



IITM
PRAVARTAK
CATALYSING INNOVATION



विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY

सत्यमेव जयते

THULLI

Newsletter
IITM Pravartak

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About us

Building a Better Technology World

IITM Pravartak Technologies Foundation is funded by the Department of Science and Technology, Government of India, under its National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) and hosted as a Technology Innovation Hub

(TIH) by IIT Madras. The NM-ICPS is a comprehensive mission aimed at complete convergence with all stakeholders by establishing strong linkages between Academia, Industry, Government, and International Organizations.

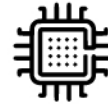
Thematic AREAS



Sensors



Networking



Actuators



Control Systems

Since the creation of IITM Pravartak in 2019 by DST under the Technology Innovation Hub (TIH) initiative, Pravartak has been continually expanding its footprint of activities in Cyber-Physical Systems in the focus areas of Sensors, Networking, Actuators, and Control Systems (SNACS). In the last five years, Pravartak has formed a team of very skilled and innovative technologists and entrepreneurs, enabling a wide range of innovative solutions to be developed. Pravartak-developed technologies are impacting every sphere of life including the strategic sector. A strong ecosystem has been developed by Pravartak by leveraging the synergies with IIT Madras, Industries and the Government. The translational research carried out at Pravartak is pathbreaking and creating new opportunities for students, and next generation technologists. The tag line of Pravartak “Catalysing Innovation” aptly describes the DNA of this dynamic organization which is on a strong trajectory of growth.

Dr. David Koilpillai R,
Project Director - IITM Pravartak



We were pleased to announce that Prof. Dr. Kamakoti Veezhinathan, Director of the Indian Institute of Technology, Madras, delivered the welcome address at the IITM Sports Tech Start-up Conclave, the first of its kind in India. Held at the Stein Auditorium, India Habitat Centre, New Delhi, and organized by the Center of Excellence in Sports Science and Analytics (CESSA) in collaboration with Outlook, the event brought together top innovators, entrepreneurs, researchers, and stakeholders from the sports industry and tech ecosystem to discuss and showcase the latest trends, developments, insights, and opportunities in Sports Tech. The conclave, featuring a distinguished jury comprising Mr. Mustafa Ghouse, Founder & General Partner, Center Court Capital; Dr. M. J. Shankar Raman, CEO, IITM Pravartak Technologies Foundation;

Prof. Dr. Mahesh V. Panchagnula, Professor of Applied Mechanics, IIT Madras; and Mr. Jalaj Dani, Dani Foundation, was a resounding success. It fostered vibrant idea exchanges, uncovered numerous growth opportunities, and leveraged the expertise of IIT Madras Center of Excellence in Sports Science & Analytics (CESSA). Two startups Elclassico Sportstech Pvt Ltd & Play AR Pvt Ltd (yet to be incorporated) were selected for potential incubation opportunity at IITM PTF. The presence of industry leaders and investors led to fruitful discussions, marking a significant milestone for the sports tech sector and setting the stage for a bright future filled with innovation & collaboration.

The IITM Sports Tech Start-up Conclave was a resounding success!

Fellowships



12th July, 2024: IITM Pravartak Technologies Foundation offered fellowships to Undergraduate, Doctoral, and Post-Doctoral candidates. These fellowships were aimed at enhancing the recipients' skills and supporting their research endeavors by providing financial and institutional support. At IITM Pravartak, we believe that our support would help individuals advance their academic and professional goals.



**Creating a Future-Ready India:
Viksit Bharat by 2047**

30th July, 2024: At IITM Pravartak Technologies Foundation, we are dedicated to supporting India's vision for "Viksit Bharat by 2047," focusing on preparing an industry-ready workforce. With around 4 crore students eligible for internships annually, and the 2024 budget proposing 1 crore internship positions, expanding these opportunities is vital.

To address this, we aimed to enhance employability skills through platforms like SWAYAM Plus, implemented an AI-based internship matching system, and strengthened industry-academia partnerships. We organized a conference with industry partners to discuss internship types, recruitment challenges, and government initiatives, contributing to Mission Internship and nation-building.

Courses Launched

15th July, 2024: IITM Pravartak has launched the 'Out of the Box Thinking' (OOBT) Mathematics course, a free online program designed to enhance problem-solving skills through diverse mathematical approaches. The program consists of 4 levels, each spanning 10 weeks, with regular assignments and solutions to deepen mathematical understanding. Open to students from class 5 and above, as well as college students, working professionals, and researchers, the course aims to support one million individuals in advancing their mathematical skills.



Out of the Box Thinking
Through Mathematics!

Free Skill Development Course at 4 different Independent Levels for Students, Teachers & Academic Professionals.

