary.in/iit-madras-enters-diamond-jubilee-year-pioneering-academic-</a>

excellence-innovation-cutting-edge-research/

IIT Madras enters its Diamond Jubilee year of pioneering Academic Excellence, Innovation & cuttingedge Research

Chennai: Fuelled by a culture of academic excellence, innovation and cutting-edge research, the Indian Institute of Technology Madras steps into its 60th year, marking it by becoming the top ranked engineering institute in India for three consecutive years (NIRF Rankings). The collective contribution of alumni, faculty and students over the past six decades has driven the rise of the Institute to become a globally recognized education centre of repute.

IIT Madras is nationally and internationally known for excellence in Technical Education, Innovation, Entrepreneurship and Research besides Industrial and Educational Consultancy. Its strengths include highly motivated and talented students, qualified and dedicated faculty, comprehensive experimental and computing facilities, and well-trained technical and administrative supporting staff.

Speaking about the Institute entering its Diamond Jubilee year, Prof Bhaskar Ramamurthi, Director, IIT Madras, said, "We have taken great strides since our Golden Jubilee in 2008 in every parameter by which one may choose to measure our Institute's growth and performance. As we enter the Diamond Jubilee year, we are confident that we will accelerate even further and scale new heights in research, teaching, and innovation."

Diamond Jubilee Activities of IIT Madras

IIT Madras is marking the Diamond Jubilee year with a series of events throughout the year. The events include 'Technology Summits' in various countries to showcase IIT Madras R&D, and innovations. They will be held in locations such as the Bay Area and Houston, U.S., Toronto, Canada and London, England.

Further 'Thematic Conclaves' will also be held in Indian cities such as Chennai, Mumbai, Delhi and Bangalore. 'Campus Congresses' would be hosted to bring together academic leaders from around the world. A 'Technology Day' has also been planned on campus to celebrate the Institute start-ups and applied R&D Centres.

Objectives and targets of IIT Madras:

- $\emptyset$  To be known as the best educational research institute in the country in all the areas we are engaged in
- Ø To produce M.S. and Ph.D. graduates with high employer reputation
- Ø To make significant contributions to the technology needs of the nation
- Ø To achieve a Ph.D + M.S. graduation rate of 0.8
- $\emptyset$  + 0.5 per year per faculty member
- Ø To publish a large fraction of papers in top journals where peers in the top 50 universities
- Ø To nurture the unique strength of IIT Madras in research and development leading to technologies with immediate societal value (water, energy, housing, healthcare, education, etc.)
- Ø To establish two or three research centres of excellence each year, built around focus themes for which IIT Madras should be known globally for the national and societal impact as well as the new knowledge that they create

#### A Brief History of the Institute

Inaugurated on July 30, 1959 by Prof. HumayunKabir, the then Union Minister for Scientific Research and Cultural Affairs, IIT Madras was founded with financial and technical assistance from the then-Federal Republic of Germany with matching support from the Government of India. In 1961 it was declared as an Institution of National Importance by Parliament.

In 1959, IIT Madras had started with the first batch of 120 students. In a few years' time, the postgraduate courses and research work started. The number of students admitted each year increased gradually. As a result of the capacity expansion, IIT Madras today has well over 9,000 students enrolled in 16 departments offering B.Tech., M.Tech., M.Sc., M.S., M.B.A., M.A. and Ph.D. degrees.

The Institute has passed through various stages of development and growth in the sixty years of its existence. During the first decade, the Institute concentrated on faculty/staff recruitment, developing curricula, examination systems, placement of students, and setting up infrastructural facilities. A strong emphasis was given to academic excellence and for laying a good foundation for research.

During the next two decades, postgraduate and doctoral programmes as well as research, technology development and consultancy projects were actively promoted. From the fourth decade, the Institute experienced substantial growth on all fronts.

The historic milestones and achievements of IIT Madras in the past six decades are far too many to be enumerated in a single document. Some of the highlights have been given below:

#### Industrial collaboration

Long before it became a buzzword, IIT Madras was among the pioneers in fostering Industry-Academic collaboration. The Centre for Industrial Consultancy and Sponsored Research (IC&SR) was set up as early as 1973 to build synergistic relationships with the government, industry and sponsoring agencies, and

various service providers. The Institute has been interacting with industries, research organisations and governmental agencies for taking up consultancy and sponsored research projects.

Further, the academic programmes of the Institute are strengthened by such active interaction with the industries.

#### **IIT Madras Research Park**

To facilitate the creation of a powerful innovation and incubation ecosystem jointly with industry as a trendsetter for the country, the IIT Madras Research Park (IITMRP) was established in 2010. It is an independent company promoted by IIT Madras and its alumni. The Research Park promotes research and development by the Institute in partnership with industry.

Besides serving as a catalyst for industry—IIT Madras interaction, it is a magnet for high-quality incubatees from amongst the Institute's faculty and students, as well as external incubatees with potential for collaboration with IIT faculty members.

#### Centers of Excellence

A major initiative was to develop focussedCentres of Excellence in the Institute on areas with potentially large societal impact. Centres have already been created in IIT Madras in areas such as catalysis, combustion, water, decentralised power systems, nanotechnology, nanoelectronics, telecommunications, heritage structures, technology and policy, sustainable development and China studies. Many more are planned in near future.

The Institute also boasts of some of the state-of-the-art infrastructure and R&D facilities such as the P.G. Senapathy Centre for Computing Resources, Deshpande Centre for Communication Networks, Bhupat and Jyoti Mehta School of Biosciences, to mention a few.

#### International collaboration & Alumni Relations

The Dean's Office of International & Alumni Relations was created to focus on building alliances with peer universities globally and to leverage the alumni community for mutual benefit. In addition to close collaboration with German universities, IIT Madras has active linkages with academic and research organisations in Austria, Belgium, Canada, France, Japan, Malaysia, Nepal, The Netherlands, Russia, Singapore, Switzerland, Thailand and the USA. A Development Office in India, and Foundations in the U.S. and Canada have enabled IIT Madras to raise nearly Rs. 75 crores in contributory funding in 2017-18.

#### National Programme on Technology Enhanced Learning (NPTEL)

IIT Madras established NPTEL (National Programme on Technology Enhanced Learning) in 1999 with other IITs and IISc Bangalore to provide up with video lecture-based courses across all the streams of engineering. This initiative has gained wide popularity in India and the lectures are being used by several engineering students from across India.

Date: 5th September 2018 Publication: DaiyThanthi

Edition: Chennai Page No: 12 Journalist: NA

Headline: IIT Madras enters its Diamond Jubilee year of pioneering Academic Excellence Innovation &

cutting-edge Research



Date: 6th September 2018

Publication: NDTV Edition: Online Journalist: NA

Professor: Prof Bhaskar Ramamurthi

Headline: Founded In 1959, IIT Madras Enters Its Diamond Jubilee Year

URL: https://www.ndtv.com/education/iit-madras-enters-its-diamond-jubilee-year-1911928

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Steal The Limited Edition Watch And A Nat GEO Subscription! (Amarchitrakatha)

10 Countries It's Super Easy To Immigrate To If You Live In India (Relocation Target)

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1e2apikaIndian Institute of Technology IIT Madras, IIT Madras, IITM, IIT, diamond Jubilee Administrative block of IIT Madras

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Date: 7th September 2018 Publication: India Today

Edition: Online Journalist: NA

Professor: Prof Bhaskar Ramamurthi

Headline: IIT Madras turns 60, becomes best engineering institute in India

URL: https://www.indiatoday.in/education-today/news/story/iit-madras-turns-60-becomes-best-

engineering-institute-in-india-1333271-2018-09-06

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Date: 8th September 2018 Publication: The Better India

Edition: Online Journalist: NA

Headline: 60 Years of IIT Madras: 5 Things Done By The Iconic Institute That Transformed Lives URL: https://www.thebetterindia.com/158902/iit-madras-anniversary-innovation-news-india/

#### 60 Years of IIT Madras: 5 Things Done By The Iconic Institute That Transformed Lives

From powering entire villages to inventing new safety devices, for 60 years now, IIT-Madras has been at the forefront of change.

India's first Prime Minister Jawaharlal Nehru, the mind and spirit behind the creation of the Indian Institutes of Technology, said something on April 21 1956, during a convocation speech at IIT-Kharagpur, which captures the very essence of what he expected from students studying at these esteemed centres of higher learning.

"It is true that all your training or the training you may get here or in any other Institute, will not take you very far if there is no strength of character, strength of mind somewhere inside you, strength of purpose somewhere, about where you are going to, some objective in life, some content in life, some real function in life—not merely getting a salary and doing an odd job.

I do not call that a function. Doing something that is worthwhile and unless you have that function of doing something that is worthwhile and putting all your heart and soul into it, you do not really understand or can experience the real joy of life," he said.

As IIT-Madras, a part of the original batch of elite technological institutions envisioned by our founders, celebrates its 60th anniversary this year, it's important to remember Nehru's words.

Yes, he subsequently spoke of how graduates from the IITs must contribute to the cause of nation-building, but at its very essence, he wanted students to find that "strength of purpose" and put their "hearts and souls into it."

It's my personal belief that when innovators, scientists and engineers develop something for society, it's not primarily driven by serving some higher purpose of nation-building or social change, but a passion for science, innovation and technology.

Celebrating the 60th anniversary of this esteemed institution, here are five major initiatives from that verdant and sprawling campus in Chennai that have changed the lives of ordinary Indians.

1) Powering 71 villages in Rajasthan

Researchers at IIT-Madras, led by Professor Ashok Jhunjunwala, developed solar-powered direct current micro-grids that have powered 71 villages in Rajasthan. Partnering up with the state-owned utility company Jodhpur VidyutVitaran Nigam Limited, the Rural Electrification Corporation of India and the Centre, the Solar DC team at IIT-M found a way to supply electricity to 4,000 off-grid homes.

This was a gamechanger for the state-owned electricity utility. Linking these villages to the conventional grid would have required enormous amounts of capital to develop the necessary infrastructure (substations and power lines, among other structures), which it didn't possess. What's even remarkable is the technology behind it.

#### Lighting up lives.

In a blog post for The Better India, a project officer explained what the technology was all about.

"Have an internal distribution line with DC appliances running on DC power, and utilise solar panels and batteries which are inherently DC. Since this marries the energy-efficient DC technology with solar power solution, the size of the system falls drastically. This translates to energy and cost savings of about 50 % compared to conventional solar power solutions available today. For homes not connected to the grid, a 125-watt micro-grid with a solar panel backed up by a small battery can supply all the electricity. For connected households, the micro-grid acts as a backup power supply to let lighting, fans, TV sets, and cellphone chargers continue operating even during brownouts."

#### 2) Transforming 300 households in Telangana

Collaborating with the Telangana State Southern Power Distribution Company Limited (TSSPDCL) and Rural Electrification Corporation, a team from IIT-Madras helped supply electricity to 300 households across rural hamlets of DevarakondaMandal in Nalgonda district.

Using their solar-powered 'Inverter-less System' developed on campus, and taken on commercially by the Cygni Energy Private Limited, an institute-incubated firm, four hamlets RamunigundlaThanda, KesyaThanda, JogiThanda and MantriyaThanda in rural Telangana today have access to uninterrupted electricity. Of course, the Rs 75 lakh funding from global telecom giant Verizon did help, but this endeavour was an IIT-M driven endeavour from the start.

The IIT-Madras-driven project was completed in June 2017, and authorities can keep tabs on the project through remote monitoring.

#### What's the technology behind it?

"Constituting a 125 Wp solar panel, a 1 kWh battery, an inverter-less controller unit and DC loads, which operate on a 48V DC internal distribution line, the device has the ability to power 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," The Better India reported last year.

Unveiling a stone plaque at KesyaThanda village in DevarakondaMandal, Nalgonda district, Telangana, marking the launch of Solar DC project. Source: Facebook.

Unveiling a stone plaque at KesyaThanda village in DevarakondaMandal, Nalgonda district, Telangana, marking the launch of Solar DC project. Source: Facebook.

"Today, millions of homes in India either do not have grid connectivity or suffer from power outages for a large fraction of the day. This project heralds India's move towards a solar-powered future, without compromising on efficiency or affordability," Professor Jhunjunwala told Economic Times.

#### 3) IIT for Villages

#### Advertisement

For more than a decade, students from the campus have close worked on rural welfare and empowerment projects. Called IIT for Villages or IVil, many students have on their own time worked on various initiatives like conducting science fests for rural children in nearby villages, footwear collection drives, bicycle donation, online teaching projects for underprivileged children, online counselling sessions between farmers from Andhra Pradesh, Tamil Nadu and experts on paddy processing and animal husbandry. For the farmer-expert interactive session, the student group received assistance from the Institute of Crop Processing and Technology (IICPT) and Tamil Nadu Veterinary and Animal Sciences University (TANUVAS), among other such initiatives.

"Every year during Saarang and Shastra, which are the annual cultural fests in IIT-Madras, IViL puts up food stalls where village women cook, and volunteers serve and manage the stalls. The entire profit earned is given to the ladies. This project is aimed at giving the women confidence in income generation and self-employment," a student volunteer told The Better India.

