



BITS Pilani
Pilani Campus

Semester-II notes 2023-24

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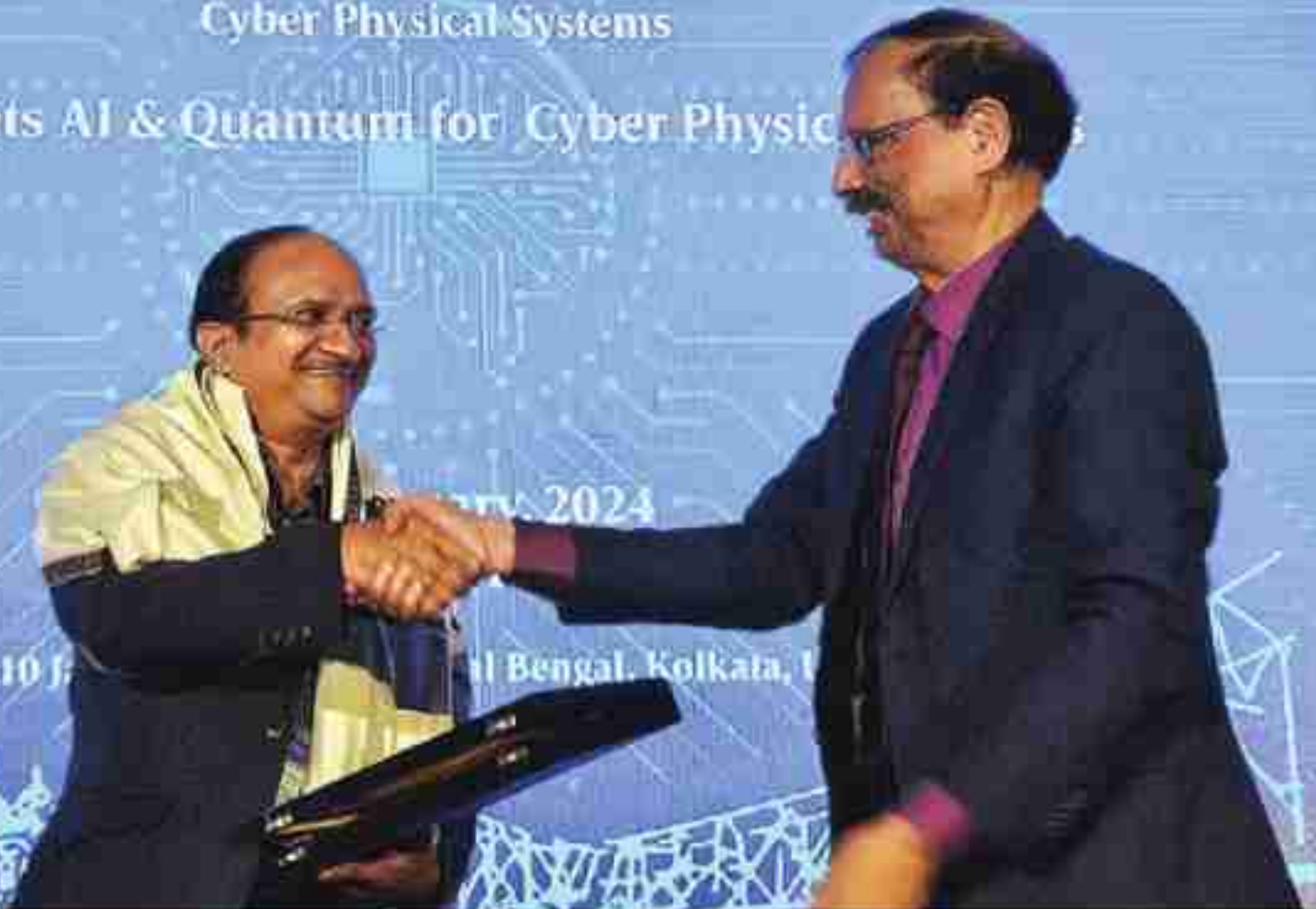
Pilani Campus

VLSI meets AI & Quantum for
Cyber Physical Systems

VLSI meets AI & Quantum for Cyber Physic

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Editorial

Dear Readers,

Welcome to the 44th edition of BITScan, a publication that showcases the dynamic academic life and achievements of Pilani Campus. This issue celebrates notable milestones, such as the inauguration of the new BITS Pilani campus in the Mumbai Metropolitan Region, a significant addition to our institution's legacy of academic excellence.

