



**Gujarat
Technological
University**

INTERNATIONAL INNOVATIVE UNIVERSITY

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R & D Newsletter

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- Collaborations/Interactions
- Research Oriented Talks

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Message From Hon'ble Vice Chancellor

Dear Faculty Members and Researchers,

We are delighted to bring you quarterly edition of our R&D Newsletter, an initiative of Research & Development Cell, to focus on our growing research culture built across the University and its affiliated colleges.

These newsletters present a brief summary of our recent research activities and initiatives, and other events to advance and promote a research ecosystem. The one of the objectives of this newsletter is to inspire our faculties and research scholars to strengthen the research landscape. We encourage you to actively engage in these research activities and initiatives, and also share this newsletter across your networks.

With your support, we aim to expand our reach across leading research institutions and industries, both nationally and internationally. We look forward for your suggestions that can further enrich and promote our research environment.

Congratulations to the R&D Cell for their hard work and dedication in bringing out this quarterly newsletter. We invite you to connect with R&D Cell for contributing in establishing partnerships and collaborations aimed towards advancing research in emerging areas and built a culture of innovation.

Best wishes,

(Dr. R. K. Gajjar)

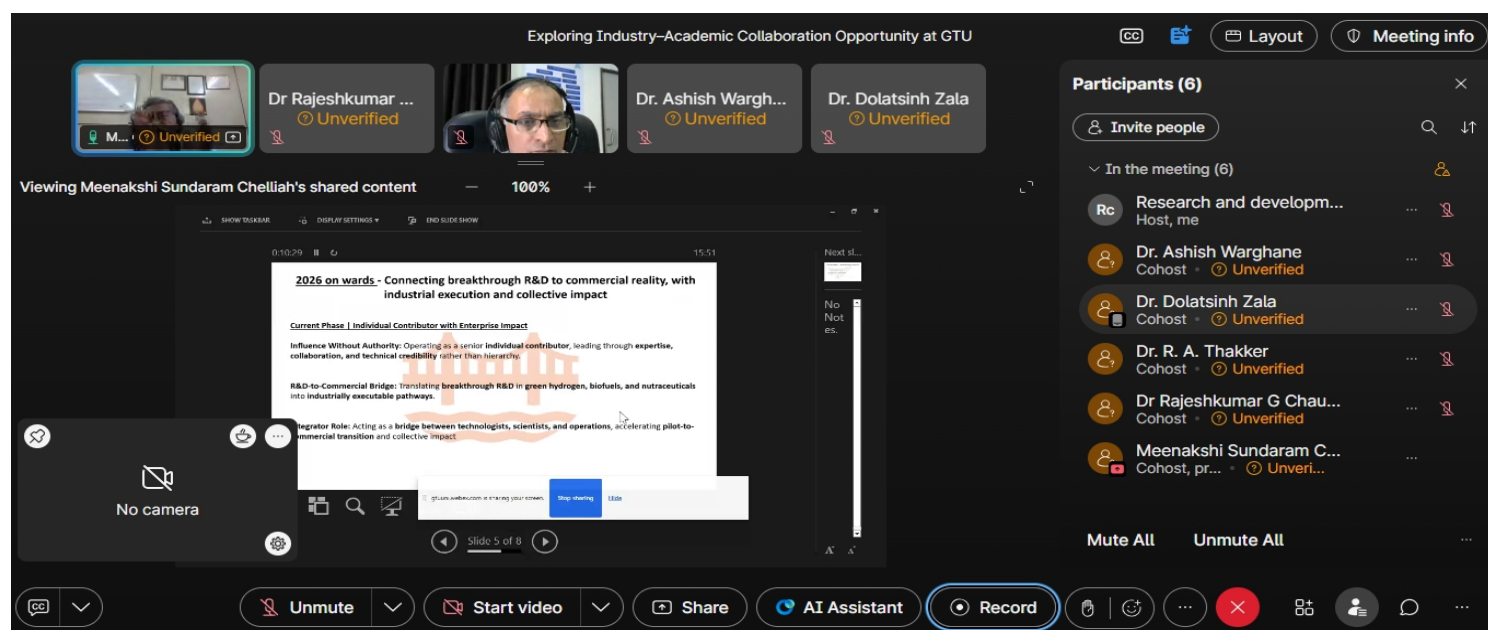
Online Meeting on Exploring Industry–Academic Collaboration Opportunity between GTU and Reliance Industries

The R&D Cell organized an online meeting on 13th January 2026 to explore collaborative opportunities between Gujarat Technological University (GTU) and Reliance Industries, with the aim of strengthening GTU's academic and research ecosystem. This initiative is aligned with GTU's vision for innovation and sustainability in alignment with National Education Policy (NEP) 2020, focusing on identifying areas for mutual cooperation.

