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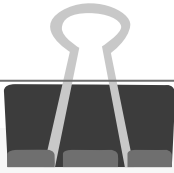
NEWS LETTER

Funded by the
Department of Science & Technology, TDT Division

GITAM – Technology Enabling Centre
GITAM (Deemed to be University)



Picture from the MSME connect 2025 event - conducted at Ginger Hotel, Visakhapatnam



Dear Readers,

It is with great pleasure that I present the fourth edition of the G-TEC Newsletter, highlighting our collective efforts in fostering innovation, collaboration, and technological advancement. Over the past year, G-TEC has strengthened its role as a bridge between academia and industry, driving impactful research and sustainable solutions.

This edition highlights major achievements, including our MoU with BARC for launching GITAM Aakruti Kendra and the MSME Connect event, which brought together over 350 participants from MSMEs, academia, and research institutions. We have also strengthened our network through pivotal MoUs with industries and academic organizations, organized impactful workshops and masterclasses, and advanced our initiatives in technology mining and transfer..

A significant focus has been placed on intellectual property awareness and technology transfer, with expert sessions conducted across various institutions. Through our collaborations with industry leaders, researchers, and entrepreneurs, we continue to create a thriving ecosystem that nurtures innovation and supports technology commercialization. Our ongoing engagement in knowledge-sharing platforms ensures that students and faculty gain exposure to cutting-edge advancements, preparing them for future challenges in the dynamic technology landscape.

I extend my sincere gratitude to Dr. Krishna Kanth Pulicherla (DST, Gol), Prof. K. Sankaran (Anna University), our Program Advisory Group members, and all stakeholders for their unwavering support. Together, we are building a future where innovation drives sustainable development.

Best Regards,

Prof. Raja P Pappu

Coordinator

DST GITAM Technology Enabling Center

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TECHNOLOGIES MINED

1 A Rapid, Reproducible and Sustainable Micropropagation Protocol for Turmeric (*Curcuma longa* L.)



Turmeric (*Curcuma longa* Linn.) belongs to family zingiberaceae and is a valuable spice and medicinal plant known for its aromatic, anticancer, stimulant, carminative, antiseptic and anthelmintic properties. Conventionally, turmeric is propagated through underground rhizomes. The practice, however, is limited to once in a year because of the dormancy of buds. It is very slow process and only 7-8 plants can be produced from one rhizome in a year. BARC has developed a technology for micropropagation of turmeric which offers a continuous source of numerous uniform size plantlets throughout the year.

TRL Level: 09

This protocol will provide disease free good quality planting material throughout the year and will enhance potential productivity of this crop. This technology can also be used in germplasm conservation of elite varieties of turmeric.

Applications:

- Agriculture sector.
- Biotechnology and pharmaceutical companies.
- Plant nurseries

2 Biodegradable packaging films prepared by extrusion processing using Guar Gum and Polyvinyl Alcohol



Developed films

TRL Level: 09

Petroleum based packaging materials are threat to environment due to their non- biodegradability and non-renewability. Hence Government of India has banned the use of plastics. Biopolymers based films could provide suitable alternatives for these petroleum-based products. Bhabha Atomic Research Centre in Collaboration with Central Institute of Petrochemicals and Engineering Technology (CIPET): Laboratory for Advanced Research in Polymeric Materials (LARPM), Bhubaneswar has developed Biodegradable Films using Guar Gum, a widely available Biopolymer and Poly Vinyl Alcohol (PVA) which can be easily scale up industrially.

It is an intelligent technological advancement for the economical & environmental solution for the plastics packaging films. It has a comparable mechanical and barrier properties with commercially available stretch wrap films and no specific environment is required for its degradation.

Applications:

- Can be used for general purpose packaging
- Can be used for making carry bags
- Can be used for food packaging

3 NISARGRUNA Biogas plant Based on Biodegradable waste resource



TRL Level: 09

Waste disposal is one of the major problems being faced by all nations across the world. City like Mumbai generates 7000-10,000 tones waste per day and proper disposal is essential to prevent pollution and maintain esthetics. Out of this waste, glass, metals, some plastic and paper can be recycled. The biodegradable waste should be processed properly to maintain natural balance of essential elements in the environment.

Disposal of biodegradable waste resource can be achieved by several means like incineration, landfills, dumping in the dumping yards, composting etc. These methods have their own hazards. Incineration can lead to respiratory illnesses. Moreover, it may lead to disruption of biogeochemical cycles of several elements and will have long term effects on biosphere. Vermiculture has been used in recent past in urban area, however, it has limitations of space. One of the economic ways would be to install community based biogas plants for processing.

Applications:

The Bio gas plants are useful for Municipal Corporations, Hospitals, Hotels, Housing Societies, Govt. Establishments, Abattoirs, Nagar Palika, Grampanchayat, Farmers. At present, 160 Nisargruna plants are functional in the country.