In this edition, you'll find extensive coverage of impactful events, collaborations, and achievements across our campus. Among these are the prestigious SATHI Project, awarded by the Department of Science and Technology with a grant of Rs. 60 crores to advance our research facilities, and a new five-year Master Research Agreement with Mercedes-Benz R&D India, which will drive innovation in mobility through intellectual property in breakthrough technologies. We also celebrate the prestigious VSI Lifetime Achievement Award 2024, conferred upon Prof. V. Ramgopal Rao, Vice-Chancellor, BITS Pilani, as well as new international collaborations, distinguished lectures, and a rich variety of seminars, conferences, workshops, and training programs. These events, enriched by faculty visits, showcase the extensive achievements and academic commitments of our faculty, whose accolades and significant projects have earned substantial funding.

Our students continue to make us proud, shining in competitions both nationally and internationally, including the APOGEE 24' Tech fest—organised entirely by students—which brought the theme "Celestial Epiphany" to life on campus. In addition, we are excited to welcome new faculty members across departments, whose expertise and passion will contribute to BITS Pilani's mission of excellence.

From academic advancements to student achievements, this issue of BITScan stands as a testament to the spirit of inquiry, collaboration, and excellence that defines BITS Pilani. We hope you enjoy exploring these stories and feel inspired by the continued progress and accomplishments of our BITS community.

Inauguration of BITS Pilani's New Campus in Mumbai

Honourable Finance Minister Smt. Nirmala Sitharaman inaugurated the BITS Pilani campus in the Mumbai Metropolitan Region (near Kalyan) on February 24, 2024, in the presence of Dr. Kumar Mangalam Birla, Chancellor, BITS Pilani, and Prof. V. Ramgopal Rao, Vice-Chancellor, BITS Pilani. This fifth campus will house the institution's management school (BITSOM), law school (BITSLAW), and design school (BITSDES).

In her inaugural address, Smt. Sitharaman remarked, "I congratulate Kumar Mangalam Birla for setting this campus. You have a tradition of excellence in education."

- Inaugural Ceremony of New Campus

BITS Pilani has always been a centre where very many young people in India always aspire to be in. You can have institutions where students can enrol, study, pass out and also manage to excel in their fields, but to make available a very complex set of courses that are also market relevant, give them the ability and skills required so that they can be readily recruited and be of value to the institutions is something which is seen as a USP of BITS Pilani. I wish the fifth campus all the very best as it continues the tradition of providing high quality education for the aspiring Indian youth.



75th Republic Day Celebration

On the vibrant morning of January 26th, 2024, BITS Pilani reverberated with patriotic fervour as it celebrated the Republic Day of India. The campus premises were adorned with the Tricolour, echoing the spirit of unity and diversity that defines our great nation. The program began with the hoisting flag. Prof. Sudhirkumar Barai, Director, BITS Pilani, Pilani Campus; Col. Soumyabrata Chakraborty, Registrar, BITS Pilani, Pilani Campus; several faculty members; and students graced the event. The Guard of Honor was

- 75th Republic Day Celebrations

presented by Mr. Kishore Singh, Chief Security Officer, and his team. The fervour of patriotism, unified diversity, and rich cultural heritage of India were beautifully brought forth through songs sung by students under the guidance of Dr. Anil Rai. The National Pledge, an oath of allegiance to the Republic of India, was administered, and the program concluded with the National Anthem sung enthusiastically by all.



Training Program on Epigenetics titled "Advanced training in Techniques of Epigenetic Regulation of Gene Expression"

BITS Pilani, Pilani Campus organised a three-day advanced training program titled "Advanced Training in Techniques of Epigenetic Regulation of Gene Expression," supported by DBT BUILDER, from January 8-10, 2024. The program aimed to develop skills in epigenetics and gene editing, offering hands-on sessions for participants, including undergraduate and postgraduate students, PhD researchers, and faculty.

The event began with a lamp lighting ceremony led by chief guests Prof. Subrata Sinha, National Science Chair (SERB), Department of Biochemistry, AIIMS, New Delhi, and Dr. Shravanti Rampalli, Principal Scientist, CSIR-IGIB, New Delhi, along with Senior Prof. S. K. Verma, Dean, Administration, Prof. Ashis Kumar Das, Coordinator, DBT-BUILDER Program, and Prof. Prabhat Nath Jha, Event Convenor. Prof. Jha introduced the DBT-BUILDER program and this training, followed by a welcome from Prof. Shilpi Garg and Prof. Rajeev Tallyan.

Prof. Ashis Kumar Das highlighted DBT-BUILDER's advanced research in "Epigenetics and Genome Editing" and its contributions to drug discovery, with support from

Biological Sciences and Pharmacy departments. Senior Prof. S.K. Verma shared insights on BITS Pilani's heritage, and Prof. Subrata Sinha discussed genetic modifications in dyslexia, while Dr. Shravanti Rampalli presented research on chronic diseases.