Backstage of the food stalls where village women are engaged in cooking. Cortesy: IViL
Backstage of the food stalls where village women are engaged in cooking. Cortesy: IViL
IVil has also worked with some non-profits and CSR arms of major corporates like TVS Motors and
Murgappa Group to implement technological solutions for on ground issues as well.

#### 4) Developing India's first indigenously built smart air purifier

Unless you've been living under a rock, you know that air pollution has become a very serious issue in Indian cities, creating among other things, a massive public health crisis.

Thankfully, students from IIT-Madras have developed state-of-the-art air purifiers using their patented Effective Granular Absorption Particulate Arrester technology that among other things has features including Wi-Fi, touch interface and can be remotely monitored through a smartphone.

The institute-incubated start-up AirOK developed India's first smart air purifier called 'Vistar' that can function across homes, hospitals and commercial spaces. "Vistar 550 has a coverage area of 550 square feet. The filter will have a life of about one year, which is twice that of the air purifiers currently available in the market," said a statement from IIT Madras describing the product.

Founded in 2015, the start-up has made some real progress. "With a dual stratified filter technology, it has the capability of filtering particulates up to 0.3 microns. These particulates include volatile organic compounds, acidic and basic pollutants, to airborne bacteria and pet dander. The smart air purifier can be placed in any corner of the room where it can sense the pollution level and automate the fan speed, based on the concentrations of the pollutants," reports The Better India.

#### 5) Building a robot that detects cracks in rail tracks, and prevent train accidents

Once again, we need no introduction to the problem of rail accidents in India. Students at IIT Madras, however, have developed a solution to one of India's biggest infrastructural challenges—maintenance of railway tracks—that not only kills ordinary passengers but has also resulted in the appointment of 400 gangmen who have to visit different sites and test the tracks every year.

Students developed Artemis, a robot, which one can fit along a railway track and detect cracks as small as 2 cm with sensors, besides sending out real-time data. Measuring just 1.5 feet in length, it has six wheels which move at a speed of 1 m/s on these tracks.

"It is equipped with ultrasonic and infrared sensors to collect data and send it to a microcontroller (microchip) inside the robot. It is not only lightweight but can move on the tracks even when there is a train running on it," reports The Better India.

Speaking to the Times of India, ShashwatSahoo, a student of biotechnology and member of the Artemis team, said, "We have developed a system that is fully automatic and sends out real-time data with the accurate location of the crack for action needed. It cuts response time. It is [a]cheap solution for Indian Railways — we used commonly available material to build the device."

Left: The IIT Team behind Artemis (Source: COI IIT-M) Right: Representational image of men working on the tracks.

Left: The IIT Team behind Artemis (Source: COI IIT-M) Right: Representational image of men working on the tracks.

Moreover, there is a GPS module and GSM-enabled SIM card installed in it, which notifies authorities of cracks on railway tracks instantly and where that segment is located.

It's imperative to note that these are just five of the innovations developed by the IIT-Madras community. There are a lot more not listed here that are as important, if not more. What this article attempts to showcase is how students and researchers at IIT-Madras have used their innate passion for science and innovation to make the lives of ordinary Indians better.

Date: 12th September 2018

Publication: Life 365

Edition: Pune Page No: 10 Journalist: NA

Headline: IIT Madras An iconic institute

## IIT Madras: An iconic institute

### **UNIQUE PROJECTS**

#### FROM POWERING ENTIRE

villages to inventing new safety devices, for 60 years now, IIT-Madras has been at the forefront of change. Here's a look

elebrating the 60th anniversary of this esteemed institution, here are five major initiatives from that verdant and sprawling campus in Chennai that has changed the lives of ordinary Indians

Transforming 300 households in Telangana: Using their solar-powered 'Inverter-less System' developed on campus and taken on commercially by the Cygni Energy Private Limited, an institute-incubated firm four hamlets Ramunigundla Thanda, Kesya Thanda, Jogi Thanda and Mantriya Thanda in rural Telangana today have access to uninterrupted electricity. Of course, the Rs 75 lakh funding from global telecom giant Verizon did help but this endeavour was an IIT-M driven endeavour from the start.

Powering 71 villages in Rajasthan: Researchers at IIT-Madras, led by Professor Ashok Jhunjunwala, developed solar-powered direct current



micro-grids that have powered 71 villages in Rajasthan. Partnering up with the state-owned utility company Jodhpur Vidyut Vitaran Nigam Limited, the Rural Electrification Corporation of India and the Centre, the Solar DC team at IIT-M found a way to supply electricity to 4.000 off-grid homes.

This was a gamechanger for the state-owned electricity utility. Linking these villages to the conventional grid would have required enormous amounts of capital to develop the necessary infrastructure, which it didn't possess. What's even remarkable is the technology behind it.

IIT for villages: For more than a decade, students from the campus have closely worked on rural welfare and empowerment projects. Called IIT for Villages or IVil, many students have on their own time worked on various initiatives like conducting science fests for rural children in nearby villages, footwear collection drives, bicycle donation, online teaching projects for underprivileged children, online counselling sessions between farmers from Andhra Pradesh, Tamil Nadu and experts on paddy processing and animal husbandry. For the farmer-expert interactive session, the student group received assistance from the Institute of Crop Processing and Technology (IICPT) and Tamil Nadu Veterinary and Animal Sciences University (TANUVAS), among other such initiatives.

India's first indigenously built smart air purifier: Unless you've been living under a rock, you know that air pollution has become a very serious issue in Indian cities, creating among other things, a massive public health crisis.

Thankfully, students from ITI-Madras have developed state-of-the-art air purifiers using their patented Effective Granular Absorption Particulate Arrester technology that among other things has features including Wi-Fi, touch interface and can be remotely monitored through a smartphone.

Robot that detects cracks in rail tracks and prevent accidents: Once again, we need no introduction to the problem of rail accidents in India. Students at IIT Madras, however, have developed a solution to one of India's biggest infrastructural challenges-maintenance of railway tracks-that not only kills ordinary passengers but has also resulted in the appointment of 400 gangmen who have to visit different sites and test the tracks every year.

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Publication: DT NEXT Edition: Chennai

Page No: 8 Journalist: NA

Headline: IIT-M steps into 60th year with series of events across country

URL: https://www.dtnext.in/News/City/2018/09/12053525/1088186/IJTMadras-steps-into-60th-year-

with-series-of-events-.vpf

# IIT-M steps into 60th year with series of events across country

chema: Fuelled by a culture of academic excellence, innovation and cutting-edge research, the Indian Institute of Technology Madras steps into its 60th year, marking it by becoming the top ranked engineering institute in India for three consecutive years (NIRF Rankings).

The collective contribution of alumni, faculties and students for over the past six decades has driven the rise of the Institute to become a globally recognised education centre of repute.

IIT Madras is nationally and internationally known for its excellence in technical education, innovation, entrepreneurship and research, besides industrial and educational consultancy. Its strengths include highly motivated and talented students, qualified and dedicated faculty, comprehensive experimental and computing facilities and well-trained technical and administrative supporting staffs.

Speaking about the institute entering its diamond jubilee year, Prof Bhaskar Ramamurthy, Director, IIT Madras, said, "We have taken great strides since our golden jubilee in 2008 in every parameter by which one may choose to measure our institute's growth and performance. As we enter the diamond jubilee year, we are confident that we will accelerate even further and scale new heights in research, teaching, and innovation."

IIT Madras is marking the diamond jubilee year with a series of events throughout the year. The events include 'Technology Summits' in various countries to showcase IIT Madras R&D and innovations. They will be held in locations such as the Bay Area and Houston, U.S., Toronto, Canada and London, England

Further "Thematic Conclaves' will also be held in Indian cities such as Chennai, Mumbai, Delhi and Bangalore 'Campus Congresses' would be hosted to bring together academic leaders from around the world. A 'Technology Day' has also been planned on campus to celebrate the Institute start-ups and applied R&D Centres. Date: 30th September 2018 Publication: The Hindu

Edition: Delhi/Mumbai/Chennai

Page No: 11

Journalist: VikasPathak

Professor: Prof Bhaskar Ramamurthi

Headline: IIT-M will be on the next 'eminence' list: Bhaskar Ramamurthi

URL: https://www.thehindu.com/education/colleges/iit-m-will-be-on-the-next-eminence-list-bhaskar-

ramamurthi/article25084371.ece

## IIT-M will be on the next 'eminence' list: Ramamurthi

'Missed first list as only 3 public institutions were chosen'

VIKAS PATHAK

Expressing confidence that the Indian Institute of Technology (IIT) Madras will be on the next list of "institutions of eminence", its director, Bhaskar Ramamurthi, said the college did not make it to the first one because just three public institutions were chosen and the QS rankings rather than the official NIRF rankings were used to compile it.

In an interview with The Hindu, Professor Ramamurthi said, "The empowered committee came up with a list of eight public institutions, which included IIT Madras. The government decided on only three public and three private institutions in the first instance. The UGC (University Grants Commission) decided the three on the basis of the QS rankings, where two other IITs were ahead of us. We wish they had used the official NIRF (National Institutional Ranking Framework) rankings instead.

He said that IIT Madras would certainly be on the next list.

The empowered committee for selecting these institutions is headed by former Chief Election Commissioner N. Gopalaswami.

Asked whether the category of greenfield institu-



Bhaskar Ramamurthi

tions, which are not yet born, should have been included in the list, the IIT-M director said, "The title eminence is misleading. Perhaps they wanted to break into the top gobal rankings. And private institutions say they can do much better with autonomy. The thought behind their selection was perhaps to give them that. Later, it was also decided to bring greenfield institutions after assessing their proposals. I agree on the nomenclature part. But the empowered committee is eminent and I am sure they knew what they were doing. They are the best persons to answer this question."

#### 'Perception is reality'

Professor Ramamurthi added that breaking into the rankings did not require much on the part of even new institutions, as these were heavily survey-driven. "You can bring in some people and raise your ranking..." he said, adding that Germany and the U.S. did not care much for global rankings.

"However, perception is reality and there is no harm in trying to enhance our institutional rankings," he said, adding that the "eminence" tag would add 20% to the budget of IIT Madras.

#### Difference in salary

Saying that the IITs had asked the Centre to permit them to hire regular rather than just contractual foreign faculty, Professor Ramamurthi said that there should be no difference in salary on the basis of nationality. "That will be unjust to some of our faculty, who have made us what we are without caring for high salaries. If at all we move towards differential salaries, these should be based on achievement rather nationality."

On the NIRF, he said it was a good, largely databased ranking framework, but added that sometimes private institutions ranked higher on placements as their students got placed through the placement cell, which is taken into account, while many PhD students of ITS were placed through their guides.

# IIT Madras is a an industry friendly Institute

Date: 3rd September 2018 Publication: The Times of India

Edition: Chennai Page No: 2 Journalist: NA

Professor: Prof RavindraGettu

Headline: IIT-M USA Firm join hands for research

# IIT-M, USA FIRM JOIN HANDS FOR RESEARCH

Indian Institute of Technology (IIT), Madras has signed a memorandum of understanding (MoU) with Continental, a technology company, for joint research in and high computing platform and cybersecurity for powertrain applications. The research will focus on intrusion detection and reporting on powertrain applications.

Ravindra Gettu, dean (Industrial Consultancy and Sponsored Research), IIT-Madras, said, "Our respective areas of expertise are complementary, and I am confident of the results." Continental's MoU with IIT Madras earlier this year was for advanced research in machine learning and bio-inspired neural networks for Continental's ADAS (Advanced Driver Assistance Systems) business." Soorajith Radhakrishan, head, Continental's Powertrain, India, said "Vehicles of tomorrow are computers on wheels, opening up areas of research hitherto unaddressed."

Date: 3rd September 2018 Publication: The Times of India

Edition: Chennai Page No: 2 Journalist: NA

Headline: IIT-M to teach innovation to Chennai school students

## IIT-M to teach innovation to Chennai school students

TIMES NEWS NETWORK

Indian Institute of Technology, Madras has launched a year-long education initiative to prepare government and private school students for the challenges of 21st century.

The Institutes' Entrepreneurship Cell (E-Cell) launched the 'E21' campaign to focus on skills such as innovation, creativity, entrepreneurship, leadership and risk-taking among 150 students from various schools in Chennai. Through different workshops and lectures series, educators will teach students about how to think creatively of the control of



students in various aspects of life. Raghavendra Hunasgi, global shaper, World Economic Forum (WEF), said at the launch, "It's high time we reconsider our style of education and tailor the courses that will create entrepreneurs and innovators. The curriculum build a decade ago will no longer hold any relevance."