4 Domestic Water Purification Device Based On Photocatalysis Using Solar Light



TRL Level: 09

A domestic water purification device” is designed on photocatalytic disinfection of water using non-toxic, reusable photocatalyst and solar light. The device does not require electricity, chemical and high pressure tap water. The device is meant for purification of drinking water with respect to suspended particles, dissolved organics and bacteria. The device purifies water in batch mode. The device works on the principle of photocatalytic disinfection of water over photocatalyst using solar light.

Applications:

- The device is meant for purification of drinking water with respect to suspended particles, dissolved organics and bacteria. The device purifies water in batch mode. The device of 60 cm x 65 cm x 10 cm size can disinfect ~ 15 liters of drinking water daily using solar light.

5 100kW, 35kV Electron Beam Melting (EBM) Gun Column for Metallurgical Application



TRL Level: -09

Electron beam melting (EBM) process uses heat obtained from the impingement of high energy intense electron beam for vacuum melting, scrap consolidation and metallurgical refining of reactive, refractory and special alloys. Electrons generated by thermionic emission are accelerated and focused with the help of electric and magnetic fields in high vacuum to the target to be melted. Electron beam melting gun column comprises of generation, acceleration, focusing and maneuvering of high intensity electron beam. The technology and knowhow of a 35kV, 100kW EBM Gun Column developed at Bhabha Atomic

Research Centre is available for transfer to industry. EB Melting Gun column and its power source can be integrated to a process chamber designed as per user specification to make EB Machines for the drip melting and Hearth Melting of reactive, refractory and special alloys (such as Nb, Ti, Nb-Ti, Zr alloys etc.).

Applications:

- EB Melting Gun column and its power source can be integrated to a process chamber designed as per user specification to make EB Machines for the drip melting and Hearth Melting of reactive, refractory and special alloys (such as Nb, Ti, Nb-Ti, Zr alloys etc.).
- EB Melting machine can also be used for the scrap consolidation of precious and strategic materials.
- EB Melting gun can also be used as a heat source for testing of components which are subjected to high heat flux in applications like ADSS (Accelerator Driven sub critical Reactor system) and ITER (International Thermonuclear Experimental Reactor).

6 Cobalt-60 Teletherapy Machine



TRL Level: 09

Teletherapy machines are used for treating localized solid tumors, such as cancers of the skin, tongue, larynx, brain, breast, or uterine cervix. About half of the cancers incidents can be treated with Cobalt-60 Teletherapy Machine. In a teletherapy machine, the radiation source is kept outside the body and the beam is directed on the cancer site. The major components of the machine are Cobalt-60 Source, Source Head, Source Drawer, Collimator, Gantry, Base Housing, Controller and Control Console.

The unit also has a Couch on which the patient is positioned during treatment. Its indexed Patient Positioning System enables quick, accurate and reproducible patient positioning

Applications:

- The machine can be used for treating localized solid tumors, such as cancers of the skin, tongue, larynx, brain, breast, or uterine cervix.

1 Seminar on Intellectual Property Rights

Academia-industry collaboration vital for innovation: Scientist

PNS ■ VISAKHAPATNAM

Stronger synergy between academia and industry is essential to propel innovation and translate research into market-ready solutions, said Dr. Krishnakanth Pulicherla, Scientist at the Department of Science and Technology (DST), during a seminar at GITAM Deemed to be University on Wednesday.

Speaking at the event titled 'Create, Innovate, Protect: IPR for the Academic World,' organised by the GITAM Technology Enabling Centre (GT-TEC), Dr. Pulicherla highlighted that while India holds the 39th position in the Global Innovation Index and ranks third globally in research publications, the lack of stakeholder engagement and limited market perspective often impede tangible innovation outcomes. He lauded GITAM's efforts in facilitating industry connections for researchers and underscored DST's support for patentable research and innovation funding.

Prof. D.N. Rao, Vice-President of Centurion University, remarked on the rapid growth of India's innovation ecosystem, encouraging researchers to explore private



funding avenues beyond government grants. GITAM Pro Vice-Chancellor Prof. Y. Gouthama Rao stressed the importance of intellectual property rights in amplifying research value. GT-TEC

Coordinator Prof. Raja Phani Pappu showcased successful applications of G-TEC innovations by entities like GAIL and in regions such as Mizoram and Lalakh.

The seminar also featured key insights from K. Subhosh Kumar (TCS IP Services), Prof. M. Padmavathi (IIT Kharagpur), Purneta Arora (Avidinvent), and Uma Parameswaran (SciTech Patent Art).

DST GITAM-Technology Enabling Centre hosted a highly impactful seminar, "Create. Innovate. Protect: IPR for the Academic World," dedicated to empowering academic and industry participants with deeper insights into Intellectual Property Rights (IPR) and fostering innovation-driven collaborations.

The event brought together leading experts from the Department of Science and Technology (DST), Centurion University, Tata Consultancy Services (TCS), IIT Kharagpur, AvidInvent, and SciTech Patent Art, creating a vibrant platform for sharing knowledge and best practices.