Enroll for free

Registration Deadline: **9th August 2024**

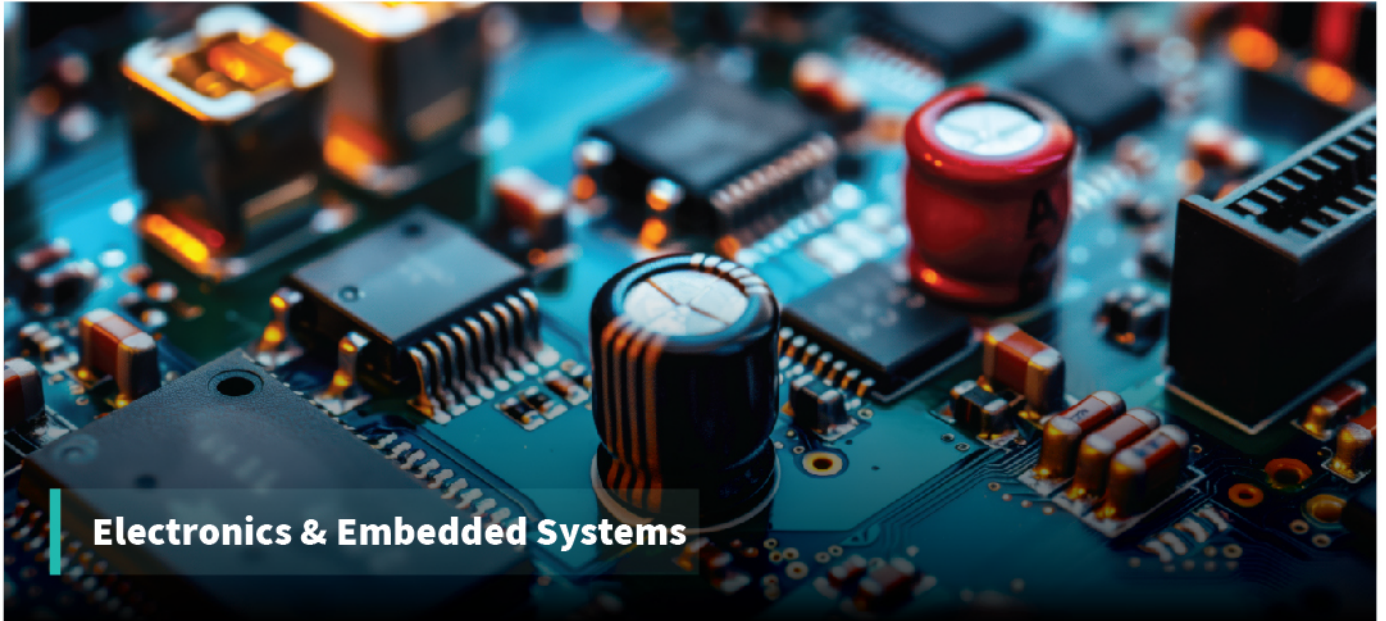
Course Start Date: **10th August 2024**

Optional In-Person Exam: **22nd December 2024**



23rd July, 2024: IITM Pravartak Technologies Foundation, in a landmark collaboration aimed at fortifying investigative capabilities within the Indian Revenue Service (IRS), delivered an intensive training course on forensic science. Tailored specifically for the esteemed 75th batch of IRS officers at the National Academy of Customs, Indirect Taxes, and Narcotics (NACIN) in Palasamudram, this initiative marks a pivotal step towards enhancing the IRS's proficiency in forensic methodologies.

Courses Launched

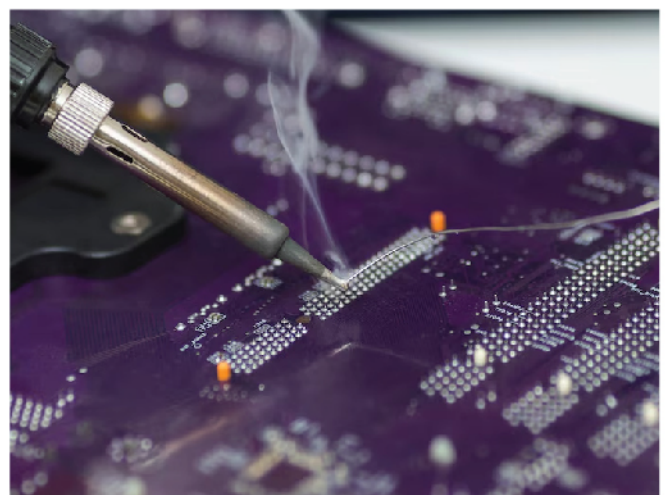


Electronics & Embedded Systems

29th August, 2024: We were thrilled to announce the launch of an exclusive in-person training program in Electronics & Embedded Systems, a collaborative effort between IIT Madras, IITM Pravartak, and SWAYAM Plus. This course offered a hands-on experience using state-of-the-art electronic kits right on campus!