Date: 20th September 2018 Publication: Deccan Chronicle

Edition:Chennai

Page No: 4 Journalist: NA

Headline: IIT-M-ONGC tie up to develop software for offshore platforms

## IIT-M-ONGC tie up to develop software for offshore platforms

Chennai, Sep 19 (PTI) Indian Institute of Technology-Madras Wednesday announced its collaboration with Oil and Natural Gas Corporation Limited to develop a software, for monitoring its over 280 fixed offshore platforms besides enhancing operational life and reducing operating costs. ONGC's existing offshore platforms in Mumbai have been operational for more than three decades. "Though the design life has exceeded in some cases, oil and gas production still continues as their reservoirs are producing," a statement from IIT-Madras said. The collaboration would enhance operational life cycle of ONGC's existing platforms and reduce running and operating costs by optimum use of offshore survey needs, it said. An agreement for the project 'Development of Structural Integrity Management System (SIMS) For Offshore Platforms of ONGC' was signed between both entities recently. The institute will develop a database for all the 280-plus platforms of ONGC and develop software for Structural Integrity Management System (SIMS) as we-II. IIT-M's ocean engineering department professor Dr S Nallayarasu said, "a technology-based tool will be developed for monitoring, assessment, inspection and maintenance of structural integrity of existing platforms to fulfil operational and regulatory requirements for prolonged production of oil and gas."

Date: 20th September 2018
Publication:The Economic Times

Edition:Chennai

Page No: 2 Journalist: NA

Headline: IIT-M and ONGC Tie Up for Offshore Platform Software



Date: 20th September 2018
Publication:The Financial express

Edition:Online Journalist: NA

Headline: IIT Madras-ONGC tie-up to develop software for monitoring offshore platforms

URL: <a href="https://www.financialexpress.com/industry/iit-madras-ongc-tie-up-to-develop-software-for-monitoring-offshore-platforms/1319420/">https://www.financialexpress.com/industry/iit-madras-ongc-tie-up-to-develop-software-for-monitoring-offshore-platforms/1319420/</a>

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By: PTI | Chennai | Published: September 19, 2018 7:17 PM

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IIT madras ONGC ties up, monitoring offshore platforms, ONGC, SIMS, Offshore Platforms

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Date: 20th September 2018
Publication:India Education Diary

Edition:Online Journalist: NA

Professor: Prof. RavindraGettu

Headline: IIT Madras to collaborate with IEOT-ONGC to enhance life of Offshore Platforms and

reduce operating costs

URL: http://indiaeducationdiary.in/iit-madras-collaborate-ieot-ongc-enhance-life-offshore-platforms-

reduce-operating-costs/

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Date: 20th September 2018 Publication:Business Standard

Edition:Online Journalist: NA

Headline: IIT Madras, ONGC sign agreement to boost operational lifecycle of platforms

<u>URL:https://www.business-standard.com/article/companies/iit-madras-ongc-sign-agreement-to-boost-operational-lifecycle-of-platforms-118091901065</u> 1.html

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Date: 20th September 2018 Publication: The Hans India Edition:Delhi/Hyderabad

Page No: 7 Journalist: NA

Professor:Prof Dr S Nallayarasu

Headline: IIT-Madras-ONGC to develop software for monitoring offshore platforms

URL: <a href="http://www.thehansindia.com/posts/index/Young-Hans/2018-09-20/IIT-Madras-ONGC-to-">http://www.thehansindia.com/posts/index/Young-Hans/2018-09-20/IIT-Madras-ONGC-to-</a>

develop-software-for-monitoring-offshore-platforms-/412921

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IIT-M's ocean engineering department professor Dr S Nallayarasu said, "a technology-based tool will be developed for monitoring, assessment, inspection

and maintenance of structural integrity of existing platforms to fulfil operational and regulatory requirements for prolonged production of oil and gas," SIMS is a process for ensuring the continued fitness of offshore structures that exceed designated life years.



Date: 20th September 2018 Publication:The Indian Saga

Edition:Online Journalist: NA

Professor: Prof. RavindraGettu and Prof S Nallayarasu

Headline: IIT Madras to Collaborate with IEOT - ONGC to Enhance Life of Offshore Platforms

URL: <a href="http://theindiasaga.com/social-sector/iit-madras-to-collaborate-with-ieot-ongc-to-enhance-life-of-">http://theindiasaga.com/social-sector/iit-madras-to-collaborate-with-ieot-ongc-to-enhance-life-of-</a>

offshore-platforms

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Date: 20th September 2018

Publication:NDTV Edition:Online Journalist: NA

Professor: Prof. RavindraGettu and Prof SNallayarasu

Headline: IIT Madras, IEOT-ONGC Collaborate To Develop Database Management Systems For

**Offshore Platforms** 

 $\underline{\textbf{URL:https://www.ndtv.com/education/iit-madras-ieot-ongc-collaborate-to-develop-database-}}$ 

management-systems-for-offshore-platforms-1918936

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Date: 20th September 2018 Publication: Millennium Post Edition: Delhi / Kolkata

Page No: 13 Journalist: NA

Professor:Prof SNallayarasu

Headline: IIT-M, ONGC tie up to develop software for monitoring offshore platforms

URL:http://www.millenniumpost.in/business/iit-m-ongc-tie-up-to-develop-software-for-monitoring-

offshore-platforms-319490

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Publication: The New Indian Express

Edition:Chennai

Page No: 3 Journalist: NA

Professor:Prof S Nallayarasu

Headline: IIT, ONGC sign MoU to reduce running cost

URL: http://www.newindianexpress.com/cities/chennai/2018/sep/20/iit-ongc-sign-mou-to-reduce-

running-cost-1874523.html

### HT, ONGC sign MoU to reduce running cost

EXPRESS NEWS SERVICE @Chennal

THE Indian Institute of Tech-THE Indian Institute of Tech-nology-Madras (IET-M) has collaborated with the Oil and Natural Gas Corporation Lim-ited (ONGC) to enhance the operational life cycle of existoperational tile cycle of exist-ing oil platforms and reduce running and operating cost, according to a statement is-sued by the inetitute on Wednesday. "The IFT Madras is going to

wednesslay.

The IIT Madras is going to develop a database management system for all the 280-plus platforms of the ONGC and develop software for Structural Integrity Management System (SIMS) as well, the statement said.

The existing offshore platforms in Mumbal have been operational for more than three decades. Though the design life has exceeded in some cases, oil and gas production still continues as their reservoirs are producting. Hence considerable effort has been made on maintaining the attractural stability and atrength of those platforms for the last 10 to 15 years in terms of mitigation measures such as underwater strengthening of members, removal of marine growth and many other activities including load shedding in some cuses, 'the statement said.

The project is being spear-besided from IIT Madras by S Nailagarnau, Professor in the Department of Ocean Engineering, who has over 25 years of experience in oil and gas industry, research and teaching.

#### TO DEVELOP SOFTWARE

The IIT-M will develop a database management system for all the platforms of the ONSC and also develop a software for Structural integrity Management System

Date: 20th September 2018 Publication: Jagran Josh

Edition:Online Journalist: NA

Professor:Prof RavindraGettu, Prof Bhaskar Ramamurthi

Headline: IIT Madras to develop database management system for ONGC offshore platforms

 $\underline{\mathsf{URL}:} \mathsf{https:}//\mathsf{www.jagranjosh.com/news/iit-madras-to-develop-database-management-system-for-ong c-database-management-system-for-ong c-database-mana$ 

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Date: 20th September 2018 Publication: News Boss

Edition:Online
Journalist: NA

Headline: IIT Madras, ONGC sign agreement to boost operational lifecycle of platforms

<u>URL:http://newsboss.in/ly/9hWG1V/IIT-Madras-ONGC-sign-agreement-to-boost-operational-lifecycle-</u>

of-platforms

#### IIT Madras, ONGC sign agreement to boost operational lifecycle of platforms

5 days ago Business / Business Standard/

Indian Institute of Technology, Madras (IITM) has announced collaboration with Oil and Natural Gas Corporation Limited (ONGC) to enhance the operational life cycle of the latter's existing platforms and reduce running and operating cost by optimum use of offshore survey requirements.IITM is going to develop a Database Management System for all the more than 280 platforms of ONGC and develop software for Structural Integrity Management System (SIMS) as well.Industrial Consultancy and Sponsored Research, IIT Madras, and Institute of Engineering and Ocean Technology (IEOT), ONGC, signed the agreement for the collaborative R&D project titled 'Development of Structural Integrity Management System (SIMS) For Offshore Platforms of ONGC'.The existing offshore platforms in Mumbai High have been operational for more than three decades. Though the design life has exceeded in some cases, oil and gas production still continues as their reservoirs are producing. Hence considerable effort has .

Date: 20th September 2018 Publication:India Finance news

Edition:Online Journalist: NA

Professor:Prof S Nallayarasu

Headline: IIT Madras, ONGC sign agreement to boost operational lifecycle of platforms

URL: <a href="https://www.indiafinancenews.com/iit-madras-ongc-sign-agreement-to-boost-operational-">https://www.indiafinancenews.com/iit-madras-ongc-sign-agreement-to-boost-operational-</a>

lifecycle-of-platforms/

#### IIT Madras, ONGC sign agreement to boost operational lifecycle of platforms

rig, oil, ongcIndian Institute of Technology Madras (IIT-M) has announced a collaboration with Oil and Natural Gas Corporation Limited (ONGC) to enhance the operational life cycle of the latter's existing platforms and reduce running and operating cost by optimum use of offshore survey requirements. IIT-M is going to develop a database management system for all the more than 280 platforms of ONGC and develop software for structural integrity management system (SIMS) as well.Industrial Consultancy and Sponsored Research, IIT Madras, and Institute of Engineering and Ocean Technology (IEOT), ONGC, signed the agreement for the collaborative R&D project titled 'Development of Structural Integrity Management System (SIMS) For Offshore Platforms of ONGC'. The existing offshore platforms in Mumbai High have been operational for more than three decades. Though the design life has exceeded in some cases, oil and gas production still continues as their reservoirs are producing. Hence considerable effort has been spent on maintaining the structural stability and strength of these platforms for the past 10 to 15 years by both ONGC and IEOT in terms of mitigation measures such as underwater strengthening of members, removal of marine growth and many other activities, including load shedding in some cases. The synergy between IEOT and IIT-M will be continued to develop a technology-based tool for monitoring, assessment, inspection and maintenance of structural integrity of existing platforms to fulfil operational and regulatory requirements for prolonged production of oil and gas, said S Nallayarasu, professor in the department of ocean engineering. The project also aims to develop the location-based design criteria specific to the platforms operated by ONGC in this region. This will become a starting point for the development of codes and standards, which do not exist as of now, for offshore platforms in India. SIMS software is being developed in line with the Government of India's Make in India policy under the umbrella of ONGC-PAN IIT programme.

Date: 20th September 2018 Publication:Trending 360

Edition:Online Journalist: NA

Headline: IIT, ONGC Sign MoUTo Reduce Running Cost

URL: <a href="https://trending360.in/2018/09/19/iit-ongc-sign-mou-to-reduce-running-cost/">https://trending360.in/2018/09/19/iit-ongc-sign-mou-to-reduce-running-cost/</a>

#### IIT, ONGC Sign MoUTo Reduce Running Cost

CHENNAI: The Indian Institute of Technology-Madras (IIT-M) has collaborated with the Oil and Natural Gas Corporation Limited (ONGC) to enhance the operational life cycle of existing oil platforms and reduce running and operating cost, according to a statement issued by the institute on Wednesday. "The IIT Madras is going to develop a database management system for all the 280-plus platforms of the ONGC and develop software for Structural Integrity Management System (SIMS) as well," the statement said.

The existing offshore platforms in Mumbai have been operational for more than three decades. Though the design life has exceeded in some cases, oil and gas production still continues as their reservoirs are producing.

"Hence considerable effort has been made on maintaining the structural stability and strength of these platforms for the last 10 to 15 years in terms of mitigation measures such as underwater strengthening of members, removal of marine growth and many other activities including load shedding in some cases," the statement said. The project is being spearheaded from IIT Madras by S Nallayarasu, Professor in the Department of Ocean Engineering, who has over 25 years of experience in oil and gas industry, research and teaching.

Date: 20th September 2018 Publication: Devdicourse

Edition: Online Journalist:NA

Professor:Prof S Nallayarasu

Headline: IIT Madras announces its collaboration its collaboration with ONGC to develop software

 $\textbf{URL:} \ \underline{\textbf{https://www.devdiscourse.com/Article/education/186656-iit-madras-announces-its-collaboration-leaves} \\$ 

<u>its-collaboration-with-ongc-to-develop-software</u>

#### IIT Madras announces its collaboration its collaboration with ONGC to develop software

Devdiscourse News Desk 19 Sep 2018, 05:50 PM India

Indian Institute of Technology-Madras Wednesday announced its collaboration with Oil and Natural Gas Corporation Limited to develop a software, for monitoring its over 280 fixed offshore platforms besides enhancing operational life and reducing operating costs.

ONGC's existing offshore platforms in Mumbai have been operational for more than three decades. "Though the design life has exceeded in some cases, oil and gas production still continues as their reservoirs are producing," a statement from IIT-Madras said.

The collaboration would enhance operational life cycle of ONGC's existing platforms and reduce running and operating costs by optimum use of offshore survey needs, it said.

An agreement for the project 'Development of Structural Integrity Management System (SIMS) For Offshore Platforms of ONGC' was signed between both entities recently. The institute will develop a database for all the 280-plus platforms of ONGC and develop software for Structural Integrity Management System (SIMS) as well.