The program concluded with an award ceremony, where Prof. Anupama Mittal led the valedictory, presenting mementos and certificates to participants with Prof. Anil B. Giakwaid, Head, Department of Pharmacy, and Prof. Rajdeep Choudhary, Head, Department of Biological Sciences.

- Training Program on Epigenetics



Prestigious VSI Lifetime Achievement Award 2024

Prof. V. Ramgopal Rao, Vice Chancellor, BITS Pilani, received the "VSI Lifetime Achievement Award 2024" from the VLSI Society of India at the 37th International Conference on VLSI Design held in Kolkata, India, on January 9, 2024. This award honours Prof. Rao's exceptional contributions to the VLSI Design and Semiconductor ecosystem in India.

Dr. Satya Gupta of the VSI Team commented, *"Prof. Rao's exceptional contributions to VLSI Design have left an indelible mark, inspiring many in the semiconductor community. This award is a testament to his commitment to innovation and leadership, shaping the future of VLSI technology."*

Expressing gratitude, Prof. Rao said, *"I am deeply honoured by the VSI Lifetime Achievement Award. This award is not only a personal achievement but also a testament to the collective efforts of my students and collaborators over 25 years. I am dedicated to advancing education, research, and innovation in VLSI, contributing to India's journey as a 'VLSI Nation.'"*

A 9-member jury comprising leaders from the global semiconductor industry and academic organisations made the award decision. BITS Pilani, in a statement, recognized Prof. Rao's leadership and noted his contributions as "outstanding and deserving of this prestigious award."

- Prof. V. Ramgopal Rao with VSI Lifetime Achievement Award 2024.



5th Regional Young Investigators' Meeting (RYIM)

The Department of Biological Sciences, BITS Pilani, Pilani campus, in collaboration with IIT Jodhpur and the Central University of Rajasthan, hosted the 5th Regional Young Investigators' Meeting (RYIM) from January 18-19, 2024, followed by a career crafting workshop organised by India Bioscience on January 20, 2024. Centred on the theme "Life Sciences and Interdisciplinary Research," the event featured interactive presentations by esteemed speakers

and offered students from diverse fields a platform to present posters during RYIM.

Workshop on "Awareness of Indian Standards and the Role of Academia in the Standardization Activities of the Bureau of Indian Standards (BIS)."

On January 19, 2024, the Department of Mechanical Engineering in collaboration with the Bureau of Indian Standards (BIS), Jaipur Branch, hosted a half-day workshop titled "Awareness about Indian Standards and Role of Academia in Standardization Activity of BIS." Coordinated by Prof. Srikanta Routroy, Prof. Arun Jalan, and Dr. Radha Raman Mishra, the event was successfully conducted with support of the BIS team.

Distinguished attendees included Prof. V. Ramgopal Rao, Vice-Chancellor, BITS Pilani, Prof. A.P. Singh, Dean AUGSD, BITS Pilani, Smt. Reena Garg, Head, LITD BIS, Smt. Kanika Kalla, Director and Head, BIS JPBO-1, and Shri Saurabh Tiwari, Head, HRBO, BIS. Prof. Srikanta Routroy, Head, Department of Mechanical Engineering, welcomed the guests and provided an overview of the workshop.

In his opening remarks, Prof. Rao discussed challenges in product certification in India and potential collaborative solutions. Smt. Reena Garg elaborated on BIS activities in India, and Shri Saurabh Tiwari introduced the "Standard Clubs" initiative. Prof. Arun Jalan delivered the Vote of Thanks, and Dr. Radha Raman Mishra anchored the session.

The BIS team led interactive sessions covering BIS activities and opportunities for academic involvement. Attended by faculty, research scholars, and students from various departments, the workshop concluded with a feedback session aimed at fostering academic engagement in BIS initiatives.