2nd batch of the exclusive in-person training program in Electronics & Embedded Systems

09th September, 2024: We are pleased to announce that IITM Pravartak has launched the 2nd batch of the exclusive in-person training program in Electronics and Embedded Systems, a collaborative initiative between the Indian Institute of Technology, Madras, and SWAYAM Plus. This program offered participants a unique opportunity for hands-on learning with state-of-the-art electronic kits, right on the IIT Madras campus.



Courses Launched



9 Days In-Person Training Program in Electronics & Embedded Systems

19th September, 2024: We are thrilled to celebrate the successful completion of the "9 Days In-Person Training Program in Electronics & Embedded Systems," a unique collaborative initiative by IIT Madras, IITM Pravartak and SWAYAM Plus. This specialized course took place on the vibrant IIT Madras Campus, offering an immersive, hands-on learning experience directly from the corridors of one of India's premier educational institutions.

The program culminated in a certificate distribution ceremony, gracefully conducted by Dr. MJ Shankar Raman and Prof. R Sarathi, marking a significant milestone in the journeys of our enthusiastic participants.

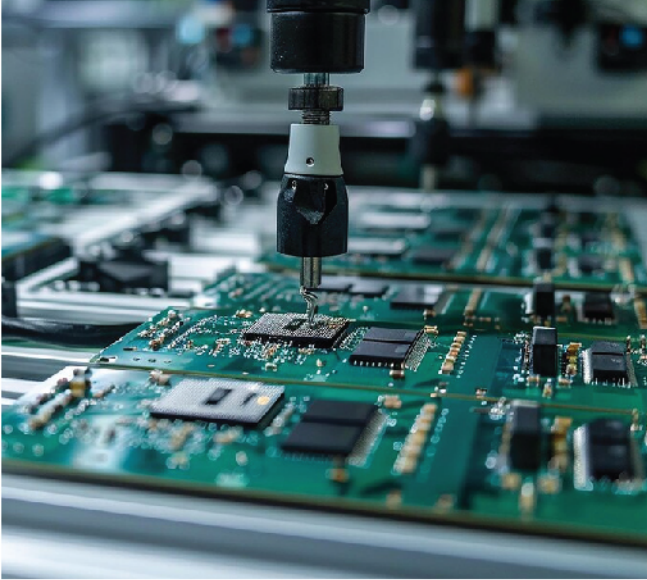


Batch 4 of our AR and VR Programming course

24th September, 2024: IITM Pravartak announced the commencement of Batch 4 of the AR and VR Programming course. This innovative program was delivered through a collaboration between VyVoxel and IITM Pravartak Technologies Foundation, integrating advanced virtual reality technologies with leading academic expertise.

Courses Launched

Advanced Electronic Manufacturing course



29th September, 2024: We were delighted to share that IITM Pravartak Technologies Foundation launched the “Advanced Electronic Manufacturing” course, which allowed learners to operate industry-standard machines and receive certificates issued by SWAYAM Plus in association with IIT Madras. The course covered a range of topics, including SMT components and handling, solder paste and stencil technology, solder paste printing and inspection, automatic pick and place machines, and the fundamentals of the reflow process.



Digital Manufacturing Training Program

31st September, 2024: We were delighted to share that IITM Pravartak Technologies Foundation launched a hands-on Digital Manufacturing training program designed to equip students with industry-ready technical skills. This program covered topics such as 3D modeling, 3D printing and scanning, and CNC programming.

visits



15th July, 2024: We were delighted to share the key moments from the recent visit of the KIT College delegation to IITM Pravartak Technologies Foundation, where the delegation had the pleasure of meeting with Prof. Gaurav Raina. Under the esteemed guidance of Mr. Rajendra Mootha, Head - New Initiatives of IITM Pravartak, we hosted 27 enthusiastic students and faculty members. Their tour provided insightful explorations into various topics, including Startup Ecosystems - 32Mins Digital Consultancy Services, Music Temple Private Limited, 5G Technology, and Automation Processes. The students' vibrant energy and keen curiosity were truly inspiring as they immersed themselves in entrepreneurship and innovation.



21st July 2024: Shri Bishwadip Dey, High Commissioner of India to the United Republic of Tanzania, visited IITM Pravartak Technologies Foundation. During his visit, he was briefed on the dynamic IITM Pravartak Ecosystem and the innovative startups incubated through the foundation. The High Commissioner expressed keen interest in collaborating with the startup ecosystem at IITM Pravartak, particularly focusing on leveraging solutions in Classical Indian and Carnatic Music, as well as Mobile Security, to benefit Tanzania. This collaboration aimed to introduce the rich heritage of Indian classical music and advanced mobile security solutions to Tanzania, fostering cultural and technological exchange between the two countries. Shri Dey's visit marked a significant step towards international collaboration, highlighting the global potential of the startups nurtured at IITM Pravartak and the Foundation's commitment to expanding its impact beyond India.