The meeting was chaired by Dr. R. A. Thakker along with the industry expert - Dr. Meenakshi Sundaram Chelliah, Head of Outdoor Cultivation at Reliance Industries. Dr. Chelliah has over 31 years of experience in industrial R&D, particularly in algal cultivation, microbial ecology, and sustainable biotechnology.

The session was attended by faculty members from GTU–SAST, -Dr. Dolatsinh Zala, Dr. Rajeshkumar G. Chaudhari, and Dr. Ashish Warghane, who showcased and deliberated in research areas of medical microbiology, infection biology, soil science, metagenomics, and molecular diagnostics bringing in research perspectives.

In the meeting, potential collaborations with Reliance Industries was also discussed to leverage industry expertise in applied research, technology development, and commercialization, thereby enriching GTU's research ecosystem.



Session on Evolution of our Universe from Big Bang to the present state - a major driver of research in Data Science, Numerical tools and Machine Learning

R&D Cell organized an online session on “Evolution of our Universe from Big Bang to the present state - a major driver of research in Data Science, Numerical tools and Machine Learning” on January 16th, 2026. This session was delivered by Dr. Jayanta Dutta, Institute for Plasma Research (IPR), Gandhinagar.

Dr. Jayanta Dutta explained the evolution of the Universe from the Big Bang Theory, highlighting how early quantum fluctuations led to the formation of galaxies and large-scale cosmic structures. He also informed about the Dark Age, stars, galaxies and the Universe. In this session he informed about the continuous expansion of the universe for over 13.7 billion years, with dark energy driving its current accelerated expansion and also explained how the Universe evolved from a simple to a highly complex state, a process yet

to be understood. He discussed both theoretical approaches, such as General Relativity and Cosmological Models, and Observational Methods. He highlighted the importance of numerical simulations, parallel computing, machine learning, and data science in studying cosmic evolution.

Dr. Jayanta Dutta presented the process of primordial gas collapse and disk fragmentation, showing how structures evolve from large scales (around 2 pc and 0.5 pc) to smaller scales (~ 500 AU), leading to the formation of dense cores and protostellar systems. He described how these stages play a crucial role in star formation within collapsing gas clouds.

He also emphasized how modern astrophysics drives advancements in data science and machine learning by utilizing massive datasets generated from next-generation observatories, enabling sophisticated data analysis, pattern recognition, and predictive modelling.

The screenshot shows a Zoom meeting in progress. At the top, a title bar reads "Evolution of our Universe from Big Bang to the present state - a major driver of research in Data Science, Numerical tools and M". Below this, a navigation bar lists participants: "Research and dev...", "Dr. R. A. Thakker" (Unverified), "Research and dev...", "Dr. Jayanta Dutta" (Unverified, highlighted with a green border), and "sweety oza" (Unverified). The main content area displays a presentation slide titled "Evolution of the Universe after Big Bang". The slide features a timeline diagram of the universe's expansion from the Big Bang to the present. Key stages labeled include: Quantum Fluctuations, Inflation, Afterglow Light Pattern (380,000 yrs), Dark Ages, 1st Stars (about 400 million yrs), Development of Galaxies, Planets, etc., and Dark Energy Accelerated Expansion. The total duration shown is "Big Bang Expansion 13.7 billion years". On the right side of the interface, a "Participants (19)" list is visible, showing various attendees with their names and verification status.

3rd Research Supervisors' Meet 2026

R&D Cell and Ph.D. Section organized the 3rd Ph.D. Research Supervisors' Meet -2026 on January 31st, 2026 at GTU Chandkheda Campus.

This meet aimed towards showcasing the comprehensive resources provided by the University to support Ph.D. supervisors and scholars. Through this interactive session the supervisors were informed about various tools, funding opportunities, and facilities available to enhance research quality. Additionally, the event served as a platform for promoting collaboration and encouraging exchange of ideas and sharing best practices among Ph.D. supervisors.

Dr. R. A. Thakker, Director-RDC, in his welcome address, emphasized the crucial role of research supervisors in elevating the quality of doctoral research. He provided insights into the university's ongoing efforts to improve research facilities and promoting collaboration.

Following this, Dr. R.K. Gajjar, Hon'ble Vice Chancellor, shared her vision for doctoral research at the university. She encouraged supervisors to promote innovation, engage in interdisciplinary research and ensure high standards of research output with integrity.

During this meet, Dr. Abhishek Kumar, Scientist-E (CS), INFLIBNET Centre, delivered a presentation on the major activities of INFLIBNET (a recognized research centre of the University). He highlighted major INFLIBNET initiatives and services, including Shodhganga and ShodhShuddhi, and explained their features and functionalities. He also showcased IRINS (Indian Research Information Network System), a web-based

Research Information Management System designed to display scholarly activities and also provides an opportunity to create scholarly network.