IIT-M's ocean engineering department professor Dr. S Nallayarasu said, "a technology-based tool will be developed for monitoring, assessment, inspection, and maintenance of structural integrity of existing platforms to fulfill operational and regulatory requirements for prolonged production of oil and gas." SIMS is a process for ensuring the continued fitness of offshore structures that exceed designated life years.

Date: 20th September 2018 Publication:India Com

Edition:Online Journalist: NA

Headline: IIT-M-ONGC tie-up to develop software for monitoring offshore platforms

URL: <a href="http://www.india.com/news/agencies/iit-m-ongc-tie-up-to-develop-software-for-monitoring-">http://www.india.com/news/agencies/iit-m-ongc-tie-up-to-develop-software-for-monitoring-</a>

offshore-platforms-3335004/

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Date: 21st September 2018 Publication: News today

Edition: Chennai

Page No: 3 Journalist: NA

Headline: IIT-M to develop new software for ONGC

## IIT-M to develop new software for ONGC

◆ Inks pact to enhance operational life cycle of existing platforms

NT Bureau

Chennai, Sept 20.

Indian Institute of Technology Madras (IIT-M) is collaborating with Oil and Natural Gas Corporation Limited (ONGC) to enhance the operational life cycle of existing platforms and reduce running and operating cost by optimum use of offshore survey requirements.

According to a press release, IT-M is going to develop a database management system for all the 280-plus platforms of ONGC and develop software for Structural Integrity Management System (SIMS) as well.

HT-M Dean (Industrial Consoltancy and Sponsored Research)
Ravindra Gettu and Institute of
Engineering and Ocean Technology (IEOT), ONGC, head Dinesh
Kumar, signed the agreement for
the collaborative R&D project
titled 'Development of Structural
Integrity Management System
(SIMS) For Offshore Platforms of
ONGC here recently.

Speaking about the initiative, Havindra Gettu said, This is



IIT-M Dean (Industrial Consultancy and Spensored Research)
Revindra Gettu and Institute of Engineering and Ocean
Technology (IEOT), ONGC, head Dinesh Kumar exchanging the
MaU in Chennai recently.

an important collaboration that has the potential to bring about significant results. We are sure this will be the first of many such tie-ups between HT Madras and ONGC.

Speaking on the occasion, Di-

nesh Kumar said, This kind of collaboration will go a long way in benefiting the country. This is part of a concerted effort to further industry-academic collaboration and a good start has been made between HT Madras and ONGC.

#### THE OBJECTIVES:

- Development of database man agenum system for 280+ platforms
- 2. Development of software for SIMS
- Development of reliability analysis scheme for fatigue life of tubular joints
- Development of Rink Based Underwater Inspection Methodology (RBUI)
- 5. Development of RBUI tool
- Carrying out RBUI campaign for 15 platforms
- Implementation of developed software at ONGC premises and training ONGC executives for further use of the robust system.
- To develop the location based design criteria specific to the platforms operated by ONGC

The project is being spearheaded from UT-M by S Nallayarasu, Professor in the Department of Ocean Engineering. Date: 21st September 2018 **Publication: The Trinity Mirror** 

Edition: Chennai

Page No: 3 Journalist: NA

Headline: IIT Madras to collaborate with IEOT for cost cuttings

### IIT Madras to collaborate with IEOT for cost cuttings

Management System for all the 280-plus platforms of ONGC and develop software for Structural Integrity Management System (SIMS) as well. Prof. Ravindra Getta, Dean Industrial Consulturey and Someoned Research

and Sponsored Research), HT Madras, and Mr. Dinesh Kumar, Executive Director, Head of Institute of Engineering and Ocean Technology (IEOT), ONGC, Panyel, signed the agreement for the Collaborative R&D project titled 'Development of Structural Integrity of Structural Integrity Management System (SIMS) For Offshore Platforns of ONGC here on 12th September 2018. Speaking about the importance of this initiative, Prof. Ravindra Gettu said, "This is on important."

This is an important collaboration that has the potential to bring about significant results. We are were this will be the first of many such tie-ups between III' Madras and ONGC:"

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The project is being spearheaded from IIT Madras by Dr. S. Nallayarusu, Professor in the Department of Ocean Engineering who has over 25 years of experience in Oil and Gas industry, research and teaching. Prior to joining IITM,

his industry experience and structural integrity his industry experience includes offshore structures and field development, structural auditing and verification, port and harbor development, marine terminals for oil and gas, FSRU-LNG facilities and FPSO's. Speaking about the challenges involved in this project, Dr. Nullayarasu, said, "The IECT and Department of Ocean Engineering, IIT Another notable feature Madras, has been working of this project is to develop on several collaborative the location based design projects such as non-internal collaboration of offshore platforms of the project of the pr

assessment in the past. The synergy between IEOT and IITM will be continued to develop a technology based tool for monitoring, assessment, inspection and maintenance of structural integrity of existing platforms to fulfill operational and regulatory requirements for prolonged production of oil & gas."

Publication: The Hindu Business Line

Edition: Chennai / Delhi / Mumbai / Pune / Bangalore / Hyderabad / Kolkata / Kochi / Ahmedabad /

Chandigarh
Page No: 7
Journalist: NA

Professor:Prof R Nagarajan

Headline: IIT Madras ties up with Singapore's Nanyang Tech University for joint PhD prog

URL: https://www.thehindubusinessline.com/news/education/iit-madras-ties-up-with-singapores-

nanyang-tech-university-for-joint-phd-prog/article25006083.ece

## NTU Singapore, IIT-M to offer joint PhD programme

#### OUR BUREAU

Chennai, September 21

Indian Institute of Technology-Madras, has joined hands with the Nanyang Technological University (NTU), Singapore, to offer a joint PhD programme. Infosys co-founder—Kris—Gopalakrishnan, an alumnus of ITFM, has agreed to sponsor five students annually totrave and stay at NTU (upto 18 months) as part of this programme.

R Nagarajan, Alumni Community Chair Professor, IIT-M, said in a press release, NIO is sending a faculty delegation for a Research Collaboration Workshop. A reciprocal workshop is planned at NIO in early 2019. Both institutions will attempt to get five PhD candidates for the joint programme during 2019.

Gopalakrishnan said, "I strongly believe in international collaboration in research so that diverse perspectives can be brought to solve global challenges. NTU and III-M are research leaders in many complementary areas and I am sure this collaboration will help advance research in both institutes."

BVR Chowdari, Senior Executive Director, President's Office, School of Materials Science and Engineering, NTU, said "the very fact that NTU has set up an office named NTU India Connect signifies the strong intent to collaborate with Indian institutes of higher learning, IIT-M is one of the first few NTU has chosen in view of the existing strong relations, which will now be strengthened."

Publication:UNI Edition:Online Journalist:NA

Headline: IIT-Madras to offer joint Ph D prog with NTU, Singapore

URL: <a href="http://www.uniindia.com/iit-madras-to-offer-joint-ph-d-prog-with-ntu-">http://www.uniindia.com/iit-madras-to-offer-joint-ph-d-prog-with-ntu-</a>

singapore/states/news/1357393.html

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#### IIT-Madras to offer joint Ph D prog with NTU, Singapore

Chennai, Sep 21 (UNI) The Indian Institute of Technology, Madras, (IIT-M) on Friday announced that it has joined hands with the Nanyang Technological University (NTU), Singapore, to offer joint Ph.D. program.

Infosys Co-founder Kris Gopalakrishnan, a distinguished Alumnus of IIT-M has agreed to sponsor five IIT-M students annually for travel to and stay at NTU (upto 18 months) as part of this program.

The IIT-M alumni community in Singapore was strong and active, and would provide various forms of support to the Institute, and to India, a release from IIT-M said here.

Both NTU and IIT-M ware committed to making this a two-way relationship.

Mr Kris Gopalakrishnan said "I strongly believe in international collaboration in research so that diverse perspectives can be brought to solve global challenges."

"NTU and IIT Madras are research leaders in many complimentary areas and I am sure that this collaboration will help advance research in both institutes". he said.

Date: 22nd September 2018 Publication:Jagran Josh

Edition:Online Journalist: NA

Professor:Prof R Nagarajan

Headline: IIT Madras, Singapore's Nanyang Technological University sign pact to offer joint PhD

URL: <a href="https://www.jagranjosh.com/news/iit-madras-singapore-nanyang-technological-university-sign-nan

pact-to-offer-joint-phd-146949

#### IIT Madras, Singapore's Nanyang Technological University sign pact to offer joint PhD

The Indian Institute of Technology Madras (IIT-Madras) and Singapore-based Nanyang Technological University (NTU) has joined hands to offer joint doctoral programme (PhD). The first round of discussions was held recently during Prime Minister NarendraModi's visit to the City State in June and a pact was signed in this regard. Water and photonics among others could be key focus areas of the programme, Alumni Community Chair Professor of the Indian Institute of Technology-Madras Prof R Nagarajan said.

Officials of both the institutions met for the first time recently at IIT-Madras since the signing of the memorandum of understanding on June 1 this year during the Prime Minister's visit to NTU. "NTU is sending a delegation of faculty for a Research Collaboration Workshop at IIT Madras. A reciprocal Workshop is planned at NTU in early 2019. Both institutions will attempt to get 5 PhD candidates enrolled in the joint program during 2019. IIT Madras alumni in Singapore will continue to meet regularly, and look for ways to give back to IIT Madras and to India," Nagarajan was quoted as saying. Various aspects of water such as purification, recycling, delivery system, and photonics among other focus areas were shortlisted during the talks, Nagarajan said.

Publication:NDTV Edition:Online Journalist: NA

**Headline: IIT Madras, NTU Singapore To Offer Joint Doctoral Programme** 

URL: https://www.ndtv.com/education/iit-madras-ntu-singapore-to-offer-joint-doctoral-programme-

1920254

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Publication:The Week

Edition:Online Journalist: NA

**Headline: BIZ-IITM-DOCTORAL PROGRAMME** 

URL: <a href="https://www.theweek.in/wire-updates/business/2018/09/21/mcm24-biz-iitm-">https://www.theweek.in/wire-updates/business/2018/09/21/mcm24-biz-iitm-</a>

doctoral%20programme.html\

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Publication: The New Indian express

Edition: Chennai Page No: 4 Journalist: NA

Headline: IIT Madras, Nanyang Technological University to offer joint doctoral degree

URL: http://www.newindianexpress.com/cities/chennai/2018/sep/22/iit-madras-nanyang-

technological-university-to-offer-joint-doctoral-degree-1875510.html

### IIT-M, NTU to offer joint doctoral degree

#### Infosys co-founder to sponsor scholars

Infosys co-founder Kris
Gopalakrishnan, an alumnus of IITMadras, will sponsor five students
from the institute annually for
travel and stay at NTU for up to 18
months as part of this program,
the release said. It added that the
IIT-M alumni community in
Singapore will provide various
forms of support

#### **EXPRESS NEWS SERVICE**

@ Chennal

INDIAN Institute of Technology-Madras (IIT-M) has joined hands with Nanyang Technological University (NTU), Singapore, to offer a joint Ph.D program, a release from the institute said on Friday.

Infosys co-founder Kris Gopalakrishnan, a distinguished alumnus of the institute, will sponsor five IIT-Madras students annually for travel to and stay at NTU for up to 18 months as part of this program, the release said adding that IIT-M alumni community in Singapore is strong and active and will provide various forms of support.

Bhaskar Ramamurthi, Director, IIT-M, exchanged the MoU for the program with NTU on June 1 in the presence of Prime Minister Narendra Modi. The NTU president Subra Suresh, is also an alumnus of IIT-M, the release said.

Date: 22nd September 2018 Publication: India .com

Edition: Online Journalist: NA

Headline: IIT(M)-NTU to offer joint doctoral programme

URL: <a href="http://www.india.com/news/agencies/iitm-ntu-to-offer-joint-doctoral-programme-3339426/">http://www.india.com/news/agencies/iitm-ntu-to-offer-joint-doctoral-programme-3339426/</a>

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Date: 22nd September 2018 Publication: Career360

Edition: Online Journalist: NA

Headline: IIT Madras, Nanyang Technological University to offer joint doctoral program

URL: https://news.careers360.com/iit-madras-nanyang-technological-university-offer-joint-doctoral-

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Date: 22nd September 2018 Publication:Business standard

Edition:Online Journalist: NA

Headline: IIT(M)-NTU to offer joint doctoral programme

URL: https://www.business-standard.com/article/pti-stories/iit-m-ntu-to-offer-joint-doctoral-

programme-118092100894\_1.html

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Date: 22nd September 2018
Publication:The Times of India

Edition:Chennai Page No: 5

Journalist: NA

Headline: IIT ties up with NTU Singapore for PhD programmes

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Date: 23rd September 2018 Publication: India Today

Edition: Online Journalist: NA

Headline: IIT Madras, NTU Singapore to offer Joint Doctoral Programme: Check key focus areas here

URL: https://www.indiatoday.in/education-today/news/story/iit-madras-ntu-singapore-pm-modi-divd-

1346402-2018-09-22

IIT Madras, NTU Singapore to offer Joint Doctoral Programme: Check key focus areas here

IIT-Madras and Singapore-based Nanyang Technological University (NTU) held the first round of discussions at the campus on a joint doctoral programme to be offered under a pact signed during Prime Minister NarendraModi's visit to Singapore in June.