- Workshop on BIS Standards



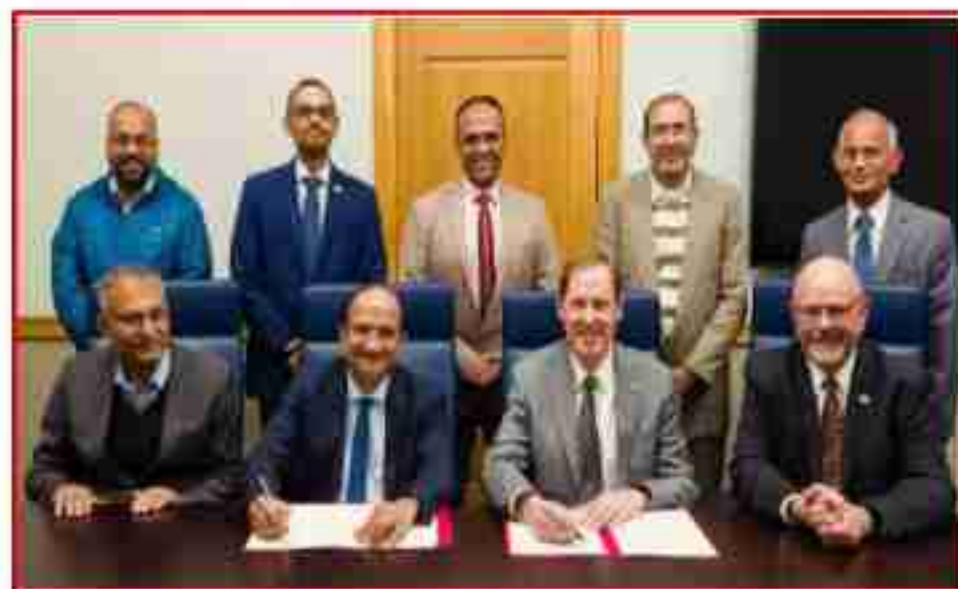
MoU signed between BITS Pilani and Iowa State University

On January 31, 2024, BITS Pilani, signed an MoU with Iowa State University of Science and Technology, a leading public institution in the USA, to launch an innovative Two-Plus-Two (2+2) undergraduate Shared Degree Program. This program allows students to complete two years at BITS Pilani and transfer to Iowa State to complete their Bachelor of Science (B.S.) in engineering.

Additionally, both institutions are collaborating on shared graduate programs, including master's and Ph.D. degrees, offering BITS Pilani students opportunities for research-based, collaborative studies. The agreement underscores a shared commitment to holistic, globally-oriented

education, with Iowa State providing BITS students with equal access to campus resources and services.

- MOU with Iowa State University



National Symposium in Chemistry (CRSI-NSC-32)

The 32nd Chemical Research Society of India (CRSI) National Symposium in Chemistry (CRSI-NSC-32) was hosted at BITS Pilani, Pilani Campus from February 2-4, 2024, preceded by the 17th CRSI-RSC Joint Symposium on February 1. Notably, this marked the first time the CRSI symposium was held in Rajasthan.

Prof. Anil Kumar, organising secretary of CSIR-NSC-32, reported participation from over 500 delegates from 80 institutes. The symposium brought together scientists, technologists, and researchers to discuss achievements, explore new research paths, and foster collaborations in chemistry and allied sciences. Prof. Dalip Kumar, convener of CRSI-NSC-32, highlighted its role in advancing chemical research, while Prof. Indresh Kumar, chairman, noted the

program featured medal lectures, RSC-CRSI lectures, poster presentations, and special talks by prominent Indian and international scientists.

The inaugural session of the 17th CRSI-RSC Joint Symposium on February 1 was led by Prof. Sudhir K. Barai, Director, BITS Pilani, Pilani Campus; Prof. Uday Maitra, President of CRSI; Dr. Ajit Sharma, Managing Director, RSC India; and Dr. Ale Palermo, Head of Global Inclusion, RSC UK. Prof. Uday Maitra officially inaugurated the CRSI-NSC-32 symposium on February 2, with Padma Shri Prof. Vinod K. Singh chairing a session. The symposium was a landmark occasion for the scientific community, inspiring future advancements in chemistry.

- Glimpses of the CRSI-NS-32 Symposium Hosted at BITS Pilani, Pilani Campus



MoU between BITS Pilani and Industry leaders, Samta Power and Vareyn Solar

On February 11, 2024, the Technology Enabling Centre, BITS Pilani (BITS-TEC) announced the signing of MoUs with industry leaders, Vareyn Solar and Samta Power. Vareyn Solar, an expert in renewable energy, and Samta

Power, focused on eco-friendly solutions, partnered with BITS-TEC to advance innovation in solar energy technology.

The MoUs target solutions for solar energy development, panel refurbishment, and recycling. Samta Power will also act as the ecosystem engagement partner, strengthening

academia-industry collaboration. Prof. Sudhir Kumar Barai, Director, BITS Pilani, Pilani Campus, expressed optimism about this partnership, envisioning villages powered by solar energy in the near future.

The signing ceremony was attended by Prof. Deepak Chitkara, Coordinator, BITS-TEC; Mr. Rajneesh Kumar; Dr. Nishant Peddagopu, COO, BITS-TEC; and esteemed faculty members, including Prof. Rajneesh Kumar, Prof. Saket Verma, and Prof. H.D. Mathur. This collaboration is expected to yield impactful outcomes for both academia and industry.

