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RGIPT
Rajiv Gandhi Institute of Petroleum Technology
An Institution of National Importance, Government of India
NEWSLETTER
ऊर्जा प्रवाह
Jais • Sivasagar • Bengaluru
Newsletter of RGIPT | 2026 | Volume 02 | Issue 01 | January–March 2026

From the Director's Desk

I am pleased to present to you the Volume 02, Issue 01 (January–March 2026) of our newsletter "ऊर्जा प्रवाह". I extend my warm greetings and best wishes to all readers. As we progress through 2026, I hope this year continues to bring new opportunities for growth, innovation, and excellence for every member of the RGIPT fraternity.

The first quarter of the year has been marked by remarkable achievements and meaningful progress across multiple domains. Our continued commitment to sustainability is reflected in the successful inauguration of the Integrated Zero Waste Plant at the Jais Campus, reinforcing our vision of a circular economy and environmental stewardship. The development of innovative technologies in waste management, bioenergy, and wastewater treatment further demonstrates RGIPT's dedication to addressing real-world challenges through research and innovation.

This period has also witnessed significant strides in strengthening industry–academia collaboration and expanding our academic ecosystem. From hosting distinguished visitors and IAS officer trainees to organizing impactful workshops such as Electric Vehicle Applications using ANSYS, and delivering specialized training programs for IOCL professionals, RGIPT continues to bridge the gap between knowledge and practice.

Our participation in prestigious platforms like India Energy Week 2026 and Viksit Bharat Young Leaders Dialogue highlights the institute's growing national presence and contribution to policy dialogue and technological advancement.

The establishment of a state-of-the-art AI & ML Lab at the Bengaluru Campus and the launch of new academic programmes such as B.Tech in AI-Enabled Energy Engineering reflect our forward-looking approach in emerging domains.

I am particularly proud of the outstanding accomplishments of our students, faculty, and alumni. From securing top ranks in GATE 2026 and winning national and international awards, to achieving global recognition in innovation and research, their success continues to bring laurels to the institute.

These achievements would not have been possible without the unwavering dedication and collective efforts of our faculty, students, staff, and stakeholders. I extend my heartfelt appreciation to each one of you for your valuable contributions.

With Warm Regards,
(Harish Hirani)

Milestone of 8000+ Citations

Prof. Atul Sharma, Professor & Head, Department of Sciences and Humanities, has achieved a remarkable milestone of 8000+ citations for his research work on "Review on thermal energy storage with phase change materials and applications."

This accomplishment reflects the significant impact and wide recognition of his contributions within the academic and research community.

Appointment of Registrar

Shri Rajan Srivastava has joined RGIPT as its first full-time Registrar. Prior to this, he served as Joint Registrar at IIT (BHU), Varanasi, bringing with him extensive administrative experience and expertise.

Sustainability

Key Highlights

- Inauguration and visit of the **Integrated Zero Waste Plant**
- Strengthening industry–government–academia collaboration
- Community participation & local outreach

RGIPT's Key Initiatives in Waste Management & Sustainability

- Zero Waste Campus Model
- Waste-to-Energy Technologies
- Digestate Utilization
- Solid Waste Processing
- Wastewater Treatment & Reuse
- Industry & Government Collaboration

International Day of Zero Waste 2026 Celebration

RGIPT, Jais Campus, marked International Day of Zero Waste 2026 with the successful inauguration of its **Integrated Zero Waste Plant**, showcasing its commitment to sustainability, circular economy, and environmental stewardship on March 30, 2026. The event was graced by Prof. Harish Hirani (Director, RGIPT), Dr. Ravindra Pratap Singh (Chairman, UPPCB), Mr. Ravi Prakash (Executive Director, HAL), and Lt. Col. (Retd.) Monish Ahuja (CMD, PRESPL), along with representatives from Bahadurpur Block and nearby villages.



Technologies Developed

Biocrude production from Hydrothermal liquefaction of mixed waste

Biocrude production via hydrothermal liquefaction (HTL) of mixed plastic and food waste achieved ~10 wt.% yield under optimized conditions (310 °C, 70 bar, 20 min, 5 wt.% $CaCO_3$, 5:1 water ratio). The process also produces hydrochar (solid biofuel) and gases, highlighting mixed waste as a sustainable source of value-added energy products.