**KEY FOCUS AREAS** 

Water and photonics among others could be key focus areas of the programme, Alumni Community Chair Professor of the Indian Institute of Technology-Madras Professor R Nagarajan told PTI on Friday, i.e. September 21.

Officials of both the institutions met for the first time recently at IIT-Madras since the signing of the memorandum of understanding on June 1 this year during PM Modi's visit to Nanyang Technological University in Singapore.

Read: CBSE alert! Commercial websites are using Board's look-alike pages with logo on social media

OTHER FOCUS AREAS

Various aspects of water such as delivery system, recycling, purification, and photonics among other focus areas were shortlisted during the talks, Nagarajan said.

INFOSYS CO-FOUNDER TO SPONSOR FIVE IIT-MADRAS STUDENTS

Meanwhile, an IIT-Madras release said, Infosys co-founder Kris Gopalakrishnan, an alumnus of IIT-Madras, has agreed to sponsor five students of the institute annually for stay at NTU (upto18 months) as part of the programme.

IIT-Madras was already having 18 such joint Phdprogrammes in association with universities around the world including the USA with the participation 56 PhD students.

Read: Declared! SBI Result 2018: SBI Clerk Main Result 2018 out @ sbi.co.in/careers

Date: 23rd September 2018 Publication: Kashmir Reader

Edition: Online Journalist: NA

Headline: IIT-Madras-NTU to offer joint doctoral programme

URL: <a href="https://kashmirreader.com/2018/09/23/iit-madras-ntu-to-offer-joint-doctoral-programme/">https://kashmirreader.com/2018/09/23/iit-madras-ntu-to-offer-joint-doctoral-programme/</a>

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Date: 23rd September 2018 Publication: Connected to India

Edition: Online Journalist: NA

Headline: NTU, IIT Madras to offer joint PhD programme as part of research collaboration efforts

URL: <a href="https://www.connectedtoindia.com/ntu-iit-madras-to-offer-joint-phd-programme-as-part-of-">https://www.connectedtoindia.com/ntu-iit-madras-to-offer-joint-phd-programme-as-part-of-</a>

research-collaboration-efforts-459

NTU, IIT Madras to offer joint PhD programme as part of research collaboration efforts

#India News Singapore

Ctol News Desk Sunday, September 23rd 2018

The Indian Institute of Technology (IIT), Madras has joined hands with the Nanyang Technological University (NTU), Singapore, to offer a joint PhD programme. Infosys co-founder, Kris Gopalakrishnan, an alumnus of IIT Madras, has agreed to sponsor five IIT Madras students annually for travel to and stay at NTU (up to 18 months) as part of this programme.

The MoU will not only strengthen IIT Madras' collaborations with NTU, but will also enable the exchange of an equal number of scholars from IIT Madras to NTU.

The MoU will not only strengthen IIT Madras' collaborations with NTU, but will also enable the exchange of an equal number of scholars from IIT Madras to NTU. Photo courtesy: ntu.edu.sg

R Nagarajan, Alumni Community Chair Professor, IIT Madras, in a press release issued by the institute said, "NTU is sending a delegation of faculty for a Research Collaboration Workshop at IIT Madras. A reciprocal workshop is planned at NTU in early 2019. Both institutions will attempt to get five PhD candidates enrolled in the joint programme during 2019. IIT Madras alumni in Singapore will continue to meet regularly, and look for ways to give back to IIT Madras and to India."

The MoU will not only strengthen IIT Madras' collaborations with NTU, but will also enable the exchange of an equal number of scholars from IIT Madras to NTU. An alumni meeting held on June 2 also served to strengthen the bond between alumni and their alma mater.

Gopalakrishnan said, "I strongly believe in international collaboration in research so that diverse perspectives can be brought to solve global challenges. NTU and IIT Madras are research leaders in many complementary areas and I am sure that this collaboration will help advance research in both institutes."

Publication: The Hindu Business Line

Edition: Online Journalist: NA

Professor: Prof NandanSudarsanam

Headline: Dvara, Robert Bosch sign MoU for data science at IIT Madras

URL: https://www.thehindubusinessline.com/news/education/dvara-robert-bosch-sign-mou-for-data-

science-at-iit-madras/article25037200.ece

#### Dvara, Robert Bosch sign MoU for data science at IIT Madras

The Dvara Group (formerly IFMR Trust) has entered into a Memorandum of Understanding with The Robert Bosch Centre for Data Science and Artificial Intelligence (RBC-DSAI) at IIT Madras. The collaboration would see the Dvara group entities - Dvara KGFS (a rural wealth management institution), Dvara Trust, and Dvara Research - jointly work with IIT Madras on initiatives that aim to advance financial access to low-income households.

Under the partnership, the RBC-DSAI would work with Dvara KGFS to deploy state of the art statistical techniques and advanced analytical tools to create insights and decision support systems that would aid and benefit over 8 lakh Dvara KGFS customers in remote rural India.

Samir Shah, Executive Vice Chair and Group President of Dvara Trust, said, "With this partnership, we aim to ensure a more systematic approach in managing wealth for low-income households which include farmers, rural entrepreneurs and vulnerable families who cannot afford to make bad financial decisions."

Prof NandanSudarsanam, Department of Management Studies, who is the lead investigator from IIT Madras, said, "Business challenges and data availability in the underbanked setting can be significantly different from standard retail banking. As a result, we find that off-the-shelf models and analytics techniques which are typical in traditional banking, are ill-equipped to address the needs of an institution working in the underbanked space. By teaming up with Dvara to develop data-driven analytics and business intelligence in such a context, we aim to address an important lacuna which can have significant societal impact."

The agreement envisages jointly working towards the creation of a prediction engine that can infer crop type and yield based on satellite images. Such an engine will significantly improve the way in which risk is assessed before lending and will be of tremendous value in determining the type of risks and assets, a release added. The collaboration will see the exploration of research questions around borrower stress, and informal lending through analysis of behavioural and demographic patterns deciphered through large datasets.

Publication: Times of India (clip attached)

Edition: Chennai Page No: 2 Journalist: NA

Headline: IIT M signs MoU on financial inclusion

URL: <a href="https://timesofindia.indiatimes.com/business/india-business/dvara-group-signs-mou-with-robert-bosch-centre-for-data-science-and-artificial-intelligence-at-iit-madras/articleshow/65951491.cms">https://timesofindia.indiatimes.com/business/india-business/dvara-group-signs-mou-with-robert-bosch-centre-for-data-science-and-artificial-intelligence-at-iit-madras/articleshow/65951491.cms</a>

# IIT-M signs MoU on financial inclusion

Chennai: The Robert Bosch Centre for Data Science and Artificial Intelligence (RBC-DSAI) at IIT Madras has tied up with Dvara Group (formerly IFMR Trust), a pioneer in the financial inclusion space.

Dvara will jointly work with IIT Madras for advance financial access to low-income households. Under the partnership, the RBC-DSAI will deploy stateof-the-art statistical techniques and advanced analytical tools to create insights and decision support systems that would aid and benefit over 8 lakh customers in remote rural India.

The agreement envisages jointly working towards the creation of a prediction engine that can infer crop type and yield based on satellite images. TNN

Scanned by CamScanner

Publication: UNI Edition: Online Journalist: NA

Professor: Prof NandanSudarsanam

Headline: Dvara, Robert Bosch sign MoU for data science with IIT Madras

URL: http://www.uniindia.com/dvara-group-inks-mou-with-iit-madras/states/news/1360771.html

#### Dvara Group signs MoU with IIT Madras Data Science and AI Centre for strategic collaboration

Mumbai, Sep 25 (UNI) The Dvara Group (formerly IFMR Trust), a pioneer in the financial inclusion space has entered into a Memorandum of Understanding with The Robert Bosch Centre for Data Science and

Artificial Intelligence (RBC-DSAI) at IIT Madras.

The collaboration would see the Dvara group entities - Dvara KGFS (a leading uniquely propositioned rural wealth management institution), Dvara Trust, and Dvara Research - jointly work with IIT Madras on

initiatives that aim to advance financial access to low-income households.

Under the partnership, the RBC-DSAI would work with Dvara KGFS to deploy state of the art statistical techniques and advanced analytical tools to create insights and decision support systems that would aid and benefit over 8 lakh customers that Dvara KGFS serves in remote rural India.

Commenting on the collaboration, Samir Shah, Executive Vice Chair & Group President of Dvara Trust, said, "We at the Dvara Group are pleased to partner with IIT Madras and its Robert Bosch Centre for Data Science and Artificial Intelligence to build next-generation capability in our financial inclusion initiatives to service

low-income households in India with customer-centric and highly suitable financial solutions. The KGFS business model has been operating successfully for the last 10 years and with this partnership, we aim to ensure a more systematic approach in managing wealth for low-income households which include farmers, rural

entrepreneurs and vulnerable families who cannot afford to make bad financial decisions.

Publication: UNI Edition: Online Journalist: NA

Headline: Dvara Group signs MoU with IIT Madras Data Science and AI Centre for strayegic

collaborations.

URL: http://www.uniindia.com/~/dvara-group-signs-mou-with-iit-madras-data-science-and-ai-centre-

for-strategic-collaboration/Business%20Economy/news/1360864.html

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Date: 26th September 2018
Publication: The Financial Express

Edition: The Financial Express - Delhi / Mumbai / Pune / Bangalore / Hyderabad / Chennai / Kolkata /

Kochi / Ahmedabad / Chandigarh

Page No: 6 Journalist: NA

Headline: IIT-M Dvara sign pact to address low-income group

# IIT-M, Dvara sign pact to address low-income group

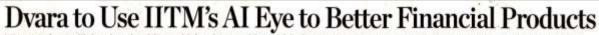
THE ROBERT BOSCH Centre for Data Science and Artificial Intelligence (RBC-DSAI) at IIT Madras has entered into an MoU with the Dvara Group (formerly IFMR Trust). The pact would see the Dvara group entities — Dvara Trust, Dvara KGFS and Dvara Research — jointly work with IIT Madras on initiatives that aim to advance financial access to low-income households.

**Publication: The Economic Times** 

Edition: Bangalore

Page No: 5 Journalist: NA

Headline: Dvara to Use IITMs AI Eye to Better Financial Products



IIT researchers will develop algorithms which, when combined with observations by subject-matter experts, will recommend products



Anandi.C@timesgroup.com

in space, to devi-that will target ancial products

red to select cus-tomers.

Dvars offers fi-nancial pro-ducts like enter-prise working capital loans, li-vestock loans, joint liability eroup loans, no-

gold invest-ment, among others, to low-inco-me families.
Nandon Sudarsanam, the lead researcher on the project, said, "We're using ideas from active learning to create better seg-ments or classes of customers.

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ITT Matrixs. The alignritim-bound framework will lead to a de-cision engine in the neat phase, said Semir Shah, group presi-dent of Dvara Trust. The appir-elect of Dvara Trust. The appir-lect of Dvara Trust. The appir-der of Dvara Trust. The appir-lect of Dvara Trust. The appir-lect of Dvara Trust. The appir-der of Dvara Trust. The appir-lect of Dvara Trust. The appir-elect of Dvara Trust. The appir-lect of Dvara Trust. The appir-lect of Dvara Trust. The appir-elect of Dvara Trust. The appir-lect of Dvara Trust. The appir-elect of Dvara Trust. The appir-der of Dvara Trust. The appir-elect of Dvara Trust. The appir-ter of Dvara Tr

Date: 26th September 2018
Publication: The Economic Times

Edition: Chennai

Page No: 2 Journalist: NA

Headline: IIT-M to Devise AI Solutions for Fin Inclusion

#### TO COLLABORATE WITH DVARA GROUP

### IIT-M to Devise AI Solutions for Fin Inclusion

Anandi.Caltimesgroup.com

Chennai: IIT Madras is collaborating with the Dwara Group, an institution that works in the financial inclusion space, to devise AI solutions to offer customised financial products for the group's 8,00,000 customers in remote locations.

An agreement in this regard was signed between the Robert Bosch Centre for Data Science and Artificial Intelligence at ITT Modras and Dwara KGFS, a group entity on Tuesday. The IIT researchers will develop algorithms which, when combined with observations by subject matter experts, will recommend financial products.

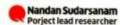
As a first step, the researchers.

As a first step, the researchers will identify groups of people in Dvara's database. These groups maybe a consequence of similar demographic details, household financial goals or transaction patterns. Then, through 'active loarning approach, an algorithm will iteratively query an expert committee for med by Dvara to seek recommendations on the products that can be affered to select customers. Dvara offers financial products like onterprise working capital loans, livestock loans, joint liability group loans, money market mutual funds, term life insurance policies, and gold investment, among others, to low-income families.

Nandan Sudar-saram, the lead researcher on the project, said. "We're using ideas from active learning to create better segments or classes of customers. The goal is essentially not just to group customers but also match them hosed on which produce portfolios are most auited for them." Sudarsanam is assistant professor at the department of management studies, ItT Madries.