- MoU with Samta Power and Vareyn Solar



LAUNCHPAD: Empowering Intellectual Property & Business Growth

On February 12, 2024, the BITS Technology Enabling Centre (BITS-TEC), in collaboration with the Institution's Innovation Council (IIC) and Pilani Innovations and Entrepreneurship Development Society (PIEDS), organised "LAUNCHPAD: Empowering Intellectual Property & Business Growth." This event provided approximately 100 participants—including students, researchers, professionals, and entrepreneurs—with hands-on training in intellectual property (IP) management and insights into its role in driving business growth.

73rd Founder's Day Celebration

On February 14, 2024 (Basant Panchami), BITS Pilani, Pilani Campus celebrated its 73rd Founder's Day, on the Institute premises. This annual celebration commemorates the inauguration of the Vidya Vihar Campus of BITS Pilani by Dr. Rajendra Prasad, the First President of India, in 1951.

In the morning, Prof. Sudhirkumar Barai, Director, BITS Pilani, Pilani Campus along with faculty members, offered floral tributes at the statue of Founder Chairman, Late Shri Ghanshyam Das Ji Birla. Subsequently, Ragamalika

Prof. S.K. Verma, Dean, Administration, BITS Pilani, served as the chief guest, emphasising IP's importance for researchers. The event began with addresses from Prof. Deepak Chitkara, Coordinator, BITS-TEC, and Prof. Anupama Mittal, Convener, IIC, followed by the official launch of the BITS-TEC Brochure by Dr. Nishant Peddagopu, COO, BITS-TEC, outlining future activities and goals for promoting innovation and entrepreneurship.

Through workshops, expert sessions, interactive quizzes, and a Trademark Design assignment, participants gained practical skills and knowledge. LAUNCHPAD celebrated multi-stakeholder collaboration while marking a new chapter for BITS-TEC's mission to foster technology commercialization and entrepreneurship. The event's success highlighted BITS-TEC, IIC, and PIED Society's commitment to nurturing a culture of innovation and establishing BITS Pilani as a hub for entrepreneurship.

- Glimpses of LAUNCHPAD



organised Thyagaraja Aradhana, where students recited classical "Kritis" composed by Saint Thyagaraja.

In the evening, a grand cultural event was held in the Central Auditorium. The event began with Prof. Barai, Col. Soumyabrata Chakraborty, Registrar, BITS Pilani, Prof. S.K. Verma, Dean, Administration, and Prof. Shilpi Garg, Faculty In-charge Institute Functions, along with Sarthak Agarwal, President, Students Union, lighting the traditional lamp followed by Saraswati Vandana. A felicitation program recognized the dedicated service of Teaching and

Non-Teaching Staff who have completed 25 years or more. Additionally, 7 Best Performance awards and 15 Certificates of Appreciation were awarded to outstanding non-teaching staff for their contributions to the Institute's administration. 10 retiring non-teaching staff were also honoured for their committed service.

- Highlights of Founders Day Celebration



International Symposium on Advances in Drug Delivery Technologies

The Department of Pharmacy, BITS Pilani, Pilani Campus, organised a two-day International Symposium on Advances in Drug Delivery Technologies (ADDT) from February 16-17, 2024. Prof. Sudhirkumar Barai, Director, BITS Pilani, Pilani Campus opened the event, followed by Prof. B. Anil Gaikwad, Head, Department of Pharmacy, who provided an overview of the department. Prof. Anil Jindal outlined the symposium's thematic focus. At the conclusion, Prof. Aniruddha Roy expressed gratitude to all participants, speakers, sponsors, and organisers.

- International Symposium on Advances in DDT



The symposium served as a platform for critical discussions on advanced drug and gene delivery systems and their applications in human health. It featured 11 invited talks from leading experts in the USA, Canada, Japan, the Netherlands, and India, offering invaluable insights into drug delivery research. Delegates, including industry professionals, faculty members, and students from CSIR Institutes, national institutions, and state universities, attended the event.

The event showcased various dance and musical performances by students from different cultural associations, highlighting India's cultural diversity. The colourful celebration concluded with a vote of thanks from Prof. Shilpi Garg, creating joyful moments and a strong sense of belonging to the Institute.

Various sessions, including an excellent showcase, panel discussions, oral and poster presentations, and technology showcases, allowed participants to share research findings, exchange ideas, and explore potential collaborations. The ADDT symposium at BITS Pilani highlighted the latest innovations and fostered collaboration and knowledge dissemination within the scientific community.