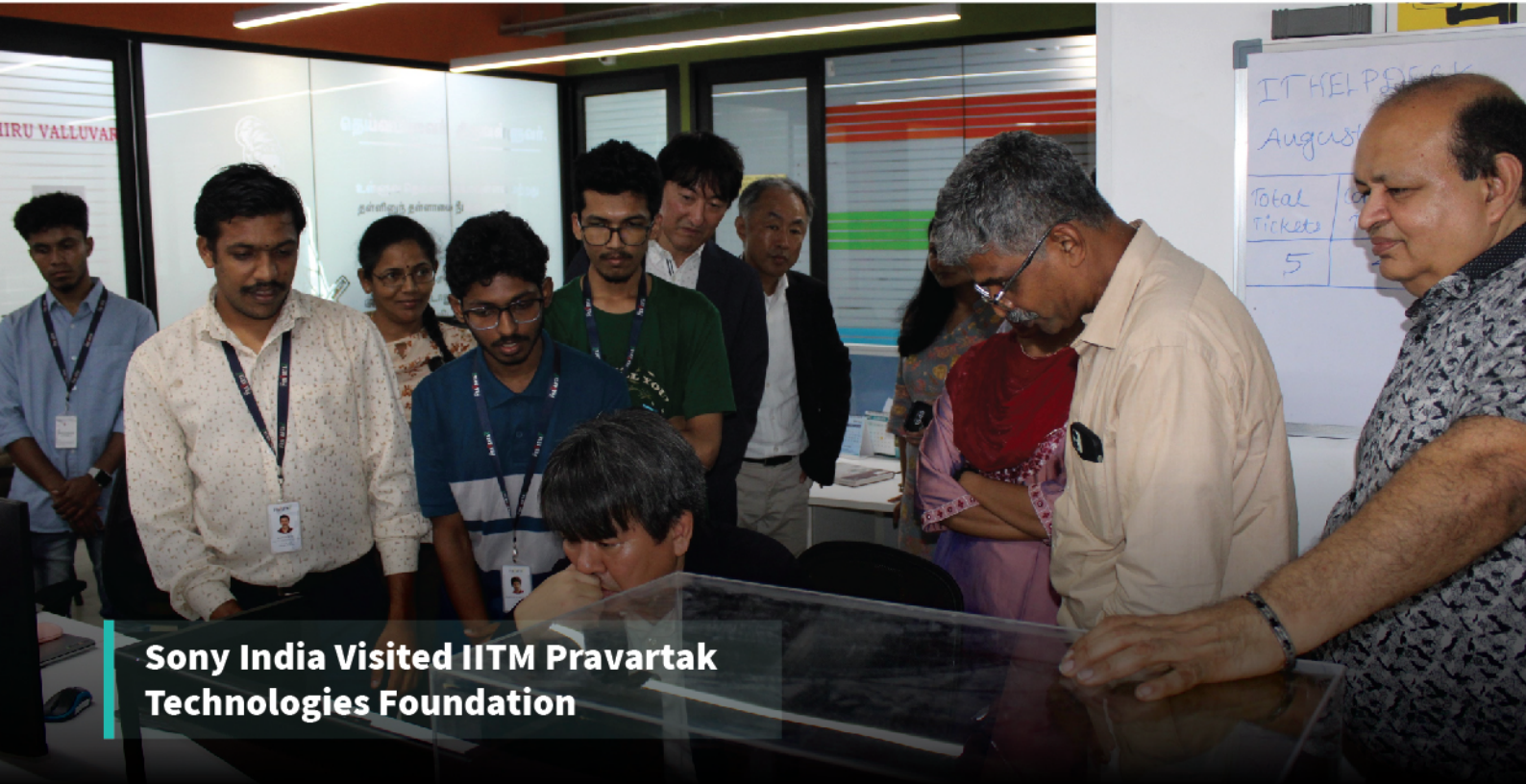
Visits



23rd July 2024: IITM Pravartak Technologies Foundation, represented by Dr. M. J. Shankar Raman, CEO of IITM Pravartak, Ms. Meenakshi Chidambaram, General Manager – Projects, and Mr. Ashutosh Kumar, Project Lead visited the National Institute of Design in Ahmedabad for a tripartite meeting. The meeting included Mr. Akhilesh Jha, Chief Controller of Accounts, Ministry of Rural Development, and Panchayati Raj, Government of India, and Prof. Bhavin Kothari, Professor in Strategic Design Management at the National Institute of Design, India. The agenda included discussions on the Rural Development Project and interactions with students regarding Leadership in Design and Leadership.



25th July, 2024: Dr. Brij Kishore Sinha, along with Dr. N.K. Rana from Ranchi University, engaged in discussions with representatives from IITM Pravartak Technologies Foundation, the Sudha and Shankar Centre for Innovation at IIT Madras, the Sudha Gopalakrishnan Centre for Brain Research, AgniKul Cosmos, the IIT Incubation Cell, and the Advanced Manufacturing Technology Development Centre (AMTDC) at IIT Madras Research Park. The meeting focused on exploring potential collaboration opportunities.