The algorithm based framework will lead to a decision engine in the next phase, said Samir Shah, group president of Dvara Trust. The applied research and decision engine is expected to head to products and plans that would have a lower delinquency rate compared with standard ions plans.

HT Madras and Dvara are assigning a higher focus to financial health or weliness as a met-



We are trying to differentiate from retail banking in that we're focussing on financial health (of the customer) over the likelihood of repayment



ric instead of the 'likelihood of repayment', which they suggested is an important factor typically in the retail banking loan assistment process.

assignment process.

"We are trying to differentiate from retail banking in that we're focussing on financial health (of the customer) over the likelihood of repayment. said Sadarsanam. "We are doing interesting work on latent variable-based chustering techniques, such as Hidden Markov Model-based clustering, where we explicitly model financial health as an unobservable variable."

According to Sadarsanam, delin-

According to Sudarsanam, delinquencies, among a gamuic of reasons, can be a result of gemine financial stress in some cases and oversight in others. However, under the metric of 'likelihood of payment', the end result is the same. Hence the research methodology does not view repayment as a perfect proxy of financial health, he said, "Especially in a microfinance concept it is important to model and understand financial health than just the likelihood of repayment, 'Sudarsanam said. Shah said the outcome of the re-

Shah said the outcome of the research would be directly applicable to business. "It would allow for segmentation work, credit-scoring and behavioural analysis, and to develop a decision engine that would make for customised and highly suitable solutions for low income households.

Publication: DT Next Edition: Chennai

Page No: 8 Journalist: NA

Headline: IIT Madras ties up with Dvara to promote financial access

URL: <a href="https://www.dtnext.in/News/City/2018/09/26060125/1089900/IIT-Madras-ties-up-with-Dvara-to-">https://www.dtnext.in/News/City/2018/09/26060125/1089900/IIT-Madras-ties-up-with-Dvara-to-</a>

promote-financial-.vpf

#### IIT-M ties up with Dyara to promote financial access

Centre for Data Science and Artificial Intelligence (RBC-DSAI) at ITT Madras has entered into a Memorandium of Understanding with The Dyara Group (for merly IPMR Trust), a pioneer in the financial inclusion space.

The collaboration would see the Draca group entities Dwars Triest, Dwars KGFS and Dwars Research industry with IPT Mulras on initiatives that aim to advance financial access to low-income households.

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Under the partnership, the RBC DSAI would work with Dwars KGFS to deploy state of the art statistical tochniques and advanced analytical tools to crests insights and decision support systems that would aid and benefit over 8 lakb customers that Dwars KGFS serves in respote turni India.

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The collaboration with
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around borrower stress, and
informal lending through analysis of behavioural and demographic patterns deciphered
through large datasets.

Commenting on the collaboration, Samir Shah, Executive Vice Chair & Group President of Dvara Trust, said, "We at the Dvara Group are pleased to partner with IIT Madras and its Robert Bosch Centre for Data Science and Artificial Intelligence to build next-generation capability in our financial inclusion initiatives to service low-income households in India with customer-centric and highly sultable financial solutions."

Scanned by CamScanner

Date: 26th September 2018 Publication: Web India 123

Edition: Online Journalist: NA

Headline: Dvara Group signs MoU with IIT Madras Data Science and AI Centre for strategic

collaboration

URL: https://news.webindia123.com/news/articles/India/20180925/3442023.html

#### Dvara Group signs MoU with IIT Madras Data Science and AI Centre for strategic collaboration

The Dvara Group (formerly IFMR Trust), a pioneer in the financial inclusion space has entered into a Memorandum of Understanding with The Robert Bosch Centre for Data Science and Artificial Intelligence (RBC-DSAI) at IIT Madras.

The collaboration would see the Dvara group entities - Dvara KGFS (a leading uniquely propositioned rural wealth management institution), Dvara Trust, and Dvara Research - jointly work with IIT Madras oninitiatives that aim to advance financial access to low-income households.

Under the partnership, the RBC-DSAI would work with Dvara KGFS to deploy state of the art statistical techniques and advanced analytical tools to create insights and decision support systems that would aid and benefit over 8 lakh customers that Dvara KGFS serves in remote rural India. Commenting on the collaboration, Samir Shah, Executive Vice Chair & Group President of Dvara Trust, said, "We at the Dvara Group are pleased to partner with IIT Madras and its Robert Bosch Centre for Data Science and Artificial Intelligence to build next-generation capability in our financial inclusion initiatives to servicelow-income households in India with customer-centric and highly suitable financial solutions. The KGFS business model has been operating successfully for the last 10 years and with this partnership, we aim to ensure a more systematic approach in managing wealth for low-income households which include farmers, ruralentrepreneurs and vulnerable families who cannot afford to make bad financial decisions."Speaking about the importance of this MoU, Prof NandanSudarsanam, Department of Management Studies, who is the lead investigator from IIT Madras, said, "Business challenges and data availability in the underbanked setting can be significantly different from standard retail banking. As a result, we find that off-the-shelf models and analytics techniques which are typical in traditional banking, are ill-equipped to address the needs of an institution working in the underbanked space. By teaming up with Dvara to develop data-driven analytics and business intelligence in such a context, we aim to address an important lacuna which can have significant societal impact."The agreement envisages jointly working towards the creation of a prediction engine that can infer crop type and yield based on satellite images. Such an engine will significantly improve the way in which risk is assessed before lending and will be of tremendous value in determining the type of risks and assets.

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Date: 26th September 2018 Publication: The Hindu

Edition: Online Journalist: NA

Professor: Prof NandanSudarsanam

Headline: Study planned on rural risk patterns

URL: https://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/study-planned-on-rural-risk-

patterns/article25043934.ece/amp/? twitter impression=true

#### Study planned on rural risk patterns

The Indian Institute of Technology-Madras' Robert Bosch Centre for Data Science and Artificial Intelligence (RBC-DSAI) has signed an agreement with the Dvara group, which will deploy statistical techniques and advanced analytical tools to create insights and decision support systems.

This would, in turn, benefit over eight lakh customers in rural areas.

The institute's lead investigator and Management Studies professor NandanSudarsanam said, "Off-the-shelf models and analytics techniques typical to traditional banking are ill-equipped to address the needs of an institution working in the underbanked space. By teaming up with Dvara we aim to address an important lacuna."

Publication: The Hindu Business Line Edition: Delhi/Mumbai / Chennai

Page No: 19 Journalist: NA

Professor: Prof NandanSudarsanam

Headline: Dvara IIT-M to work on financial access for low-income households

URL: https://www.thehindubusinessline.com/news/education/dvara-robert-bosch-sign-mou-for-data-

science-at-iit-madras/article25037200.ece

## Dvara, IIT-M to work on financial access for low-income households

#### **OUR BUREAU**

Mumbal, September 26

The Dvara group has signed an MoU with the IIT-Madras to work on enhancing low-income households' access to finance.

The collaboration will see the Dvara group (formerly IFMR Trust) entities — Dvara KGFS (a rural wealth management institution), Dvara Trust, and Dvara Research — work with The Robert Bosch Centre for Data Science and Artificial Intelligence (RBC-DSAI) IIT-Madras on initiatives to advance financial access to low-income households.

Under the partnership, the RBC-DSAI will work with Dvara KGFS to deploy modern statistical techniques and advanced analytical tools to create insights and decision-support systems that will benefit over eight lakh Dvara KGFS customers in rural India.

The agreement envisages creation of a prediction engine that can infer crop type and yield, based on satellite images. Such an engine will significantly improve the way in which risk is assessed before lending, a release said.

Date: 27th September 2018
Publication: India Education Diary

Edition: Online Journalist: NA

Professor: Prof NandanSudarsanam

Headline: Dvara Group signs MoU with IIT Madras Data Science and AI Centre for strategic

collaboration

URL: <a href="http://indiaeducationdiary.in/dvara-group-signs-mou-iit-madras-data-science-ai-centre-strategic-">http://indiaeducationdiary.in/dvara-group-signs-mou-iit-madras-data-science-ai-centre-strategic-</a>

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Commenting on the collaboration, Samir Shah, Executive Vice Chair & Group President of Dvara Trust, said, "We at the Dvara Group are pleased to partner with IIT Madras and its Robert Bosch Centre for Data Science and Artificial Intelligence to build next-generation capability in our financial inclusion initiatives to service low-income households in India with customer-centric and highly suitable financial solutions. The KGFS business model has been operating successfully for the last 10 years and with this partnership, we aim to ensure a more systematic approach in managing wealth for low-income households which include farmers, rural entrepreneurs and vulnerable families who cannot afford to make bad financial decisions."

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Date: 27th September 2018 Publication: Skill Outlook

Edition: Online Journalist: NA

Headline: IIT Madras Data Science and AI Centre signs MoU with Dvara group for strategic

collaboration

URL: http://skilloutlook.com/education/iit-madras-data-science-and-ai-centre-signs-mou-with-dvara-

group-for-strategic-collaboration

#### IIT Madras Data Science and AI Centre signs MoU with Dvara group for strategic collaboration

Chennai, 25 September 2018: The Robert Bosch Centre for Data Science and Artificial Intelligence (RBC-DSAI) at IIT Madras has entered into a Memorandum of Understanding with The Dvara Group (formerly IFMR Trust), a pioneer in the financial inclusion space.

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Publication: PTI Edition: Online Journalist: NA

Professor: Prof. PrathapHaridoss

Headline: New online courses offered on power generation, mining

URL: http://www.ptinews.com/news/10075726 New-online-courses-offered-on-power-generation--

mining.html

New online courses offered on power generation, mining

SharePrint Print E-mailCommentsComment[ - ] Text [ + ] 18:39 HRS IST

Chennai, Sept 28 (PTI) Online courses in the fields of power generation, mining and renewable energy would be offered by the public sector undertaking NLC India Limited (NLCIL) under a tie-up with the National Programme on Technology Enhanced Learning (NPTEL), a collective of IITs and IISc.

A memorandum of understanding was recently signed between the NLCIL and NPTEL to offer the courses, a press release from IIT-Madras said here Friday.

NPTEL coordinator PrathapHaridoss said the collaboration would pave the way for more PSUs to tie-up with the collective.

Formerly Neyveli Lignite Corporation, a navaratna company, NLCIL, apart from offering the courses, would provide industry perspective to enhance technical content of the course, the release said.

NPTEL has been delivering open online courses for certification since 2014, it said.

Publication: UNI Edition: Online Journalist: NA

Professor: Prof. PrathapHaridoss

Headline: NLCIL to collaborate with NPTEL to co-offer courses related to power generation, Mining

URL: http://www.uniindia.com/nlcil-to-collaborate-with-nptel-to-co-offer-courses-related-to-power-

generation-mining/states/news/1363819.html

## NLCIL to collaborate with NPTEL to co-offer courses related to power generation, Mining

Chennai, Sep 28(UNI) NLC India Limited (NLCIL), formerly Neyveli Lignite Corporation will collaborate with National Programme on Technology Enhanced Learning (NPTEL) to co-offer courses related to their domain expertise of Power generation, Mining and renewable sector and provide the industrial perspective to enhance technical content created by course instructors from IITs/IIScs.

A release from IIT Madras said here on Friday that NLCIL has become the first Central Public Sector Undertaking to become Industry Associate.

NPTEL signed the MOU with NLC India Limited on September 20 and this is a big step forward for both the organizations and the opportunities to collaborate are aplenty.

Speaking about the importance of this collaboration, NPTEL, IIT Madras, Coordinator, Prof.Prathap Haridoss said "We hope this partnership will pave the way for more PSUs to recognize the potential of our courses and encourage them to partner with us and use these to motivate their employees to embark on a journey of life long learning anywhere anytime." NPTEL has been successfully delivering open online courses for certification since 2014. Starting from one course with 1,180 people writing the examinations in June 2014, NPTEL is offering 270 courses this semester alone with more than 1.6 lakh candidates registered for exams in October 2018.

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Date: 29th September 2018 Publication: The Week

Edition: Online Journalist: NA

Professor: Prof. PrathapHaridoss Headline: BIZ-NLC-COURSES

URL: https://www.theweek.in/wire-updates/business/2018/09/28/mcm24-biz-nlc-courses.html

#### **BIZ-NLC-COURSES**

New online courses offered on power generation, mining Chennai, Sept 28 (PTI) Online courses in the fields of power generation, mining and renewable energy would be offered by the public sector undertaking NLC India Limited (NLCIL) under a tie-up with the National Programme on Technology Enhanced Learning (NPTEL), a collective of IITs and IISc.

A memorandum of understanding was recently signed between the NLCIL and NPTEL to offer the courses, a press release from IIT-Madras said here Friday.

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Formerly Neyveli Lignite Corporation, a navaratna company, NLCIL, apart from offering the courses, would provide industry perspective to enhance technical content of the course, the release said.

NPTEL has been delivering open online courses for certification since 2014, it said.