Awareness Programme on Cyber Crime

To raise awareness about the escalating threat of cybercrime, BITS Pilani organised a comprehensive awareness program on February 19, 2024, with participation from faculty and staff members. The key speaker was Shri Hri Ram Soni, Deputy Superintendent of Police (Dy SP), Cyber Police Station, Jhunjhunu.

The event began with a warm welcome from Prof. Sudhirkumar Barai, Director, BITS Pilani, Pilani campus, who emphasised the importance of vigilance in the digital age. Dr. Bibhas Ranjan Sarkar, President, BITS Pilani Staff Association, introduced the key speaker.

Shri Hri Ram Soni highlighted various forms of cyber threats, sharing insights from his experience in cybercrime cases. He provided essential tips for safeguarding personal and professional information, including the importance of strong passwords and secure online transactions. He urged immediate reporting of cyber incidents to family or colleagues and advised against using personal photographs as display pictures on social media.

The session was interactive, allowing attendees to ask questions and clarify cybersecurity concerns. Case studies

illustrated real-life cybercrime incidents, emphasising the risks of online activities and the need for best practices.

The program was meticulously organised under the leadership of Col. Soumyabrata Chakraborty, Registrar, BITS Pilani, Pilani campus, and Prof. S.K. Verma, Dean-Administration. High engagement from faculty and staff included contributions from Dr. Bibhas Ranjan Sarkar, Dr. Ashish Gupta (Deputy Registrar), Mr. Pankaj Joshi (Legal Officer), Mr. Suresh Pant, Mr. Atul Runthala, Mr. Sushil Kumar, and Mr. Shivdeep Mokawat, among others, who played vital roles in ensuring the program's success.

As the event concluded, Prof. Barai thanked Shri Hri Ram Soni for his enlightening session and expressed gratitude to all participants for their engagement. He reiterated the

institute's commitment to organising future events to help the BITS Pilani, Pilani campus community navigate the complexities of the digital landscape safely.

- Cyber Crime Awareness Program



International Conference on Intersections of Knowledge: Exploring Discourses and Beyond in Humanities and Social Sciences

The Department of Humanities and Social Sciences (HSS) inaugurated its two-day *International Conference on Intersections of Knowledge: Exploring Discourses and Beyond in Humanities and Social Sciences* on February 23-24, 2024. Sponsored by the Indian Council of Social Science Research (ICSSR) and Sage India Publications Pvt. Ltd., the conference began with an invocation to Goddess Saraswati and the traditional lamp lighting.

Conference Convener Prof. Devika Sangwan, Head, Department of Humanities and Social Sciences, outlined the aim: *"to encourage a confluence of ideas and foster diverse perspectives for meaningful discoveries and friendships."* Patron of the Conference, Prof. Sudhirkumar Barai, Director, BITS Pilani, Pilani Campus, underscored the importance of holistic education aligned with the National Education Policy 2020, emphasising the role of humanities in nurturing well-rounded individuals.

Chief Guest Prof. Kiki Caruson from the University of South Florida joined online, advocating for interdisciplinary research as a solution to societal challenges. She encouraged participants to appreciate how varied disciplines address common issues, stating that *"interdisciplinary research can solve grand problems."* Prof. Caruson highlighted the expanded access to Humanities electives alongside sciences, urging exploration of these opportunities.

Representatives from co-sponsor Sage India Publications Pvt. Ltd. provided insights on integrating online research methods. The session concluded with the release of the Conference's book of abstracts and a vote of thanks from Dr. Prateek, co-convenor and faculty member in the HSS department, BITS Pilani, Pilani Campus.

- Highlights of Inaugural Ceremony



BITS Pilani Receives the Prestigious SATHI Project

BITS Pilani is honoured to receive the prestigious SATHI (Sophisticated Analytical and Technical Help Institute) project awarded by the Department of Science and Technology (DST), Government of India. The award was presented on February 28, 2024, National Science Day at Vigyan Bhavan, New Delhi, and was accepted by Prof. V. Ramgopal Rao, Vice-Chancellor, BITS Pilani, and Prof. Sudhirkumar Barai, Director, BITS Pilani, Pilani Campus. This achievement includes a grant of Rs. 60 crores over the next four years to establish advanced research facilities at the institute.

The selection of BITS Pilani for the SATHI project highlights its dedication to research and innovation excellence. Among over 35 institutions, BITS Pilani's compelling proposal underscored its commitment to advancing scientific knowledge and technological capabilities.