Sony India Visited IITM Pravartak Technologies Foundation

08th August, 2024: The recent visit of senior management from Sony India to IITM Pravartak Technologies Foundation highlighted a significant collaboration between corporate and academic sectors aimed at advancing technology and innovation in India. Sony India, through initiatives like Sony Research India, was actively engaged in pioneering work in AI, digital content creation, and sustainable development. Similarly, IITM Pravartak fostered an ecosystem of innovation, particularly in areas such as data science and AI applications.

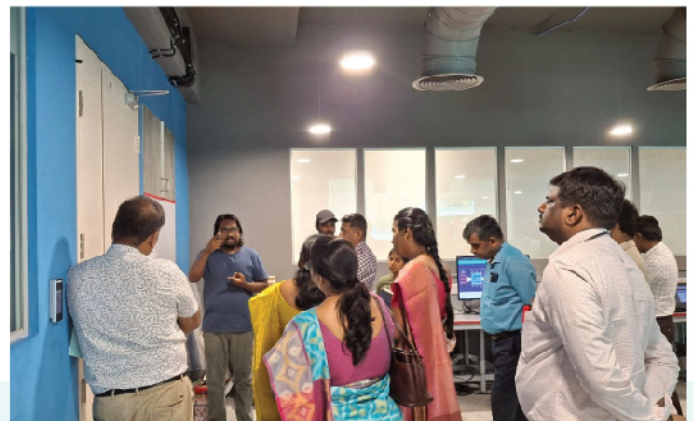
The Sony India team, which included key figures such as Mr. Keiichi (Tony) Asakura-san, Mr. Yoji Kawamoto-san, Mr. Shinichi Inoue-san, Ms. Vinutha Raja, and Mr. Anil Sasidharan, emphasized the importance of collaboration with academic

institutions to accelerate innovation. Their efforts to establish research centers and participate in open innovation programs reflected a strategic approach to leveraging local talent and enhancing technological advancements. This partnership enriched the technological ecosystem not only in Tamil Nadu but also across India, supporting a broader national agenda for innovation and economic growth through technology.

Sony India's recent visit to IITM Pravartak highlighted a strategic collaboration to advance AI, digital content creation, and innovation in India's growing tech ecosystem.

Visits

08th August, 2024: We were pleased to share the enriching experience from the recent visit of a high-level faculty delegation from KIT College to IITM Pravartak Technologies Foundation. The delegation explored a diverse range of startups and R&D facilities, gaining insights into our thriving ecosystem.



During their visit, the delegation engaged with several of our incubation initiatives:

- 📍 32Mins Digital Consultancy Services
- 📍 Music Temple
- 📍 5G Technology
- 📍 Automation Processes

Additional stops included **AgniKul Cosmos, the IITM Incubation Cell, and HTIC**, making their journey a comprehensive dive into entrepreneurship and innovation.

The enthusiasm and inquisitiveness of the delegation were truly inspiring as they delved into the world of technological advancements and creative solutions. This visit facilitated a valuable exchange of ideas, offering fresh perspectives to both the delegates and our team at IITM Pravartak.



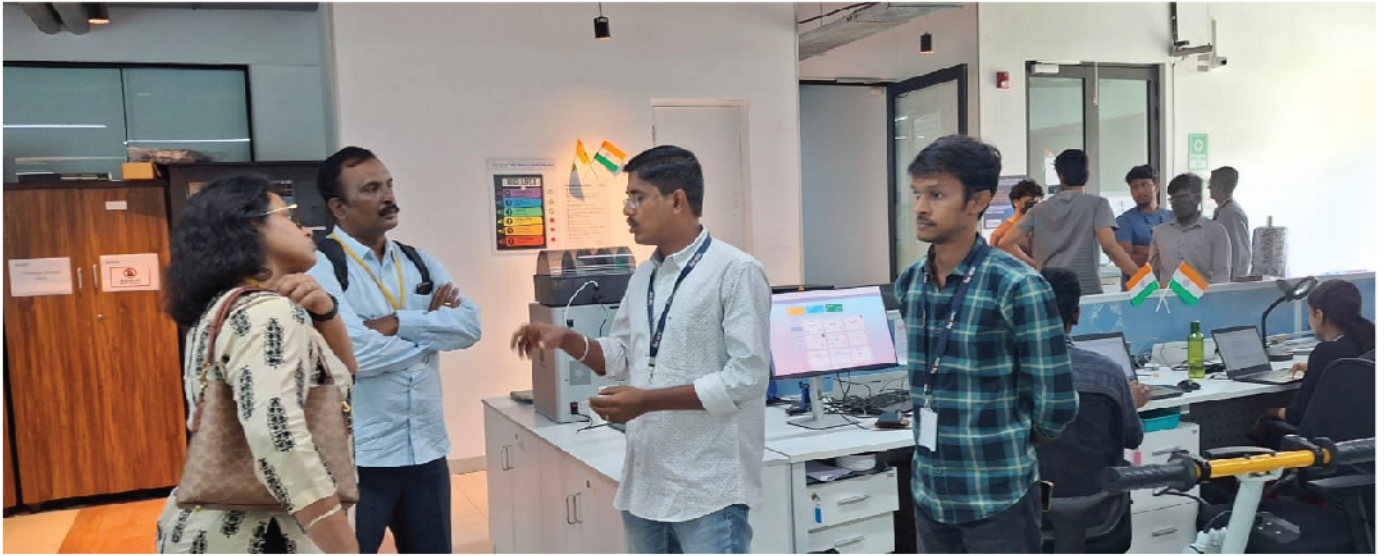
14th August, 2024: On Independence Day, IITM Pravartak welcomed a distinguished delegation from the Indian Army's Southern Command, including Lt. Gen. Karanbir Singh Brar and Lt. Gen. Dhiraj Seth. Our CEO, Dr. MJ Shankar Raman, and Mr. Rajendra Mootha showcased our technological advancements and cutting-edge projects.