Green-Synthesized Nanofluid-Membrane for Biogas Plant CO_2 Capture- Enhancing Biomethane yield

Biogas yield was enhanced using a 3-stage membrane system that selectively removed CO_2 and impurities, enriching CH_4 content. Multi-pass operation improved methane purity, calorific value, and overall fuel quality, resulting in higher usable biogas output with minor H_2 as a byproduct.

Integrated Circular Bioeconomy System for Waste Valorisation, Bioenergy, Soil Health, and Sustainable Agricultural Applications

This integrated circular bioeconomy system converts agricultural and food waste into value-added products like biogas, vermimanure, and organic soil amendments. It combines bioenergy, biotransformation, and waste valorisation to support soil health, sustainable agriculture, and scalable solutions for environmental management and climate mitigation.

Microbial Wastewater Treatment via Enriched Nano–Bio System

Wastewater treatment using an integrated nano–bio–phytochemical system (microbes, nanofluid, and plant extract) achieved near-complete removal of turbidity, TDS, conductivity, and suspended solids under mild conditions. Significant reductions in COD and BOD, along with improved dissolved oxygen, highlight its high purification efficiency. The process also generates reusable water and biomass, offering a sustainable solution for advanced treatment and reuse.

Solid Plastic Waste Valorization into Utility Products

Plastic waste was converted into value-added products like mats, tables, and stools through thermal softening and molding. This process transforms low-value waste into durable, practical items, offering a sustainable solution for waste management.

Visits, Meetings, Workshops, Seminars

Advancing R&D with Societal Impact

The Institute had the privilege of hosting Ms. Piush Antony and Mr. Ajay Singh from the United Nations Children's Fund (UNICEF) on March 17, 2026. The visit focused on exploring potential avenues for collaborative research with meaningful societal impact, particularly in advancing a cleaner and greener Uttar Pradesh. Discussions emphasized promoting employment generation through sustainable, inclusive, and development-driven initiatives, with special attention to leveraging emerging opportunities in key temple cities such as Ayodhya, Varanasi, and Mathura.

Bridging the Gap between Industry and Academia

Mr. Adithya Vaddiraj, Engineering Manager at Johnson Matthey, delivered an insightful lecture on Industrial Reactor Technologies, offering valuable industry perspectives to students and faculty. The session focused on the working principles and industrial applications of Plug Flow Reactors (PFR) in catalytic processes. Drawing from his professional experience, he elaborated on how reaction kinetics, catalyst design, and flow behavior critically influence reactor performance. The lecture effectively emphasized the importance of integrating fundamental concepts of Chemical Reaction Engineering with real-world industrial practices, providing participants with a deeper and more practical understanding of the subject.

RGIPT Welcomes IAS Officers to Campus

Institute had the privilege of hosting IAS Officer Trainees on its campus, providing them with valuable insights into the institute's academic excellence and cutting-edge research ecosystem on March 19, 2026. The visit served as an enriching platform to showcase RGIPT's significant contributions to energy research, technological innovation, & sustainable development. Through interactive sessions and campus exposure, the trainees gained a deeper understanding of the institute's role in shaping future-ready solutions for the energy sector & its commitment to national development.

Workshop on Electric Vehicle Applications Using ANSYS Solutions

The Department of Electrical and Electronics Engineering successfully organized a two-day workshop on "**Electric Vehicle Applications Using ANSYS Solutions**" on March 14-15, 2026. The workshop offered participants valuable hands-on experience and practical insights into electric vehicle system modeling, simulation, and analysis using advanced ANSYS tools. Key sessions covered critical aspects of electric mobility, including electric powertrain modeling, motor and inverter analysis, thermal management, and system-level simulation for EV applications. Such initiatives significantly contribute to enhancing industry-relevant skills and support outcome-based education in the rapidly evolving domain of electric mobility.