Key sessions covered critical topics including patent strategies, IP management in digital and life sciences, as well as the legal frameworks essential for the commercialization of academic research. Panel discussions and expert talks shed light on the pivotal role of robust IP practices in strengthening the link between research, industry partnerships, and real-world impact.



This seminar reinforced GITAM's commitment to cultivating a strong culture of innovation and IP awareness—vital for translating research breakthroughs into meaningful, societal solutions. We extend our gratitude to all participants and partner institutions for making this event a success and look forward to many more such collaborative initiatives to advance the academic and innovation landscape.

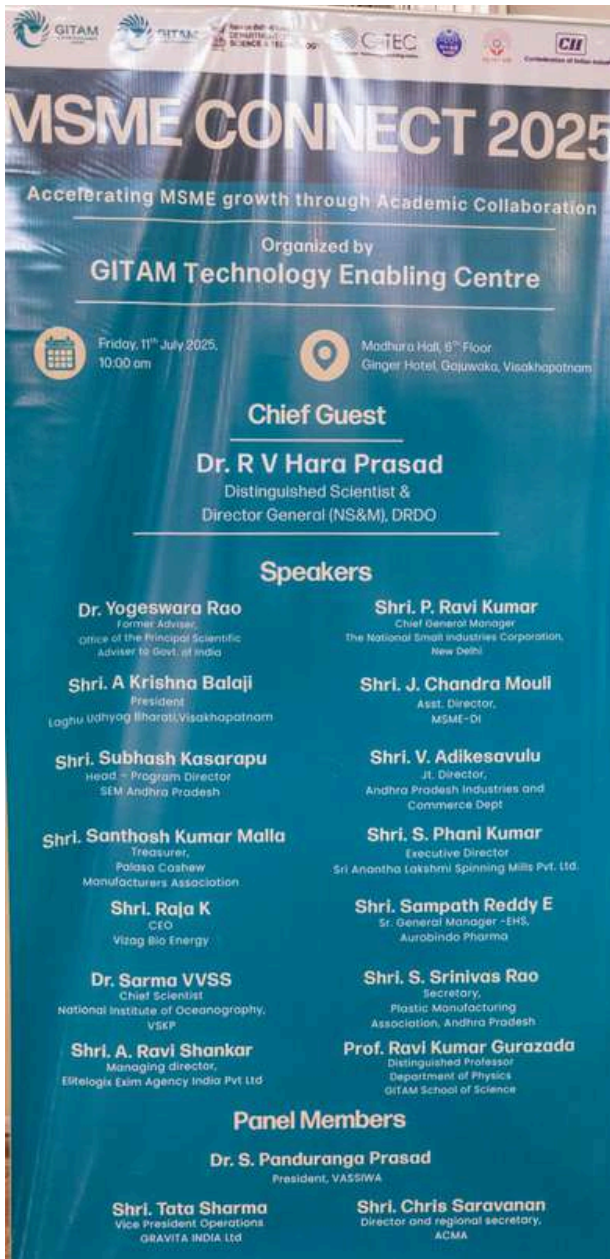
2 MSME Connect 2025



DST GITAM Technology Enabling Centre (G-TEC) organized MSME Connect 2025 in Gajuwaka, Visakhapatnam. The primary goal was to address pressing challenges faced by MSMEs across sectors and foster stronger connections between industry and academia.

The event was graced by Dr. R V Hara (Distinguished Scientist & Director General, DRDO) as chief guest, who applauded GTEC's initiative in building bridges between industry and academic research.





MSME CONNECT 2025
Accelerating MSME growth through Academic Collaboration

Organized by
GITAM Technology Enabling Centre

Friday, 11th July 2025,
10.00 am

Madhura Hall, 5th Floor
Ginger Hotel, Gajuwaka, Visakhapatnam

Chief Guest
Dr. R V Hara Prasad
Distinguished Scientist &
Director General (NS&M), DRDO

Speakers

Dr. Yogeswara Rao Former Advisor, office of the Principal Scientific Adviser to Govt. of India	Shri. P. Ravi Kumar Chief General Manager The National Small Industries Corporation, New Delhi.
Shri. A Krishna Balaji President Laghu Udyog Bharati, Visakhapatnam	Shri. J. Chandra Mouli Asst. Director, MSME-DI
Shri. Subhash Kasarapu Head - Program Director SEM Andhra Pradesh	Shri. V. Adikesavulu Jt. Director, Andhra Pradesh Industries and Commerce Dept
Shri. Santhosh Kumar Malla Treasurer, Palasa Cashew Manufacturers Association	Shri. S. Phani Kumar Executive Director Sri Anantha Lakshmi Spinning Mills Pvt. Ltd.
Shri. Raja K CEO Vizag Bio Energy	Shri. Sampath Reddy E Sr. General Manager -EHS, Aurobindo Pharma
Dr. Sarma VVSS Chief Scientist National Institute of Oceanography, VSKP	Shri. S. Srinivas Rao Secretary, Plastic Manufacturing Association, Andhra Pradesh
Shri. A. Ravi Shankar Managing director, Eteologix Exam Agency India Pvt Ltd	Prof. Ravi Kumar Gurazada Distinguished Professor Department of Physics GITAM School of Science