Date: 29th September 2018
Publication: Greater Kashmir

Edition: Online Journalist: NA

Professor: Prof. PrathapHaridoss

Headline: New online courses offered on power generation, mining

URL: https://greaterkashmir.com/news/business/new-online-courses-offered-on-power-generation-

mining/297955.html

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Date: 29th September 2018 Publication: Careers 360

Edition: Online Journalist: NA

Professor: Prof. PrathapHaridoss

Headline: NLC collaborates with NPTEL to offer courses on Power Generation, Mining

URL: <a href="https://news.careers360.com/nlc-collaborates-nptel-offer-courses-power-generation-mining">https://news.careers360.com/nlc-collaborates-nptel-offer-courses-power-generation-mining</a>

### NLC collaborates with NPTEL to offer courses on Power Generation, Mining

NEW DELHI, SEPTEMBER 29: NLC India Limited (NLCIL), formerly Neyveli Lignite Corporation, is collaborating with National Programme on Technology Enhanced Learning (NPTEL) to co-offer courses on Power Generation, Mining and renewable sector. Also, this step is taken to provide the industrial perspective to enhance technical content created by course instructors from IITs/IIScs.

Also read: IIT Mandi gears up to welcome students with an innovative 5-week induction program Speaking on the development, about Prof.PrathapHaridoss, Coordinator, NPTEL, IIT Madras, said, "We hope this partnership will pave the way for more PSUs to recognize the potential of our courses and encourage them to partner with us and use these to motivate their employees to embark on a journey of lifelong learning anywhere anytime."

NLCIL has become the first Central Public Sector Undertaking to become Industry Associate. NPTEL signed the MOU with NLC India Limited on September 20, 2018. This is a big step forward for both the organizations and the opportunities to collaborate are aplenty.

To facilitate a more formal way in which the L&D division of companies can leverage the NPTEL courses for re-skilling of their employees and for companies who wish to recruit from the pool of NPTEL certified learners, NPTEL flagged off the Industry Associate initiative in January 2018 with no financials involved. Companies such as IBM, Infosys, Aricent Technologies, Glass Academy etc are the forerunners in this and have started partnering with NPTEL in the last few months.

NPTEL has been delivering open online courses for certification since 2014. Starting from one course with 1,180 people writing the examinations in June 2014, NPTEL is offering 270 courses this semester alone with more than 1.6 lakh candidates registered for exams in October 2018. Not only this, NPTEL has partnered with more than 2,020 colleges who have formed NPTEL Local Chapters.

NPTEL is the largest provider of MOOCs in India today, especially the Engineering stream, with a credible proctored certification exam that clearly qualifies and differentiates the learners who do these courses.

NLC India Limited (NLCIL) is a 'Navratna' profit-making public sector enterprise engaged in mining of lignite, coal and generating thermal power through lignite and coal-based power plants and renewable energy from its Solar and Wind plants.

Date: 29th September 2018 Publication: Business Standard

Edition: Online Journalist: NA

Professor: Prof. PrathapHaridoss

Headline: New online courses offered on power generation, mining

URL: <a href="https://www.business-standard.com/article/pti-stories/new-online-courses-offered-on-power-">https://www.business-standard.com/article/pti-stories/new-online-courses-offered-on-power-</a>

generation-mining-118092800870 1.html

### New online courses offered on power generation, mining

Press Trust of India | Chennai Last Updated at September 28, 2018 18:45 IST Tiny URL Add to My Page Print Email

### ALSO READ

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NPTEL has been delivering open online courses for certification since 2014, it said.

Date: 29th September 2018 Publication: India.com

Edition: Online Journalist: NA

Professor: Prof. PrathapHaridoss

Headline: New online courses offered on power generation, mining

URL: http://www.india.com/news/agencies/new-online-courses-offered-on-power-generation-mining-

3352990/

### New online courses offered on power generation, mining

Published: September 28, 2018 6:46 PM IST

New online courses offered on power generation, mining

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Date: 29th September 2018 Publication: Web India 123

Edition: Online Journalist: NA

Professor: Prof. PrathapHaridoss

Headline: NLCIL to collaborate with NPTEL to co-offer courses related to power generation, Mining

URL: https://news.webindia123.com/news/articles/India/20180928/3444366.html

### NLCIL to collaborate with NPTEL to co-offer courses related to power generation, Mining

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Chennai | Friday, Sep 28 2018 IST

NLC India Limited (NLCIL), formerly Neyveli Lignite Corporation will collaborate with National Programme on Technology Enhanced Learning (NPTEL) to co-offer courses related to their domain expertise of Power generation, Mining and renewable sector and provide the industrial perspective to enhance technical content created by course instructors from IITs/IIScs.

A release from IIT Madras said here on Friday that NLCIL has become the first Central Public Sector Undertaking to become Industry Associate. NPTEL signed the MOU with NLC India Limited on September 20 and this is a big step forward for both the organizations and the opportunities to collaborate are aplenty.

Speaking about the importance of this collaboration, NPTEL, IIT Madras, Coordinator, Prof.PrathapHaridoss said "We hope this partnership will pave the way for more PSUs to recognize the potential of our courses and encourage them to partner with us and use these to motivate their employees to embark on a journey of life long learning anywhere anytime."NPTEL has been successfully delivering open online courses for certification since 2014. Starting from one course with 1,180 people writing the examinations in June 2014, NPTEL is offering 270 courses this semester alone with more than 1.6 lakh candidates registered for exams in October 2018.

Date: 29th September 2018 Publication: Devdiscourse

Edition: Online Journalist: NA

Professor: Prof. PrathapHaridoss

Headline: NLC aims to boost mining and energy sector with new online courses

URL: https://www.devdiscourse.com/Article/other/199188-nlc-aims-to-boost-mining-and-energy-

sector-with-new-online-courses

### NLC aims to boost mining and energy sector with new online courses

Devdiscourse News Desk 28 Sep 2018, 06:41 PM India

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Date: 29th September 2018 Publication: Business World

Edition: Online Journalist: NA

Professor: Prof. PrathapHaridoss
Headline: BIZ-NLC-COURSES

URL: <a href="http://www.businessworld.in/article/BIZ-NLC-COURSES/28-09-2018-161105/">http://www.businessworld.in/article/BIZ-NLC-COURSES/28-09-2018-161105/</a>

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Date: 29th September 2018

**Publication: The New Indian Express** 

Edition: Chennai

Page no.: 6
Journalist: NA

**Headline: NLCIL signs MoU with NPTEL** 

## NLCIL signs MoU with NPTEL

### EXPRESS NEWS SERVICE

@ Chennal

NLC India Limited has collaborated with National Programme on Technology Enhanced Learning to co-offer educational courses related to their domain expertise of power generation, mining and renewable sector and provide industrial perspective to enhance technical content created by course instructors from IIT and Indian Institute of Science. Date: 29th September 2018 Publication: The Hans India Edition: Hyderabad/Delhi

Page no.: 8
Journalist: NA

Professor: Prof NandanSudarsanam

Headline: IIT-Madras, Dvara group sign MoU

URL: http://www.thehansindia.com/posts/index/Young-Hans/2018-09-29/IIT-Madras-Dvara-group-sign-

MoU-/415408

## IIT-Madras, Dvara group sign MoU



OUR BUREAU

Chennai: The Robert Boach Centre for Data Science and Artificial Intelligence (BRC-DSAI) or IIT-Madras entered into a Memorandum of Universitating with The Dwara Group (Germerly IFMI). Trust), a pioneer in the financial inclusion annee on Tuesdor.

ruse, a pioneer in the manager, inclusion space on Turesday.
The collaboration would see the Dwars group entities - Dwars Trust, Dwars KGFS and Dwars Rosearch - jointly work with HT Madras on initiatives that aim to advance financial access to low-income households.
Under the partnership, the

Under the partnership. The BBC-BSAI would work with Dram KGFS to deeploy state of the art statistical techniques and advasced analytical tools to create insights and decision support systems that would aid and benefft over # liskft customers that Dram KGFS serves in remote raral India.

Spenking shout the Importance of this MoU Prof Nandan Sudarsunam, Department of Munagement Studies, who is the lead investigator from 117 Mudras, said, "Business challenges and data availability in the underhanked setting can be significantly different from standard retal banking. As a result, we find that off-the-shelf models and analytics techniques which are typical in traditional healing are ill-equipped to address the

The agreement will advance financial inclusion initiatives in India and foster the creation of cutting-edge analytics and insights that propel suitable solutions for low-income households

needs of an institution working in the under banked space. By teaming up with Dears to develop data-driven analytics and business intelligence in such a context, we aim to address un important facuna which can have

simificant societal impact."

Also, the agreement envisages jointly working towards the exation of a prediction engine that can infer crop type and yield based on satellite images. Such an engine will significantly improve the way in which tisk is assessed before lending and will be of tremesdom value in determining the type of risks and assets. The collaboration with Dyara Research will see the exploration of research questions around borrower stress, and informal lending through analysis of belinvioural and demographic patterns deciphered through large detacts.

Commenting on the collaboration, Samir Shah, Executive Vice Chair & Group President of Dwars Trust, said, "We at the Dwars Group are pleased to partner with ITP-Madras and its Hobert Bosch Centre for Data Science and Artificial Intelligence in huild next-guaration capability in our financial inchesion initiatives to service low-income households in India with customer-centric and highly suitable financial solutions. Date: 30th September 2018 Publication: The Hindu

Edition: Chennai Page No: 4 Journalist: NA

Headline: PSU firm partners with NPTEL to offer courses

URL: <a href="https://www.thehindu.com/news/cities/chennai/psu-firm-partners-with-nptel-to-offer-">https://www.thehindu.com/news/cities/chennai/psu-firm-partners-with-nptel-to-offer-</a>

courses/article25084968.ece



## **IIT Madras is a research-focused Institute**

Date: 7th September 2018

**Publication: The New Indian Express** 

Edition: Bangalore

Page No: 5 Journalist: NA

Headline: IISc IIT Madras profs chosen for ACCS-CDAC Award

### IISc, IIT Madras profs chosen for ACCS-CDAC Award

Prof P Vijay Kumar of the Indian Institute of Science (IISc) and Prof V Kamakoti from the Indian Institute of Technology (IIT) Madras have been selected for this year's ACCS-CDAC Foundation award for 2018. Prof S Sadagopan, Director of the International Institute of Information Technology Bangalore (IIITB), who chaired the Awards panel, and Dr Saragur M Srinidhi, President of ACCS, announced this year's award at a press conference on Thursday.

Date: 12th September 2018
Publication: Hindustan Times

Edition: Mumbai Page No: 11 Journalist: NA

**Headline: Community connection** 

## **Community connection**

### **FIELD TEST**

Providing solar power technology to light up homes, helping farmers get a better price, opening up digital markets to craftsmen – institutes are moving beyond the campus, enabling tangible change

Dipanjan Sinha

• dange or will industrate our

ducation is stepping out of the classyoom in interesting ways, as students and faculty collaborate with local communities on projects and research initiatives.

A system to harness solar power, created by students and fuculty offit? Adadras is highting up homes in villages in Tamil Nadu, Rajasthun and Manipur, a project of the Institute of Roral Management Anami (IRMA) is the liping pig and silk farmers in two districts of Assam to take their products directly to markets, thereby increasing their profit margins; students of the National Institute of Fashion Technology (NIFT) are helping craftsenen in Gos and Kolhupur market their products and skilling ordine; and National School of Drama students in villages across the country to stage productions of traditional theatre forms in the metro.

forms in the metros.
For faculty and researchers, projects like these are an opportunity put their knowledge to practical use; for students, if is a chance to gain experience their chosen field and experience places and meet people they would otherwise not have had



acress to

"My journey to villages in the Nilligh's district of Tamil Nadu, was life-changing and shaped the course my career would take." says Anusha Remachantan, who completed a Masters in electrical engineering from IT- Madras and is now working with a health care-stortup. "The struggle of carring our equipment around and the sheer jey of being able to help people with your knowledge were all part of the learning curve."

Ramachandran was a part of the HT-M Solar DC Project where direct-current or DC micro-grals were used to directly

top-electricity from solar panels.
"We use solar panels and batteries that are inherently DC.
This way we cut the energy loss that happens during conversion from AC to DC by about 50 per cent," explains Prabbjot Kaur.

They (community projects) teach life skills, which students cannot learn in a classroom. They teach you to think on your feet and deal with unforeseen challenges in real time, something you won't get even in most industry internships

FATIMA AGARKAR, co-founder, KA Associates

CEO of the Centre for Battery Engineering and Electronic Vehicles (C-BEEV) at IIT-M.

The team, which currently mountors the equipment from Chemnal, is a mix of faculty, researchers, alumni and students. Their project helped power? I villages in in Bajasthan in May 2017 and was later also used to power over 4,000 homes in districts across Assam and Tamii Nadu.

At NIFT, Mumbai, meanwhile, attenue of six Musters students led by assistant professor Rashmi Gularintecided to survey craffiamen in Goo on their challunges. On the bosis of the information, NIFT holds an annual workshop where they bring in experts on digital macketing, GI status applications etc.