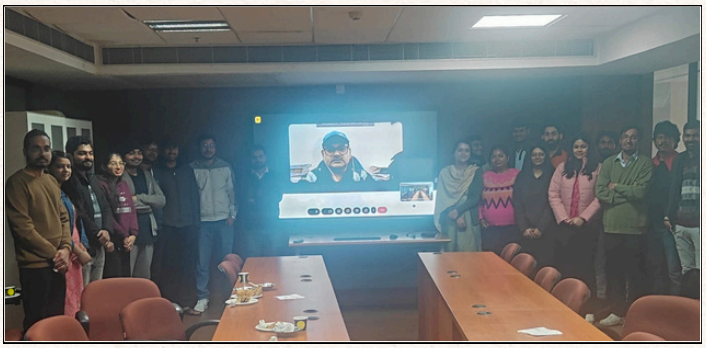
India Energy Week 2026

January 27–30, 2026 | ONGC ATI, Goa

RGIPT participated in India Energy Week 2026 at ONGC ATI, Goa, showcasing its contributions to the energy sector. The stall was visited by the Director along with faculty members, providing a platform for collaboration, innovation, and engagement with industry and research stakeholders.

Invited Talk on Green Energy Challenges: Generation and Storage *January 23, 2026*

Dr. Ambesh Dixit, Professor, Department of Physics, IIT Jodhpur, delivered an invited lecture on "Green Energy Challenges: Generation and Storage." The session highlighted key issues and emerging solutions in sustainable energy systems.



Expert Talk on Sustainable Materials and Energy Solutions *January 30, 2026*

Dr. Ashok Sharma delivered an insightful lecture at the Department of Energy and Human Sciences, RGIPT, on "New Materials for a Greener Tomorrow: Energy Storage and Environmental Solutions." The session highlighted the role of advanced materials in addressing energy and environmental challenges, offering valuable insights into innovative and sustainable solutions.

Building Bridges Between Academia and Industry

A productive meeting with Palo Alto Networks at RGIPT Bengaluru Campus, led by Prof. Harish Hirani, Director RGIPT to explore collaboration in cybersecurity and innovation-driven learning.

What's New

Inauguration of ERP Portal for CIF

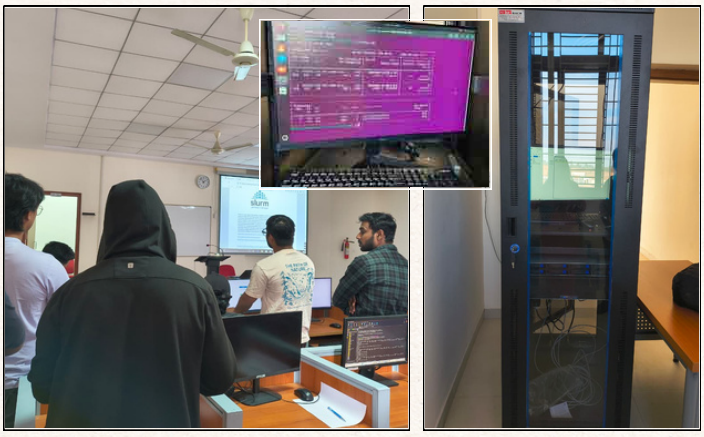
The ERP Portal for Central Instrumentation Facilities (CIF), an in-house developed digital workflow management system, was inaugurated by Prof. Harish Hirani, Director, RGIPT. Developed by B.Tech students—Harsh Dubey, Ark Shree, and Saubhagya Verma—the portal aims to streamline operations, enhance accessibility, and improve the efficiency of instrumentation facility management within the institute.

www.portal.rgipt.ac.in/CIFST

Kudos to Harsh Dubey, Ark Shree, and Saubhagya Verma for their dedication and technical excellence in developing the system.

AI & ML Lab Established at Bengaluru Campus

Aligned with the National AI Mission, RGIPT has established its first state-of-the-art AI & ML Laboratory at the Bengaluru campus under the leadership of Prof. Harish Hirani, Director. Powered by NVIDIA Blackwell RTX Pro 6000 (96 GB) GPUs and an enterprise-grade high-performance GPU server, the facility is fully equipped for AI, Deep Learning, and Generative AI applications. It will enable students to undertake advanced research in areas such as Large Language Models (LLMs), Computer Vision, Natural Language Processing (NLP), and large-scale data analytics, fostering the development of next-generation AI solutions.