Panel Members

Dr. S. Panduranga Prasad
President, VASSIWA

Shri. Tata Sharma Vice President Operations GRAVITA INDIA LTD	Shri. Chris Saravanan Director and regional secretary, ACMA
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Attendance reflected immense community interest, with over 300 participants including 205 MSMEs, 43 startups, and 32 researchers. Eighteen distinguished speakers—leaders from corporates, MSME organizations, government bodies, and industry associations—shared insights on overcoming industry challenges, accessing innovative funding, leveraging collaboration, and making the most of government support schemes for MSMEs.

Key achievements from the event include:

- Showcasing more than 350 breakthrough technologies developed by GTEC and partners
- Collecting over 100 industry challenges to help target future solutions
- Identifying critical training needs for startups
- Establishing more than 10 collaborative linkages to continue moving innovation from lab to market



MSME Connect 2025 proved to be a dynamic platform for exchanging ideas, connecting stakeholders, and advancing sustainable growth within the MSME ecosystem. GTEC remains committed to driving innovation and entrepreneurship for economic and societal progress.

3 Faculty Leadership Series at GITAM



G-TEC was honored to be part of the Faculty Leadership Series - "From Ideas to Impact: Enabling Scientific Leadership and Innovation", held at GITAM from 16-18 July 2025. This enriching program was tailored specifically for early- and mid-career faculty members, focusing on critical themes such as innovation translation, scientific leadership, and fostering collaborative research ecosystems. The program featured distinguished facilitators who generously shared their insights, including

Aseem Mishra, Founder and CEO of Prantae; Rajesh Parishwad, Senior Associate Director at the American Chemical Society; Savita Ayyar, Founder of Jaquaranda Tree; and Krishna Raghav Chaturvedi, PhD, Outreach Manager at the American Chemical Society. The event was also graced by guest speaker Colin Jamora from Shiv Nadar University.

Special thanks go to Manjula Rao, Director of Strategic Initiatives, and Dr. Raja P Pappu, Dean of GITAM School of Business, for their thoughtful conceptualization and curation of this impactful faculty development program, which greatly enriched the academic community.



4 DST G-TEC Participates in IPHEX 2025 - The 11th International Pharmaceutical Exhibition



GITAM Technology Enabling Centre (G-TEC) is pleased to announce its participation in IPHEX 2025 - the 11th International Pharmaceutical Exhibition, held at Bharat Mandapam, New Delhi, from September 4-6, 2025. This renowned international platform convened leading voices from the pharmaceutical and MedTech ecosystems, along with policymakers, innovators, and industry experts.

Our engagement provided a valuable opportunity to exchange ideas on patents, technologies, and pioneering products, further strengthening G-TEC's vision of nurturing industry-academia partnerships and encouraging grassroots innovation.



Key Insights Highlighted:

Diagnostics for All: AI-powered, patient-focused solutions for inclusive healthcare access

Innovation Pathways: Flexible regulatory models for AI/ML, wearable devices, and personalized medical technologies

Medical Device Parks Roadmap: Positioning India's MedTech manufacturing at par with global standards under the National Medical Devices Policy, 2023

With the Indian MedTech industry projected to surpass \$30 billion by 2030, G-TEC's participation in IPHEX 2025 underscores its dedication to advancing innovation, sustainability, and collaboration, shaping a more sustainable and self-reliant future.

5 DST G-TEC at the 28th National Conference on e-Governance



GITAM Technology Enabling Centre (G-TEC) had the privilege of participating in the 28th National Conference on e-Governance, held in Visakhapatnam on September 22-23, 2025. The event was inaugurated by Shri N. Chandrababu Naidu, Hon'ble Chief Minister of Andhra Pradesh, and served as a milestone platform to explore the future of digital transformation in governance.

Themed "Viksit Bharat: Civil Service and Digital Transformation," the conference brought together policymakers, innovators, and startups from across the nation to exchange best practices and drive advancements in citizen-centric digital governance.

Highlights of the event included insightful addresses by Dr. Jitendra Singh, Hon'ble Minister of State for Personnel, Public Grievances and Pensions of India, and Shri N. Chandrababu Naidu, Chief Minister of Andhra Pradesh, who shared transformative perspectives on the role of technology in empowering citizens and strengthening governance structures. The opportunity to interact with Shri Mathukumilli Sribharat, Hon'ble Member of Parliament, added immense value and inspiration.



Participation in this event enabled G-TEC to engage with national and state-level stakeholders, reaffirming our mission of fostering technology-driven solutions, enabling networks, and contributing to the nation's journey toward innovative, transparent, and accountable governance.