The delegation engaged with startups such as Swayatt Drishtigocchar Pvt Ltd and Meister-Gen Technologies Pvt Ltd, which presented innovative products for potential military applications. They also visited the Advanced Manufacturing Technology Development Centre (AMTDC) to observe modern manufacturing practices. We were proud to host the Southern Command delegation and showcase our commitment to supporting national development.



14th August, 2024: The IITM Pravartak Technologies Foundation was honored to host a distinguished delegation from SLASSCOM, Sri Lanka, which included Mr. Ashique Sheriff Mohamed Ali, Mr. Jehan Hiranjan Roberts Perinpanayagam, and Mr. Balapuwaduge Nishan Chrisanka Mendis.

During their visit to IIT Madras, the SLASSCOM delegation explored the Centre of Innovation, and Heritage Centre, and engaged in an exclusive interaction with Director Prof. V Kamakoti. Following this, they visited the IITM Research Park, where they had the opportunity to interact with startups from the IITM Incubation Cell and the AMTDC. They also toured the IITM Pravartak office and facilities, culminating in a productive meeting with the management team to exchange ideas and explore avenues for future collaboration.



23rd August, 2024: We had the pleasure of welcoming the Trustee and Placement Officer from Adhiyamaan College of Engineering to IITM Pravartak Technologies Foundation. Their visit included a comprehensive tour of the AMTDC and the cutting-edge 5G CoMNet Testing Lab, where they engaged deeply with our technical teams.

The highlight was their interaction with innovative startups like 32Mins Digital Consultancy Services and Music Temple, exploring synergies and fostering connections that bridge academia and industry. Such collaborations are vital for nurturing the ecosystem and driving forward technological advancements.



04th September, 2024: We had the privilege of hosting a team of four esteemed representatives from the Indian Institute of Technology Jodhpur at IITM Pravartak Technologies Foundation. During their visit, the team had an insightful look at our ongoing technology interventions and innovations. They shared their valuable perspectives on how academia can drive industry advancements, sparking engaging discussions with our team at IITMPravartak.



05th September, 2024

Vivekananda International Foundation

We had the privilege of welcoming a distinguished delegation from the Vivekananda International Foundation, including Dr. Arvind Gupta, IPS, Lt Gen RK Sawhney (Retd), and Dr. Saroj Bishoyi, to IITM Pravartak Technologies Foundation. During their visit, our CEO, Dr. MJ Shankar Raman, presented our cutting-edge projects and initiatives driving innovation across various sectors. He provided an overview of the IITM Pravartak ecosystem, emphasizing our collaborative efforts in research excellence, technological advancement, and industry partnerships. The delegation learned about our focus areas, including AI, machine learning, and 5G technologies, highlighting our commitment to building a robust

tech-driven ecosystem. The discussions emphasized the importance of such collaborations in shaping the future of technology and national development. We looked forward to continuing our work aligned with the vision of institutions like the Vivekananda International Foundation.

The visit strengthened ties with the Vivekananda International Foundation and explored collaboration in AI and 5G, paving the way for future partnerships.

Announcement



Campus Outreach for Database Engineering

17th July, 2024: IITM Pravartak Technologies Foundation, under the Digital India and ATMANIRBHAR initiative, executed projects focused on databases, enhancing them to cover identified features in core database architecture, engineering, and tools. Students and faculty from institutions across India were invited to participate in these innovative and transformational research projects as Associates or Interns.