Training Programs

IOCL Training Program on Petroleum Refining Technology

A two-week campus training program on "Petroleum Refining Technology" was successfully organized by the Rajiv Gandhi Institute of Petroleum Technology (RGIPT), Jais Campus, Amethi, from January 27 to February 07, 2026, specifically designed for Chemical Engineers from Indian Oil Corporation Limited (IOCL). The program witnessed active participation from 27 professionals representing key IOCL units, including AOD Refinery, Barauni Refinery, Bongaigaon Refinery, Gujarat Refinery, Guwahati Refinery, Panipat Naphtha Cracker, Panipat Refinery, and Paradip Refinery. The training aimed to enhance technical competencies and provide in-depth insights into modern petroleum refining processes, operational challenges, and industry best practices through expert lectures, practical sessions, and interactive discussions.

Celebrations

77th Republic Day @ RGIPT Jais Campus

A vibrant celebration of patriotism and unity marked the 77th Republic Day at RGIPT Jais Campus, reflecting the spirit of the nation through enthusiasm, pride, and collective participation.

Cultural Performances by Students

77th Republic Day @ RGIPT Bengaluru Campus

The 77th Republic Day was celebrated with great enthusiasm and patriotic spirit at RGIPT Bengaluru Campus, bringing together students, faculty, and staff in a vibrant display of unity, pride, and national fervor.

Institute Day Celebration

RGIPT celebrated its Institute Day on February 14, 2026 with great enthusiasm, featuring a series of engaging activities including a panel discussion, model and prototype display, poster presentations, and open house competitions. The program commenced with the ceremonial lighting of the lamp by Chief Guest Prof. Bhrigu Nath Singh, Vice Chancellor, RGNAU; Guest of Honour Shri Rajesh Kumar Pathak, Director General, Bharat 6G Alliance; and Prof. Harish Hirani, Director, RGIPT, marking an auspicious beginning. The event also witnessed the presentation of the Young Alumni Achiever Award 2025, Best Teacher Award, Best Digitalization Initiative (Faculty) Award, and Best Performer (Staff) Award. Students actively showcased their innovative ideas through poster presentations, interacting with dignitaries and demonstrating the institute's vibrant academic and research culture.

Achievements

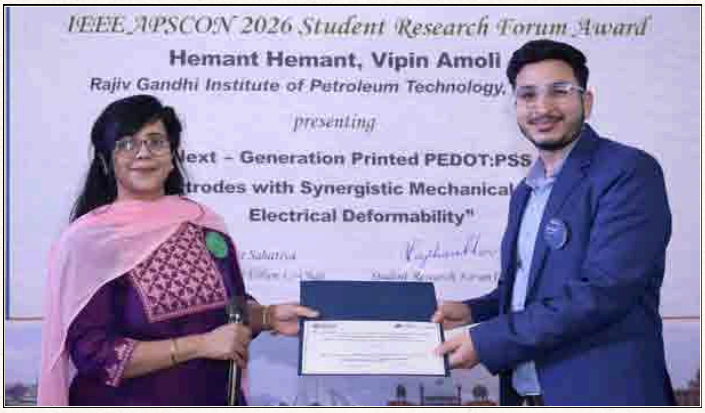
Team Respira won the Cisco ThingQbator Cohort 8

Team Respira has achieved a remarkable milestone by winning the Cisco ThingQbator Cohort 8, a national-level startup competition organized by Cisco and the NASSCOM Foundation. The team secured a winning prize of INR 5,00,000, recognizing their innovative and impactful solution.

The team—Mr. Subhadeep Mandal (B.Tech, Chemical Engineering), Mr. Aarsh Patel (B.Tech, Electronics and Communication Engineering), and Mr. M. Aathrey (B.Tech, Electronics and Communication Engineering)—developed an ergonomic nasal filter using electrospun nanofiber technology. Their solution addresses real-world challenges in air filtration and personal health, showcasing innovation, technical excellence, and strong interdisciplinary collaboration.

Best Lecture Presentation Award – IEEE APSCON 2026

Mr. Hemant was honored with the Best Lecture Presentation Award at IEEE APSCON 2026 for his presentation titled "Next-Generation Printed PEDOT Electrodes with Synergistic Mechanical and Electrical Deformability." His work highlights innovative advancements in flexible electronic materials, showcasing significant potential in next-generation electronic and energy applications.