6 DST G-TEC at Standards Conclave 2025 organized by the Bureau of Indian Standards (BIS)



DST G-TEC participated in the Standards Conclave 2025 organised by the Bureau of Indian Standards (BIS), which brought together policymakers, industry, academia and standardisation experts to discuss how quality standards support innovation, safety and competitiveness.



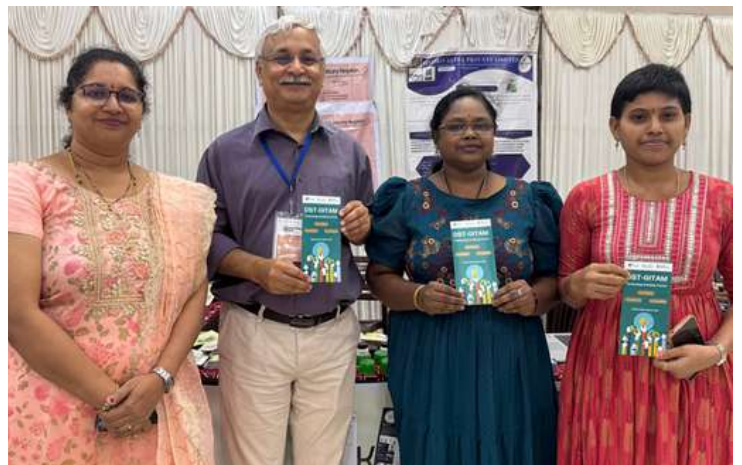
The G-TEC team interacted with BIS officials and domain experts on recent developments in Indian standards and on ways to involve universities, MSMEs and startups more effectively in the standards ecosystem, helping ensure that technologies emerging from GITAM are standards-ready and globally competitive.

7 DST G-TEC participation at Enterprising Bharat 2025



DST G-TEC took part in Enterprising Bharat 2025, a national entrepreneurship summit centred on “building for the next billion” in India’s rural and peri-urban communities. Organised by the Grameena Incubation Centre and its ecosystem partners, the summit showcased how innovation, stronger market linkages and youth-led enterprises can unlock rural opportunities.

During the conclave, DST G-TEC interacted with incubators, investors and development agencies to explore how university research can evolve into startups tackling real-world issues in agriculture, livelihoods, sustainability and digital inclusion, thereby creating stronger pathways for GITAM innovations to reach “Bharat” at scale.



8 DST G-TEC at Cost and Competitiveness of MSMEs in India



DST G-TEC participated in the national initiative on “Cost and Competitiveness of MSMEs in India”, which aims to understand cost pressures, productivity gaps and regulatory challenges faced by MSMEs and channel these insights into policy and support schemes.

Drawing on its MSME white paper and regional engagement, DST G-TEC shared perspectives on technology adoption, skills, market access and finance, positioning GITAM as a partner for developing capacity-building programmes and technology solutions that help MSMEs lower costs and enhance competitiveness.

9 DST G-TEC participation at AP MSME Export Development Convention 2025



DST G-TEC recently participated in the AP MSME Export Development Convention 2025 in Visakhapatnam, a key platform connecting Andhra Pradesh's MSMEs with global buyers, financiers and export support agencies. The team joined discussions on export readiness, technology upgradation and market diversification, and explored ways to align GITAM's innovation and capacity-building programmes with the state's rapidly growing MSME export ecosystem.

10 DST G-TEC participation at 30th CII Partnership Summit 2025



DST G-TEC took part in the 30th CII Partnership Summit 2025 in Visakhapatnam, which focused on “Technology, Trust, and Trade: Navigating the New Geoeconomic Order.” The summit convened global industry leaders, policymakers and investors to deliberate on resilient supply chains, digital public infrastructure and sustainability-driven growth models.

At the forum, DST G-TEC interacted with key stakeholders to explore how university research, startups and technology transfer can advance Andhra Pradesh’s innovation priorities and India’s broader development goals, further positioning GITAM as a strategic knowledge and technology partner in international collaborations.



11

DST G-TEC Team visit to at Akruthi Kendra, BARC, Mumbai for Technology Training.



DST G-TEC recently deputed a five-member team from GITAM to AKRUTI Kendra, BARC Mumbai for an intensive technology training programme. During the visit, the team was trained on around 30 BARC technologies spanning agriculture, food processing, water, waste management and other societal applications, curated specifically for deployment through the upcoming AKRUTI Kendra at GITAM.

The AKRUTI Programme is designed to enable rural and small-scale techno-entrepreneurship by sharing BARC's proven, field-ready technologies with local institutions that can demonstrate, disseminate and transfer them to MSMEs and community enterprises. With this training, G-TEC is now better positioned to act as a technology translation and handholding hub for small and medium industries in the region, supporting low-cost, high-impact technology transfer and helping create new livelihood opportunities around BARC technologies.