At institutes like IRMA, intervontion is the objective. "There are three parts of our course which involve field work, village field study, which happens in the first year, development internships in the second year, and numagement intermitips, also in the second year. The development internabily segment in simed at bringing about tangible change, "says professor Pramed Singh, Lust year, a group fravelled to Dhemali, Assam, with professor Singh where they worked with local silk and pig farmers to create systems that would fallow them to self-directly to the market by 2018, for a better price. To be part of projects like these adds a differentiating factor to the resume of a student, says. Fallims Agarkar, co-funder of education consultance of Association Comment.

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Date: 13th September 2018 **Publication: Hindustan Times** 

Edition: Delhi Page No: 11

Journalist: DipanjanSinha Faculty: Dr. PrabhjotKaur

Headline:Institutes are moving beyond the campus, enabling tangible change

URL: https://www.hindustantimes.com/education/institutes-are-moving-beyond-the-campus-enabling-

tangible-change/story-hpD3gqtxdd4a0z7YsvPEFN.html

## **Community connection**

### FIELD TEST

Providing solar power technology to light up homes, helping farmers get a better price. opening up digital markets to craftsmen institutes are moving beyond the campus, enabling tangible change

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Date: 17th September 2018 Publication:India Today

Edition:Online
Journalist: NA

Professor: Prof Meher Prasad/Prof DevdasMenon

Headline: IIT Madras is modifying an eco-friendly construction material used since ancient Egypt to make affordable homes in India

URL: <a href="https://www.indiatoday.in/education-today/featurephilia/story/gypsum-gfrg-eco-friendly-">https://www.indiatoday.in/education-today/featurephilia/story/gypsum-gfrg-eco-friendly-</a>

1342071-2018-09-17

### IIT Madras is modifying an eco-friendly construction material to make affordable homes in India

Students are putting gypsum wallboard in a created wall of metal construction in Germany. (Photo courtesy: Getty Images)

Students are putting gypsum wallboard in a created wall of metal construction in Germany. (Photo courtesy: Getty Images)

Gypsum is said to be a part of recent advancements made in the field of construction. However, several archeological surveys have proven that it has been used in ancient cultures like ancient Egypt, Mesopotamia, ancient Rome, the Byzantine Empire, and the Nottingham alabasters of Medieval England.

Formed as an evaporite mineral and as a hydration product of anhydrite, gypsum is a crucial eco-friendly component used in the construction. Its industrial wastes are conventionally called 'green materials'.

### GYPSUM IS AN ECO-FRIENDLY RESOURCE:

Taking this project one step forward, IIT Madras is making it more environment-friendly.

"Manufacture of GFRG (Glass Fibre Reinforced Gypsum) panels from the raw material gypsum, viz., natural gypsum, mineral gypsum, phospho-gypsum or chemical gypsum, with purity more than 90 per cent, entails less energy in comparison to energy-intensive conventional building materials like, brick, concrete, etc," says Meher Prasad, a professor of Structural Engineering Division under the Department of Civil Engineering, IIT Madras.

Flowers of gypsum, Selenite From Bannockburn, near Cromwell, New Zealand. (Photo courtesy: Getty Images)

GFRG panels have been approved as a green material by the United Nations Framework Convention on Climate Change (UNFCC) under Clean Development Mechanism (CDM).

GFRG have also been approved by the World Bank as being eligible for 'carbon credits' under the Kyoto Protocol.

Further, the manufacture of GFRG panels from phospho-gypsum (fertilizer industry waste) is another green material. It eliminates the use of bricks.

"Increased thermal resistance of gypsum, reduces the air conditioning load on the buildings, thus reducing the operational energy need in GFRG buildings," says Prasad.

As far as India is concerned, manufacture of GFRG panels from phospho-gypsum (fertilizer industry waste) adds further to the greenness of the material.

Also read: IIT-Madras prof shares his idea of zero investment organic farming in India

Further, GFRG building construction totally eliminates the use of bricks.

The increased thermal resistance of gypsum reduces the air conditioning load on the buildings, thus reducing the operational energy need in GFRG buildings.

All of these factors add sustainability with regard to the use of GFRG technology.

### HOW IS GFRG DIFFERENT FROM GYPSUM?

Native American Woman carving Alabaster. (Photo courtesy: Getty Images)

GFRG, which is commercially known as Rapidwall®, are prefabricated hollow panels, introduced in Australia as an alternative building material in 1990.

Although gypsum is not water resistant, advancement of the mineral as GFRG panels have made it load bearing, water-resistant property, enabling it to be used as structural part (internal and external walls) in building assemblies.

### **USES OF GFRG IN INDIA**

This technology was introduced in India in 2003, using all kinds of gypsum. IIT Madras is carrying significant research on the same in order to introduce affordable mass housing construction.

Although the use of gypsum is limited, "IIT Madras has extended the use of panels as floor/roof slabs, staircase waist, and landing slabs. A complete building system was thus proposed by IIT Madras, with the use of GFRG panels alone, with minimal use of concrete and steel, and avoiding entirely the use of bricks," adds Prasad.

Moreover, after the sheer efforts of the university, the Ministry of Housing and Urban Affairs, the Government of India, Bureau of Indian Standards (BIS) has recently approved standards for the structural design of GFRG buildings, which is currently under wide circulation.

Veins of gypsum in Lower Lias rocks Watchet, Somerset, England. (Photo courtesy: Getty Images) OVERALL BENEFITS OF GFRG TECHNOLOGY:

Here's a look at the list of the benefits of using GFRG technology, in comparison to conventional technologies:

Substantial reduction in the structural weight of the building (panels weigh only 44 kg/m2) contributing to savings in foundation and reduction in earthquake design forces, particularly in multi-storeyed construction

No plastering requirement for walls and ceiling

Increased speed of construction with lesser manpower

Save fertile agricultural land and energy intensive burnt clay bricks

Saving of 8-10 per cent built-up area for the same carpet area

It is expected that GFRG buildings are more durable than similar conventional buildings, as the concrete and steel are encased by the GFRG shell.

Also read: How IIT Madras' 'happiness' programme helps students deal with mental pressure

Date: 17th September 2018 Publication:The Hindu Tamil

Edition:Chennai Page No: 2 Journalist: NA

Headline: IIT Madras is modifying an eco-friendly construction material to make affordable homes in

India



Date: 19th September 2018

Publication: Live Chennai

Edition: Online Journalist: NA

Professor: Prof. DevadasMenon& Prof. Meher Prasad

Headline: IIT Madras innovates Eco-Friendly Low-Cost Houses URL: <a href="https://www.livechennai.com/detailnews.asp?newsid=44014">https://www.livechennai.com/detailnews.asp?newsid=44014</a>

### **IIT Madras innovates Eco-Friendly Low-Cost Houses**

IIT Madras has come out with an innovative design in house construction - environment-friendly as well as lower construction cost! In fact, it is possible to construct a 500 sqft house in Rs. 7 Lakhs.

The new technology, developed by IIT Madras and known as 'GFRG' has gained popularity to build quality constructions at lower costs.

This development is a boon, especially for the middle-class section of the society residing in suburban areas.

With the substantial and growing population in India, the demand for houses also grown day-by-day. However, the prices of the essential construction material such as cement and rod have sky-rocketed and still keep rising. So, the construction cost is also astronomically high. Thus, the ambition/desire for an 'own house' remains a distant dream for the larger section of the population. With the current financial emergencies, the central government is also unable to construct and provide houses for the citizens.

In this scenario, IIT Madras embarked on a research to build quality constructions at low costs without affecting the environment.

The professors and the research students of the structural engineering section of the Civil Engineering Department undertook the research for this in the year 2003.

Based on the Australian Technology, the Structural Engineering research team came up with the innovation of GFRG – Glass Fibre Reinforced Gypsum in the year 2013.

Model' construction has been built inside the IIT Chennai Complex using this technology. Some professors have been residing in these houses with their families. They had encountered 2 severe cyclones including 'Varda' and the great floods in Chennai during 2015 which the construction has withstood.

Professors DevadasMenon and Meher Prasad, from the Structural Engineering section of the IIT Chennai Civil Engineering Department,, shared their experience:

The main ingredient of the innovation of GFRG is gypsum. Presently, India has a stock of 65 million tons of gypsum. The wall is built in the production plant with the basic ingredients of gypsum, These are then brought to the construction site and the houses are built with care and quality.

As the construction is made without guiders (Uthiram) or pillar supports, the available interior area goes up. The average thickness of the wall in the normal buildings is 9 inches. However, under GFRG technology, the wall thickness is only 5 inches.

Building a house with present technology costs around Rs. 2000 per square foot. However, with GFRG, it costs only from Rs. 1250 to Rs. 1500.

As the requirement of sand and rods get reduced in this technology, the construction cost comes down by 20%. It is possible to construct a house of 500 sqft with Rs. 7 Lakhs.

Normally, it takes around 6 months to 1 year to complete constructing a house. With GFRG technology, the construction can be done within a month! The life of the construction is around 70 Years. The construction will not be affected by nature's furies such as an earthquake, etc. The construction is so so strong and of high quality.

We constructed a house in Chennai IIT and 5 hostels asas 4-storeyed buildings in IIT Andhra. Several independent houses have been constructed in Bengaluru.

36 houses have been constructed in Nellore, Andhra. On the whole, around 1000 new constructions have been completed with this technology in South India.

With these developments, this technology has now gained huge popularity.

Several leading construction organizations such as CREDAI, Indian Builders' Association, etc., have reviewed and analysed about the adoption of this new technology.

The most prominent positive development among all is that for the construction of new building in the heavily-flood affected Kerala State, they have given priority to our technology.

In a situation demanding houses for 12000 people, the customers were granted Rs. 5 lakhs apiece to construct 1500 houses. Out of this, 500 houses will be our constructed using GFRG technology. If the other customers desire, we can give our technology free.

It is worth noting here that during the floods in Aanaichaal village in Idukki district, the houses constructed using GFRG technology in this area were not at all affected by the landslide.

Date: 21st September 2018 Publication: WION TV

Edition:Electronic
Journalist: MrSiddarth

Professor: Prof DevdasMenon

Headline: Solution to India's housing shortage: Gypsum panels used to build low cost homes

URL:https://www.youtube.com/watch?v=7abe8pe1Tck&app=desktop



Date: 21st September 2018 Publication: Dinamalar

Edition: Online Journalist: NA

Headline: (குறைந்தசெலவில்வேகமாகவீடுகட்டலாம் | IIT Madras Engineers Showcase

**Low Cost Housing Model)** 

URL: <a href="https://www.youtube.com/watch?v=eaALTvrvMUg&feature=youtu.be">https://www.youtube.com/watch?v=eaALTvrvMUg&feature=youtu.be</a>



Date: 30th September 2018 Channel: Doordarshan

Show: Good News Edition: Electronic

Journalist: Nishant Saurabh Professor: Prof. R. Pradeep

Headline:

Nanomaterials-based water technology to remove arsenic from drinking water

URL: <a href="https://www.youtube.com/watch?v=EGTC23Jn5wl&app=desktop">https://www.youtube.com/watch?v=EGTC23Jn5wl&app=desktop</a>



# IIT Madras is an innovation and entrepreneurship hub

Date: 21st September 2018

**Publication: The New Indian Express** 

Edition:Chennai Page No: 2

Journalist: NA

Professor: Prof Vijayalakshmi

Headline: 85 rural women turn entrepreneurs, thanks to IIT Madras

URL: <a href="http://www.newindianexpress.com/cities/chennai/2018/sep/21/85-rural-women-turn-">http://www.newindianexpress.com/cities/chennai/2018/sep/21/85-rural-women-turn-</a>

entrepreneurs-thanks-to-iit-madras-1875073.html

## 85 rural women turn entrepreneurs, thanks to IIT-M

EXPRESS NEWS SERVICE @ Chennai

ABOUT 85 women from villages in Salem, Tirupur and Kancheepuram have formed their enterprises, trained in business and entrepreneurship by a team led by the faculty of IIT-Madras, according to a statement issued by the institute.

This is part of the five-year skill development project funded by the Tamil Nadu Newsprint and Papers Limited (TNPL) as part of their corporate social responsibility initiative, executed by the ITT-Madras faculty, with the support of the Development of Humane Action (DHAN) Foundation.

"Over 200 participants were chosen, based on various parameters and given intensive technical training in tailoring, embroidery, jewellery-making, and IT skills among others," said V Vijayalakshmi, one of the two principal investigators of the project.

Women, who had an educational qualification of at least class 10, were picked and psychometrically analysed for entrepreneurial skills before they received training. They underwent a 15-day workshop with hands-on experience and skill tests along with a goal of creating a new product at the end of the programme. "It also imparted basic skills such as starting and managing a small shop or facility, sessions on motivation, resilience and other qualities for becoming successful entrepreneurs," she said.

Of the 200 women, 85 went on to

start their own business ventures either in a group or by themselves. "While women from Tirupur preferred learning skills related to garment making, women from other districts were open to learning a variety of skills. They now make embroiled folders for events at the IIT-Madras," claimed Vijayalakshmi, who added the demand for their produce has been tremendous.

The participants were also given credits ranging from ₹18,000 to ₹25,000 through mudra loan.