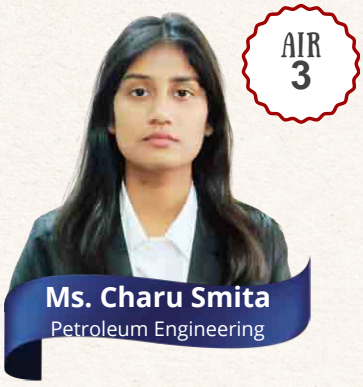
Best Idea Innovation Award

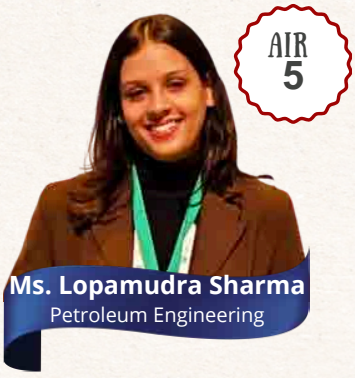
Mr. Mohammad Yasar, a 3rd Year B.Tech Chemical Engineering student, has won the Best Idea Innovation Award at the Istanbul Youth Summit 2026, held in Istanbul, Türkiye (February 9–12, 2026). Competing against 70+ participants from 11 countries, he stood out with his impactful idea on biomass valorization, focusing on converting agricultural waste into carbon-neutral products through low-cost, decentralized solutions to support farmers. Notably, he was the only fully funded participant, proudly representing RGIPT and India on the global stage.

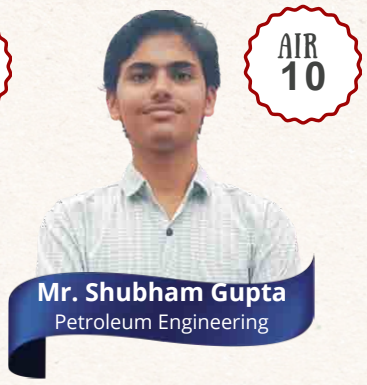
Kudos to Team Data Morphers

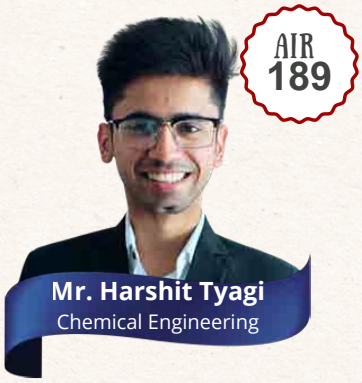
Team Data Morphers emerged as winners of Smart India Hackathon (SIH) 2025 under the ISRO problem statement (SIH25177) in the Smart Vehicles theme. Their achievement reflects exceptional innovation, technical expertise, and a strong problem-solving approach in addressing real-world challenges.