WORKSHOPS

Seminar on Sustainable Packaging – Driving Innovation for a Greener Future



DST GITAM Technology Enabling Centre successfully hosted a thought-provoking Seminar on Sustainable Packaging on 19th August 2025 at VDC. The event brought together 42 participants—including 22 MSME representatives and 20 academia and PhD scholars—to explore the future of packaging through the lens of sustainability and innovation.

The seminar featured insightful discussions on smart, safe, and eco-friendly packaging technologies, with a strong emphasis on integrating innovation with environmental responsibility. It served as an engaging platform for knowledge exchange and meaningful collaboration between industry leaders and the research community.

We extend our heartfelt thanks to Dr. N. Nataraj, Deputy Director of the Indian Institute of Packaging (IIP), Hyderabad, for delivering his expert perspectives on emerging packaging trends and global standards. His guidance inspired participants to reimagine packaging solutions that are both technologically advanced and environmentally sustainable.

With initiatives like these, G-TEC continues to bridge academia and industry, driving innovation for safer, smarter, and greener packaging solutions that support a sustainable future.

CAPACITY BUILDING PROGRAMS

Session on “Technology Transfer and Commercialization” at Avanathi Institute of Pharmaceutical Sciences



DST G-TEC conducted an engaging session on “Technology Transfer and Commercialization” for undergraduate students and faculty at Avanathi Institute of Pharmaceutical Sciences on 5th August. The session highlighted the vital role of technology transfer in bridging academic innovation and industry needs by showcasing real-world examples and pathways for translating research from the lab to the marketplace.

Both students and faculty actively participated, gaining valuable insights into the commercialization process, entrepreneurial opportunities, and essential skills for successful technology adoption in the pharmaceutical sector. The session sparked curiosity, encouraged knowledge sharing, and received excellent feedback for its relevance and practical approach.



DST G-TEC looks forward to continued collaboration with Avanathi Institute of Pharmaceutical Sciences (AIPS) Visakhapatnam, aiming to empower the next generation of innovators and support a vibrant ecosystem for technology-driven growth.

Empowering Innovation: Session on IPR and Technology Commercialization at Visakha Government Degree College for Women



The DST GITAM Technology Enabling Centre (G-TEC) conducted an interactive session on “A Way to Future Women Entrepreneur and the Role of Patents in Technology Transfer” at Visakha Government Degree College for Women, Visakhapatnam, on 22nd October 2025

The session emphasized the importance of technology transfer in transforming academic research into real-world industrial solutions. Participants explored how innovative ideas from the lab can be successfully translated into market-ready products through effective patenting and commercialization strategies.

Students and faculty members engaged enthusiastically in discussions on Intellectual Property Rights (IPR), entrepreneurial pathways, and the process of turning inventions into impactful enterprises. They gained practical insights into how innovation and technology protection contribute to societal advancement and economic growth.

The session received highly positive feedback for its relevance and hands-on approach. DST G-TEC looks forward to continued collaboration with Visakha Government Degree College for Women, fostering innovation and empowering the next generation of technology-driven women entrepreneurs.

INDUSTRY VISIT

DST G-TEC Industry Interaction with Laghu Udyog Bharti at Vizianagaram



The DST G-TEC team visited the Saripalli Industrial Area in Vizianagaram for an industry interaction programme with members of Laghu Udyog Bharati (LUB), one of India's largest grassroots MSME networks. The team met the executive committee of LUB to understand local industry priorities and explore how GITAM's technology, mentorship and capacity-building support can be aligned with the needs of micro and small enterprises in the region.



As part of the visit, the G-TEC team also toured multiple units in the industrial area and collected detailed problem statements directly from entrepreneurs on issues such as process inefficiencies, technology gaps, quality challenges and market access. These on-ground insights will feed into co-created solutions, pilot projects and targeted technology-transfer initiatives under the GITAM-LUB collaboration, ensuring that future interventions are driven by real MSME challenges from Vizianagaram and surrounding clusters.



MEMORANDUM OF UNDERSTANDING

The formalization of a Memorandum of Understanding (MoU) between Academia and G-TEC represents a momentous achievement that nurtures cooperation and alliance between these institutes. This MoU acts as a binding agreement that defines the terms and parameters of collaboration, paving the way for collaborative research and projects with common objectives.

S. No.	Name of Institute/ Industry	Focus areas
1.	1.BVC Odalarevu (A), Amalapuram	Food Technology Automation AR/VR Pharmaceuticals Agriculture Smart Manufacturing
2.	1.Vignan's Institute of Engineering for Women (A), Visakhapatnam	
3.	Ramachandra College of Engineering (A), Eluru	
4.	Anagha Organics	
5.	SUG Creatives	
6.	INDQ	
7.	BARC	
8.	Laghu Udyog Bharati	

GITAM-BARC MoU for establishing AKRUTI Kendra at Visakhapatnam Campus



GITAM Technology Enabling Centre (G-TEC), in partnership with GITAM Deemed University, has proudly signed a Memorandum of Understanding with Bhabha Atomic Research Centre (BARC) to establish an AKRUTI Kendra at the Visakhapatnam campus.