Vidya Shakti



Rural interaction centres (RIC)

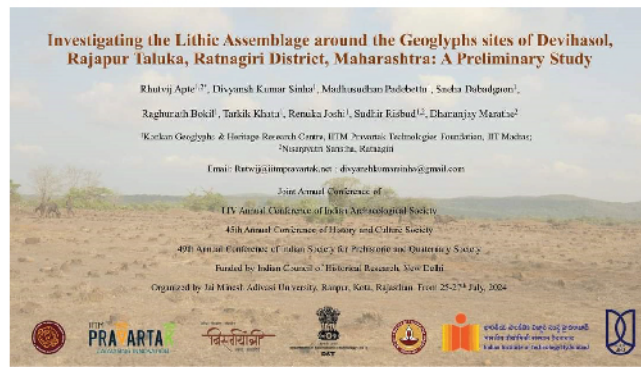
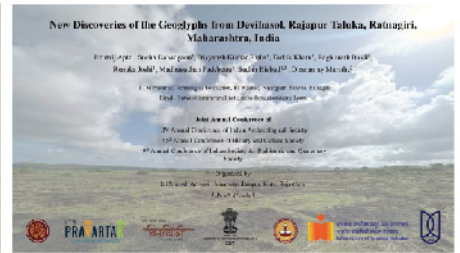
Newspaper Article Coverage about Vidya Shakti project



संश्लेषण करके 5-दिवसीय की डिवाइस-उन्मुखतायें लागू करें
काराणवासी क्षेत्राच्छतिपिळ 50 सुप्रीरुं माणवावरकं पववं
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19th July, 2024: We are thrilled to announce that IITM Pravartak Technologies Foundation, in collaboration with the Indian Institute of Technology, Madras, and the UP Basic Education Department - 'Project Vidya Shakti', has established over 500 Rural Innovation Centers (RICs) across India, including 140 in Tamil Nadu, 354 in Uttar Pradesh, and 10 in Arunachal Pradesh. These centers aim to advance education in rural areas through online classes and virtual reality (VR).

Announcement



30th July, 2024: The Konkan Geoglyphs and Heritage Research Centre presented two key research papers at the International Joint Annual Conference. These papers, from the project "Scientific Investigation, Digital Documentation, and Conservation of Petroglyphs in Konkan, Maharashtra," led by the Department of Science & Technology, Government of India, were a collaborative effort involving IITM Pravartak Technologies Foundation, IIT Madras, Nisargyatri Sanstha, IIT Hyderabad, and JNU.

The research focused on:

- Lithic Assemblage and New Discoveries at Geoglyph Sites of Devihasol, Ratnagiri.
- New Discoveries of Geoglyphs in Rajapur Taluka, Ratnagiri.

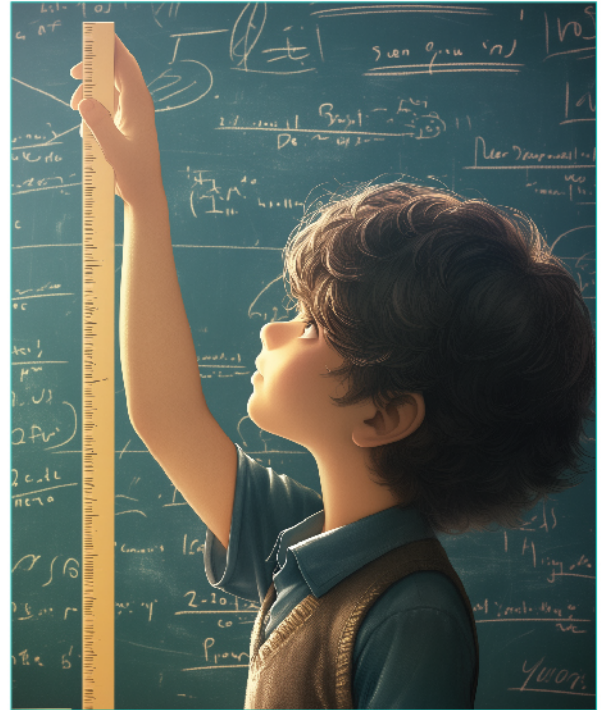
Presented at the 54th Annual Conference of the Indian Archaeological Society and related events, in Kota, Rajasthan, the papers were highly appreciated by scholars, highlighting the project's importance in advancing Indian rock art studies.

Announcement

Out Of The Box Thinking Through Mathematics

Live Session

31st July 2024: We were happy to announce that IIT Madras Pravartak conducted a FREE LIVE Session on Beautiful Mathematics at 6 PM. This session was open to School and College Students, Teachers, Parents, and Working Professionals. It was conducted as part of the Out of the Box Thinking through Mathematics Course.



22nd August, 2024: We are thrilled to share that our CEO Dr. MJ Shankar Raman, IITM Pravartak Technologies Foundation, had the honor of speaking at the Student Induction Program at Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, Kancheepuram (SCSVMV). Dr. MJS Raman engaged with the students on the pivotal role of cybersecurity and entrepreneurship in today's evolving landscape in India and around the globe. He emphasized the importance of continuous learning and encouraged students to embrace entrepreneurship as a pathway to innovation and personal growth. It was an amazing experience for our CEO to connect with and inspire the bright, young minds that will shape our future.