Top Rankers in GATE 2026



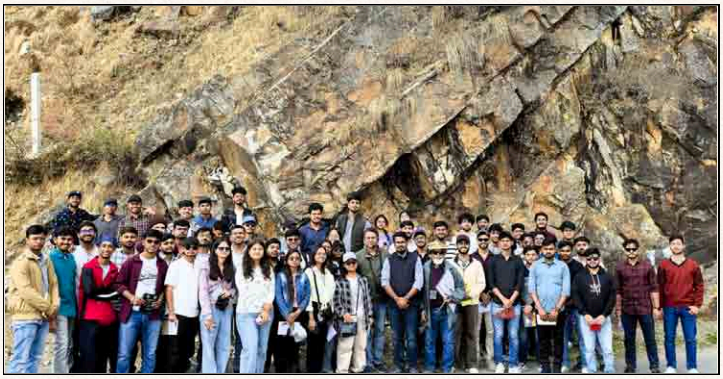


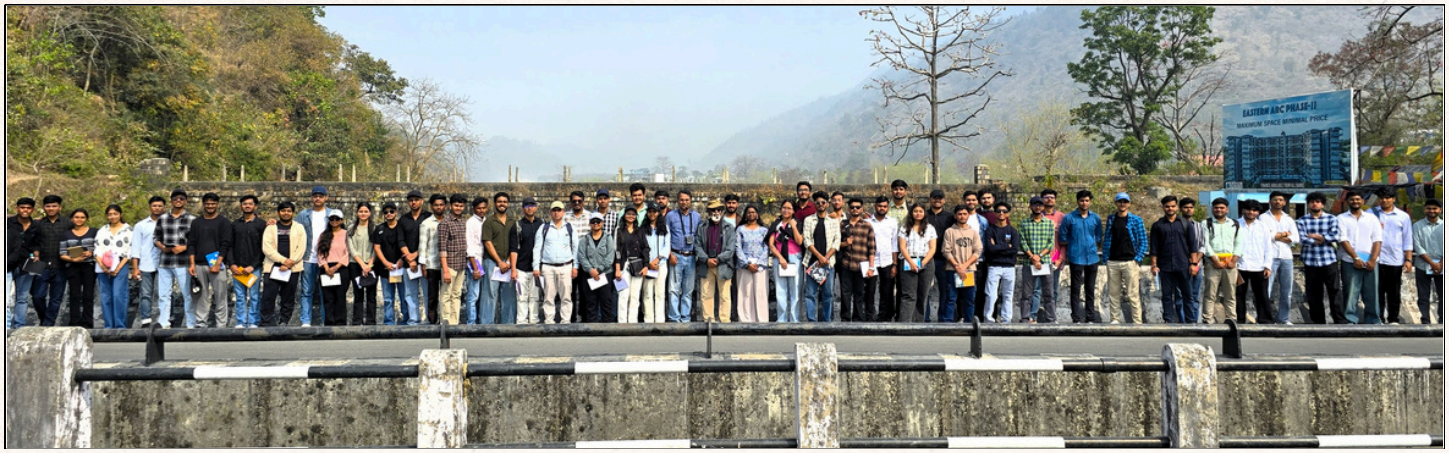




Industry Visit

B Tech (2024–28) students gained hands-on exposure through an industrial visit to IDT and KDMIPE (ONGC) and a field study of Dehradun's geological features, guided by esteemed faculty and experts





RGIPT at VBYLD 2026

Bharat Mandapam, New Delhi

RGIPT proudly participated in the Viksit Bharat Young Leaders Dialogue (VBYLD) 2026, where its AI-based innovation "QuizerAI" was selected to represent Uttar Pradesh at the national level under Hack for Social Cause. Team RGIPT—Kunal Kumar (CSE), Shubham Kumar Gupta (ChE), and Aditi Sikder (CSE-AI)—showcased their solution before national leaders, policymakers, and experts, and had the opportunity to engage with distinguished dignitaries including Anandiben Patel, Hon'ble Governor of Uttar Pradesh, Rajnath Singh, Hon'ble Defence Minister of India, and Narendra Modi, Hon'ble Prime Minister of India.

Hon'ble Defence Minister, Shri Rajnath Singh presenting a memento to Ms. Aditi Sikder, Team Lead of RGIPT

Our Alumni

Young Alumni Achiever Award 2025

On the occasion of Institute Day Celebration, RGIPT proudly conferred the Young Alumni Achiever Award 2025 on Shri Ashok Charan, IRS (B.Tech – Petroleum Engineering, 2013), Joint Commissioner of Income Tax (OSD), Jaipur, in recognition of his outstanding professional achievements and continued association with the Institute.

Chief Guest - Prof. B.N. Singh (VC, RGNAU), Guest of Honour - Shri Rajesh Kr Pathak (DG, Bharat 6G Alliance), and Patron - Prof. Harish Hirani (Director, RGIPT) presenting the Award

Alumnus Achievement

Mr. Shivam Narayan Jha (Chemical Engineering, 2017 Batch) for his outstanding achievement in the **UPSC Civil Services Examination 2025**, securing an impressive **All India Rank (AIR) 597**. His success is a proud moment for RGIPT and an inspiration for aspiring civil servants.

Newly Introduced Programmes

B.Tech in **AI-Enabled Energy Engineering**	M.Sc. in **Sustainable Energy**	M.Sc. in **Applied Geoscience**

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