This strategic collaboration marks a significant milestone in technology transfer for micro, small, and medium enterprises (MSMEs) and local industries. The AKRUTI Kendra—a technology demonstration and training center—will serve as a vital platform for deploying advanced, BARC-developed technologies across key domains including water management, agriculture, food processing, waste management, and more



Key objectives of the AKRUTI Kendra include:

- Facilitating real-world deployment of cutting-edge DAE-BARC technologies
- Nurturing innovation and techno-entrepreneurship through skill-building and mentorship
- Bridging the gap between academic research and industry demand
- Accelerating sustainable solutions and livelihood opportunities for the broader community

Hans India *AKRUTI Kendra aspires inclusive technological growth*

HANS NEWS SERVICE VISAKHAPATNAM

In a significant step towards enhancing technology transfer for societal benefit, the Bhabha Atomic Research Centre (BARC) signed a memorandum of understanding (MoU) with the GITAM Technology Enabling Centre (GTEC) in Visakhapatnam here on Thursday.

The collaboration aims to establish an AKRUTI Kendra on the campus which will serve as a platform for technology translation and commercialisation, particularly for micro, small, and medium enterprises (MSMEs) and local industries. The AKRUTI programme, a flagship initiative by DAE-BARC, focuses on deploying advanced atomic research technologies for societal applications, particularly in rural and urban development. The MoU was exchanged between institutions Registrar D Ganasekharan and Department of Atomic Energy (DAE) Technology Transfer and Collaboration Division in the presence of the institution's Vice-Chancellor Errol DSouza.

BARC Technology Transfer and Collaboration Division AKRUTI Group Leader Bharati A Bhalera, among others.

The newly established kendra at the institution will act as a catalyst in enabling access to BARC-developed technologies, fostering innovation and bridging the gap between research and industry needs.

This strategic partnership underscores the shared commitment of BARC and the institution to promote inclusive technological growth and create sustainable solutions for national development.

Memorandum of understanding exchanged between the officials in Visakhapatnam on Thursday



Through this initiative, GITAM reinforces its commitment to societal impact, empowering innovators, and translating high-value research into community-centric solutions. We look forward to the collective impact of this partnership in fostering a vibrant technology ecosystem on our campus and beyond.

GITAM - Laghu Udyog Bharati MoU Signing Ceremony



Officials exchange MoU copies to boost innovation and growth in the MSME sector, in Visakhapatnam on Tuesday | EXPRESS

GITAM, LUB ink pact to give boost to MSMEs

EXPRESS NEWS SERVICE
@ Visakhapatnam

GITAM University has signed a MoU with Laghu Udyog Bharati (LUB), a national organisation representing more than 60,000 MSMEs across 27 states.

The MoUs were formally signed and exchanged here on Tuesday in a hybrid ceremony by GITAM Pro Vice-Chancellor Prof. Y. Gouthama Rao, Registrar Prof. D. Gunasekharan, School of Business Dean Prof. LUB, representatives Raja P. Pappu, AP President T. Yogish Chandra, Working Committee Member, A. Krishna Balaji, General Secretary Om Prakash Gupta and National Coordinator (Industry-Academia) Jayanti Goela were present.

The partnership aims to bridge the gap between aca-

demical research and industry requirements through initiatives by adopting new technologies, offering tailored training programmes and workshops, providing mentorship for student start-ups, supporting research and development, and facilitating access to national and international funding opportunities.

Under the MoU, GITAM will design and deliver need-based capacity-building programmes for industries associated with LUB. University faculty will also contribute to LUB-led national initiatives including the Net Zero Initiative and the Knowledge Based Initiative (KBI), through the GITAM Technology Enabling Centre (G-Tech) established by the Department of Science and Technology (DST), Government of India.

GITAM Deemed to be University has signed a Memorandum of Understanding (MoU) with Laghu Udyog Bharati (LUB) to strengthen the MSME ecosystem and drive innovation-led growth across India. The partnership will connect academic research with industry needs, support technology adoption by MSMEs, and create mentoring and training avenues for student startups.

The MoU was formalised in the presence of GITAM's senior leadership and representatives from the Department of Science and Technology (DST), along with national, state and district office-bearers of LUB, reflecting strong commitment on both sides. The collaboration will be anchored by the DST-supported GITAM Technology Enabling Centre (G-TEC), which will design joint programmes, technology-transfer initiatives and industry-academia engagements for LUB's MSME network.