- SATHI Project Awarded to BITS Pilani



NUCLEUS 1.0

In a remarkable showcase of innovation and scientific excellence, the Institution's Innovation Council at BITS Pilani, in collaboration with the DST-supported BITS-Technology Enabling Centre, hosted Nucleus 1.0 on February 29, 2024. This pioneering tech event brought together 57 school innovators, 75 attendees and teachers from four schools, along with 36 innovators from colleges and startups at BITS Pilani, Pilani campus.

Prof. Anupama Mittal, Convener of the Institution's Innovation Council, highlighted the event's success in fostering collaboration and inspiring future scientific leaders. Led by Prof. Deepak Chitkara, Coordinator, BITS-TEC, and Dr. Nishant Peddagopu, COO, BITS-TEC, Nucleus 1.0 featured evaluations by a distinguished panel, including representatives from the Ministry of MSME and research scientists.

Prof. Sudhirkumar Barai, Director, BITS Pilani, Pilani Campus, commended the young innovators' creativity and urged them to continue their dedication. Prizes worth over INR 75,000 were awarded to top innovators, with innovations spanning advanced sensor technologies to AI-based solutions. Nucleus 1.0 leaves a lasting legacy of inspiration and future-focused innovation.

- Nucleus 1.0 Tech Showcase at BITS Pilani



INNOVATE- 2024 - International Conference on Integrating Novel Approaches for Non-Communicable Disease Target Exploration

On March 7, 2024, The International Conference on Integrating Novel Approaches for Non-Communicable Disease Target Exploration (INNOVATE-2024) was inaugurated at BITS Pilani, Pilani campus. The conference, a collaboration between the Department of Pharmacy, BITS Pilani, Pilani campus, and the Indian Pharmacological Society (IPS), aimed to foster dialogue in pharmacological research related to non-communicable diseases. It received partial sponsorship from the Science and Engineering Research Board (SERB), Government of India.

- INNOVATE-2024



The inauguration began with a ceremonial welcome by Prof. B. Anil Gaikwad, Head, Department of Pharmacy, and a Saraswati Vandana Invocation. Prof. R. Mahesh, Senior Professor, extended greetings to all attendees, followed by Prof. Rajeev Taliyan's address on the conference objectives, emphasising collaborative research's importance in non-communicable diseases.

Prof. Sudhirkumar Barai, Director, BITS Pilani, Pilani campus, shared his vision for fostering academic innovation. Prof. B. Kalakumar, General Secretary of IPS, highlighted pharmacology's critical role in healthcare. Dr.

Shivprakash Rathnam, President of IPS, delivered the keynote, sharing insights and experiences in pharmacology. The ceremony also included the launch of the conference's book of abstracts, symbolising extensive scholarly efforts in pharmacology. Prof. Barai felicitated Dr. Rathnam and Prof. Kalakumar in honour of their contributions.

INNOVATE-2024 promises valuable discussions and potential collaborations that could lead to breakthroughs in pharmacological research for societal advancement.

International Women's Day Panel Discussion

On March 8, 2024, The International Women's Day celebration hosted by the Internal Complaints Committee (ICC) was a notable event celebrating the achievements and role of women under the theme, "Viksit Bharat@2047, Role of Women." The program began with Saraswati Vandana and a ceremonial lamp-lighting, symbolising knowledge and reverence.

The event featured a distinguished panel discussion with notable speakers including Dr. Seema Sinha, Bursar at Birla Balika Vidyapeeth; Dr. Smitanjali Mishra, Principal, and Ms. Archana Sharma, Vice Principal, Smt. Janki Devi Mandella School; Mrs. Shobha Verma, Principal, Bal Niketan Sr. Secondary School; Mrs. Rambha Kumari, PGT & Sr. Coordinator, Smt. Jamuna Mishra Academy; and Dr. Sunita Sharma, Principal, GSS Girls College. Their stories of resilience and achievements inspired attendees, highlighting their roles as leaders in education and community development.

The discussion, led by ICC Presiding Officer Prof. Poonam Goyal and moderated by Prof. Sangeeta Sharma, addressed crucial topics including women-led development, enhancing educational access for rural girls, and the need for structural changes to support gender equality. The event also provided interactive activities, quizzes, and discussions for students from nearby areas like Jhunjhunu and Chirawa, promoting awareness of women's roles in nation-building.

Key topics included economic empowerment, skill enhancement for rural girls, and increasing female literacy rates—steps vital to building a more inclusive society. The event concluded with a vote of thanks, a brunch, and a group photo session, underscoring unity and the celebration of womanhood. This Women's Day celebration exemplified the commitment to a more inclusive and empowered future.