This interactive session with PhD supervisors allowed them to discuss challenges and strategies for Ph.D. supervision. Key topics of discussion included funding accessibility, thesis evaluation, publication concerns, and improving the overall quality of doctoral research.

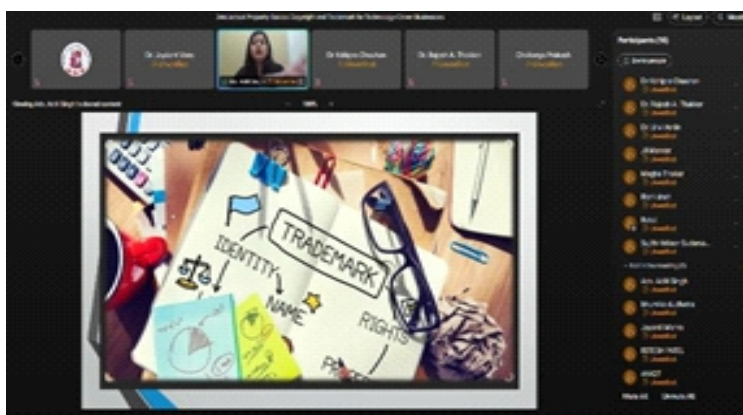
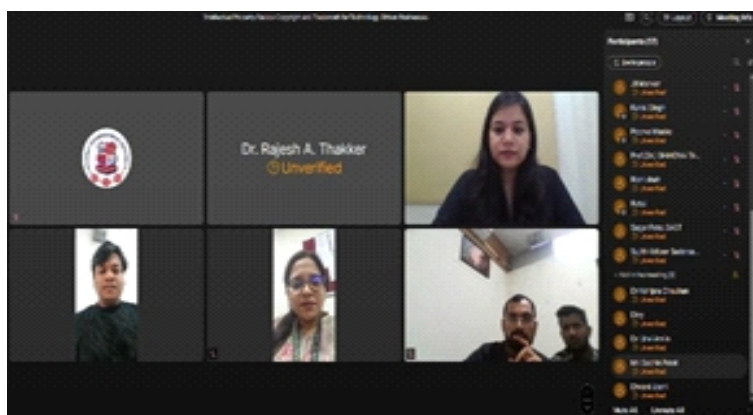


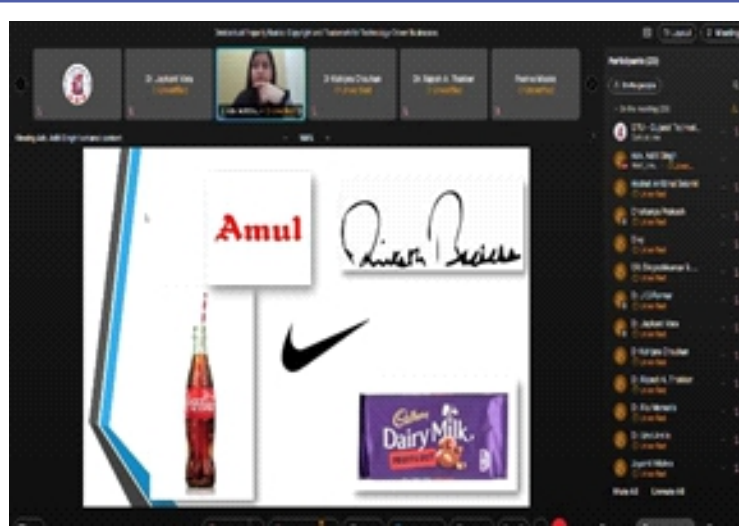
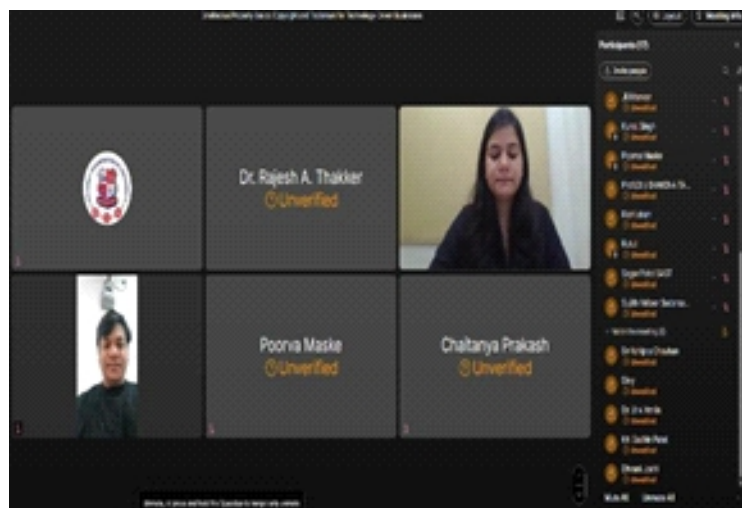
Session on Intellectual Property Basics: Copyright and Trademark for Technology-Driven Businesses

On 7th February 2026, GTU-IPFC, GTU R&D Cell, and DPIIT-SPRIHA jointly organized an expert talk on "Intellectual Property Basics: Copyright and Trademark for Technology-Driven Businesses". This session was delivered by Ms. Aditi Singh, Senior Associate at Y. J. Trivedi & Co, who provided valuable insights into copyright and trademark protection, particularly for technology-driven businesses.