PROBLEM STATEMENTS

1. Problem: Bio-degradable film for vegetable cultivation

Statement: Biodegradable pest-degradable films offer a sustainable alternative to plastic sheets in vegetable farming by naturally breaking down in the soil after use, thus preventing microplastic accumulation and pollution. These films effectively suppress weed growth, retain soil moisture, and increase soil temperature, which facilitates better plant establishment and higher crop yields. Their soil-biodegradability eliminates the need for labor-intensive removal and disposal, reducing both waste and environmental impact. Additionally, using certified biodegradable films in agriculture lessens the reliance on chemical herbicides and supports eco-friendly, resource-efficient farming practices, all while maintaining the agronomic benefits of conventional mulches.

2. Problem: AI/ML-based decision support systems for MSMEs

Statement: Custom AI tools tailored for MSMEs are increasingly in demand because they offer significant advantages in decision-making, efficiency, and growth. These intelligent systems can automate routine tasks, analyze vast data sets for insights, and personalize customer engagement, enabling small businesses to operate more efficiently and competitively. AI-driven solutions assist with demand forecasting, inventory management, and market analysis, helping MSMEs make informed strategic choices while reducing costs and errors.

3. Problem: Predictive Maintenance for High-Speed Spinning Machinery

Statement: Traditional cold-pressed oil filtration methods often prove inefficient in completely removing impurities while maintaining product quality, leading to compromised purity and shelf life. To address these limitations, the objective is to develop an advanced filtering machine featuring adjustable operating speeds (90-150 RPM) and integrated multi-stage filtration technology.

PROBLEM STATEMENTS

4. Problem: Automation of Milk Packet Arrangement in Dairy Plants

Statement: Manual arrangement of milk packets in dairy plants remains a labor-intensive and inefficient process, creating multiple operational challenges. Current reliance on human workers for crate packing leads to inconsistent output speeds, high labor costs, and physical fatigue among staff from repetitive motions. The solution must accommodate varying packet sizes and materials while operating efficiently in typical plant conditions.

5. Problem: Technology Requirement for Drying Frozen Potato Seeds for Transportation

Statement: Transporting frozen potato seeds currently faces significant challenges due to excessive moisture, leading to ice formation that damages seed viability, increased shipping weight, microbial growth risks, and clumping issues. Existing drying methods like ambient air drying prove inefficient—requiring 8-12 hours while delivering inconsistent results and high energy consumption. There is an urgent need for an advanced drying solution that can rapidly reduce moisture content below 8% without compromising the biological integrity of seeds.

6. Problem: Pest Management in Organic Farming

Statement: Farmers are facing significant challenges in controlling pests while adhering strictly to organic farming practices. The limited availability of effective, eco-friendly pest control solutions often impacts crop yield and quality. There is a growing need for sustainable, non-chemical pest management strategies that are both cost-effective and environmentally safe.

PROBLEM STATEMENTS

7. Problem: High Quality Organic Fertilizer

Statement: The demand for high-quality organic fertilizers is increasing due to the shift towards sustainable agriculture. However, farmers require guidance on selecting suitable organic inputs that enhance soil fertility and improve crop productivity. Standardization, quality assurance, and awareness about application methods remain key areas of concern.

8. Problem: Requirement for Vacuum Sealing Machine for Vegetables

Statement: Producers and vendors have expressed the need for vacuum sealing machines to improve the shelf life and freshness of vegetables. Proper packaging solutions are essential to reduce post-harvest losses and maintain product quality during storage and transportation. Affordable and efficient vacuum sealing equipment would significantly support small and medium-scale agri-entrepreneurs.

SECTORS OF FOCUS AT GITAM - TEC

- Smart Manufacturing
- Agri Tech
- Health Tech
- Food Technology
- Material Science
- Waste Management
- Toys

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OUR TEAM



Prof. Raja P Pappu

Dean - School of Business

Coordinator



Dr. Prasada Rao AK

Associate Dean Core-
Engineering

Co-Coordinator



**Prof. K Viswanatha
Chaitanya**

Professor, Life Sciences

Co-Coordinator



SomBhatt Ayyala

Deputy Director, Industry
Relations

COO



**Dr. Chandra Mouli
KVVNR**

Technology Expert



Alekhya Maram

**Manager, Technology
Transfer**



Dr. Rama Devi B

**Assistant Manager,
Technology Transfer**



**Ms. Varalakshmi
Patru**

**Junior Officer,
Operations**



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Thank you for reading the latest edition of the GITAM Technology Enabling Centre (G-TEC) Newsletter! We hope you found the updates and insights informative and inspiring.

As we continue to advance our mission of fostering innovation, research, and collaboration, we encourage you to stay connected with us and participate in our various initiatives.

- Join our Events and Workshops to Enhance your Knowledge
- Collaborate with Us for Technology Transfer and Development

For more information, please reach out to us at:

Email: gtec@gitam.edu

Website: www.gtec.gitam.edu

LinkedIn: www.linkedin.com/company/91447466

Best regards,

The G-TEC Team

GITAM Technology Enabling Centre (G-TEC)

Visakhapatnam, India

THANK YOU

Together, let's drive innovation and make a difference!