Announcement



29th August, 2024: We had the privilege of hosting OOBT SPoCs & representatives from various Schools for a tour of the IITM Research Park and IITM Pravartak Technologies Foundation Ecosystem. It was a pleasure to showcase our industry-academia partnerships and the innovations within our ecosystems.



The group visited several facilities, including AMTDC, AgniKul Cosmos, the IITM Incubation Cell, 32Mins Digital Consultancy Services, Music Temple, and the 5G CoMNet Testing Lab. They were impressed by the dynamic startup culture and the advanced solutions being developed. Their enthusiasm for bringing students to experience this environment firsthand was evident. We appreciate the positive feedback and look forward to hosting more visits to inspire the next generation of innovators.

Announcement



29th August, 2024: We were excited to share the success of our OOBT SPoC event, which brought together 123 SPOCs from 56 schools. This workshop was a key part of our "Out of the Box Thinking Through Mathematics" course, aimed at enhancing innovative problem-solving skills in students. The event featured engaging sessions led by esteemed speakers, including Prof. V. Kamakoti Veezhinathan and Mr. Sadagopan Rajesh, who provided practical insights on implementing the OOBT course in schools. Additionally, an interactive Q&A session clarified doubts and deepened the participants' understanding of the course's application.



09th September, 2024: Dr. MJ Shankar Raman took part in a groundbreaking panel discussion on 'Triumph over Barriers in Technology Translation' during the launch of the DST-GDC IIT Madras INCUBATE Program for Deep Tech Startups. Spearheaded by the Union Minister Dr. Jitendra Singh, this initiative is part of the broader NIDHI program, which has been empowering innovators & entrepreneurs, especially from Tier II & III cities, to bring their groundbreaking ideas to market.



Under the guidance of luminaries like Dr. Jitendra Singh and Prof. Abhay Karandikar, Secretary, DST, IITM Pravartak Technologies Foundation is set to be a cornerstone in India's march toward becoming a global innovation leader by 2047.



Memorandum of Understanding (MoU)



26th July, 2024: We are pleased to announce a strategic partnership between IITM Pravartak Technologies Foundation and Tamkeen Education from Oman, aimed at delivering job-enabling courses in Qatar and Oman through a hybrid model. This collaboration will offer comprehensive training across various disciplines, including Data Science, AI/ML, Cricket Analytics, DevOps, and Cloud Computing.





30th July, 2024: We are pleased to share that the IITM Pravartak Technologies Foundation team had a productive meeting with Mr. Amit Narang, Ambassador of India to the Sultanate of Oman. During the meeting, we explored various innovative technologies and projects that the IITM Pravartak Technologies Foundation is currently developing.

We are excited to announce our collaboration with Tamkeen Education in Oman, which aims to bring advanced skill development and technology courses to the region. This partnership signifies a strong commitment to fostering educational and technological growth in Oman and India. We look forward to further strengthening our collaborations in skilling and technology, driving mutual growth and development in these sectors.



21st August, 2024: We at IITM Pravartak Technologies Foundation are thrilled to announce that the Heggunje Rajeeva Shetty Charitable Society and IITM Pravartak Technology Foundation have forged a meaningful partnership to expand educational opportunities for underprivileged children in rural Karnataka. This collaboration aims to establish Rural Interaction Centers (RICs) that will provide essential online learning and counseling services to support skill development and foster sustainable livelihoods.

On August 15, 2024, we celebrated the inauguration of 20 RICs in the Udupi district. We're excited to share that regular classes have commenced as of August 19, 2024. These centers will empower the youth with knowledge and skills, helping them build a brighter future.

This initiative is a significant step towards bridging the educational divide and ensuring that every child, regardless of their location, has access to quality education and resources. We look forward to the positive impact these RICs will have on the community.



29th August, 2024: We are excited to announce a new Memorandum of Understanding (MoU) between IITM Pravartak Technologies Foundation and Astraia. This partnership represents a significant advancement in our commitment to enhancing education and professional skills in the rapidly evolving fields of AI and Data Science.

Astraia, known for its expertise in skilling initiatives, will deliver specialized training sessions for NIC personnel at our foundation. This initiative aims to provide cutting-edge skills and knowledge, strengthen their capabilities, and prepare them for future challenges in a tech-driven world.



27th September, 2024: We are thrilled to announce that IITM Pravartak Technologies Foundation has signed an MoU with SKCL Accelerator! This collaboration marks a significant milestone, laying the foundation for potential VC opportunities and strategic partnerships in the Deep Tech sector. By leveraging each other's strengths, both organizations are set to enhance technical expertise, funding, and incubation support for startups.

Our startups—Vyoma Systems Pvt. Ltd., Meister-Gen Technologies Private Limited, Music Temple Pvt. Ltd., and Swayatt Drishtigochar—had the incredible opportunity to showcase their innovative products and services to the SKCL representative.

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