Ms. Aditi Singh explained the concepts of Intellectual Property Rights, especially copyright and trademark. She explained that intellectual property includes creations such as inventions, designs, artistic works, and brand names used in business.

She discussed the importance of trademarks in protecting brand names, logos and symbols that help customers identify the source of products or services. She explained copyright - protects original works such as books, music, artistic works, software, and digital content. She also explained the process of trademark registration and the benefits of protecting intellect. She gave practical examples to show how start-ups and technology-based businesses can protect their brand, content, and innovations through proper IP protection.





Session on Empowering Postdoc: Support, Innovative Strategies and Global Cooperation

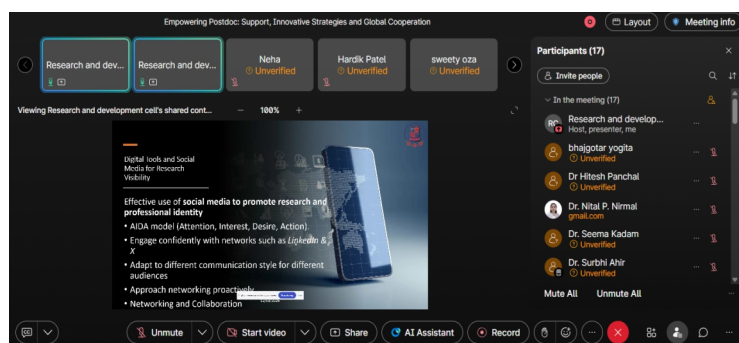
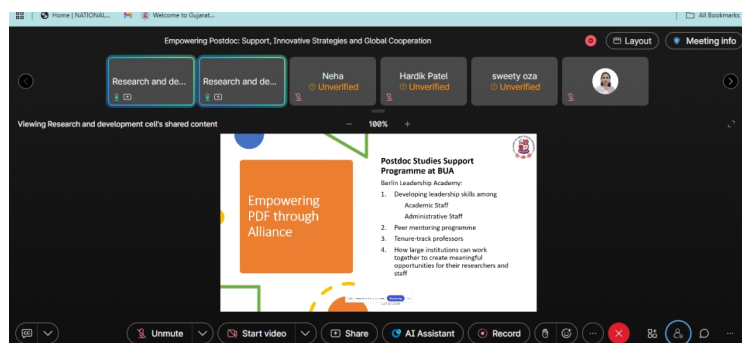
R&D Cell organized an online session on Empowering Postdoc: Support, Innovative Strategies and Global Cooperation on March 12th, 2026. This session was delivered by Ms. Mona Chaurasiya, Research Coordinator, GTU. She shared insights from her training at Freie Universität Berlin. This Freie Universität is ranked 97th globally in QS World University Rankings 2025, and is known for its strong interdisciplinary research and guiding motto "Veritas – Justitia – Libertas" (Truth, Justice, Freedom).

In this workshop, she highlighted the role of the Berlin University Alliance, a collaboration of four leading Berlin institutions promoting integrated research through the initiative "Crossing Boundaries toward an Integrated Research Environment" (2019–2032). The alliance has received recognition and funding under Germany's Excellence Strategy for advancing collaborative and innovative research.

Ms. Mona Chaurasiya discussed about Postdoc Studies Support Programme and Postdoc Academy at Berlin University Alliance (BUA), which provides structured support through self-assessment tools, risk management programmes and technology transfer opportunities & support to enhance postdoctoral research and career development. She also highlighted that BUA has received funding under Germany's Excellence Strategy, recognizing its role in promoting an integrated, interdisciplinary, and innovative research ecosystem.

Ms. Mona Chaurasiya explained how the BUA supports postdoctoral researchers through innovative strategies, global collaboration, and structured programs by offering career guidance, networking, workshops, internships, and Postdoc Career Fairs. She also explained the use of digital tools like ResearchGate, Mendeley, and Zotero, along with the AIDA model, to enhance research visibility and explore diverse career opportunities beyond academia.

During this session, she also informed about GTU's participation with I-STEM, a platform connecting researchers with scientific facilities across India.





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TECHNOLOGICAL
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AN INTERNATIONAL INNOVATIVE UNIVERSITY
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GTU Social Media Platforms



GTU What's App Channel