- International Women's Day Panel Discussion



DST-TEC Conclave 2024: Spearheading India's Technology Ecosystem Evolution

On March 14, 2024, the DST-TEC Conclave 2024, held at DELNET in New Delhi, brought together 22 Technology Enabling Centres (TECs) funded by the Technology, Translation, and Innovation (TTI) division of the Department of Science & Technology (DST), Government of India. This summit showcased significant contributions to advancing India's technological ecosystem, highlighting the collective progress of these centres in enhancing scientific inquiry and innovation.

The conclave served as a dynamic platform for knowledge exchange, collaboration, and showcasing TEC-driven initiatives. Under the guidance of the Expert Advisory Committee, the event emphasised the government's commitment to leveraging science and technology for societal benefit. The Committee highlighted the conclave's importance in building a cohesive framework for nationwide technological advancement and collaboration.

The Technology Enabling Centre at BITS Pilani (BITS-TEC), coordinated by Prof. Deepak Chitkara and his team, presented their initiatives to foster innovation and technology development, particularly within Rajasthan. BITS-TEC aims to cultivate a robust tech ecosystem, providing support to MSMEs, startups, industries, and students, promoting growth and enabling solutions to flourish within and beyond the state.

The DST-TEC Conclave 2024 concluded with a strengthened commitment to expanding India's technological capabilities.

- DST-TEC Conclave 2024



Workshop on Cheminformatics and Machine Learning in Drug Discovery

The Workshop on Cheminformatics and Machine Learning in Drug Discovery (WCMLDD-2024) was inaugurated on March 18, 2024, at BITS Pilani, Pilani Campus. Organised by the Department of Pharmacy, the event featured notable guest speakers including Prof. Narsimhan (MDU Rohtak), Dr. Manoj Kumar (IMTECH Chandigarh), and Prof.

Kamlesh Tiwari (BITS Pilani), along with Dr. Boyli Ghosh and Dr. Lahari Murali from Cresset Software Group. Faculty members of the Pharmacy Department and 52 registered participants, primarily PhD students from BITS Pilani and other esteemed institutions like NIPER, IIT-BHU, IMTECH, and Jamia Hamdard, attended the two-day workshop.

The inauguration began with Saraswati Vandana, followed by a ceremonial welcome for the speakers. Prof. Hemant R. Jadhav, Department of Pharmacy, BITS Pilani, outlined the workshop's objectives, emphasising the impact of recent advancements in data analytics for drug discovery. He highlighted that cheminformatics and ML techniques hold promise for reducing the cost and timeline associated with developing future drugs.

- Workshop on Cheminformatics and Machine Learning in Drug Discovery



Chitrarth Dagar Memorial Award function

The Department of Mechanical Engineering, BITS Pilani, Pilani Campus organised the Chitrarth Dagar Memorial Award function on April 26, 2024, at the J.C. Chaudhry NAB Auditorium. The event was attended by Prof. Sudhirkumar Barai, Director, BITS Pilani, Pilani Campus, Prof. Srikanta Routroy, Head, Department of Mechanical Engineering, along with faculty members, students, and the family of the late Mr. Chitrarth Dagar, a dedicated Mechanical Engineering student from the 2011-2015 batch and an active member of Gurukul.

The ceremony began with a welcome note, followed by a tribute film showcasing Chitrarth's activities at various events at BITS Pilani. The Gurukul team then presented a musical performance, and attendees observed a minute of silence in his memory. Prof. Srikanta Routroy described the selection process for the award, which honours the best-performing Mechanical Engineering student each year, before announcing this year's awardee, Mr. Naman Seth. Additionally, the Best Performing Gurukul Student Award was presented to Mr. Madhav Nath Khanna.

The awards were conferred by Chitrarth Dagar's family and Prof. Sudhirkumar Barai. Prof. Geeta Bhatt concluded the

event with a vote of thanks, marking a heartfelt tribute to Chitrarth's legacy.

- Chitrarth Dagar Memorial ceremony



10th International Yoga Day Celebration

"Yoga for Self and Society" — BITS Pilani celebrated the 10th International Day of Yoga with enthusiasm, promoting both physical and mental wellness within our campus community. This significant day, inspired by Hon'ble Prime Minister Shri Narendra Modi Ji's 2014 UN address, saw its first global celebration on June 21, 2015. Since then, it has united people across the world, including in cities like New York, Paris, Beijing, and New Delhi.

Honouring this ancient practice, BITS Pilani brought together students, faculty, and staff, reinforcing our commitment to personal well-being and collective harmony through yoga.

- Yoga Day Session



BITS Pilani and Mercedes-Benz R&D India Partner for Advanced Technology Research

On July 1, 2024, BITS Pilani signed a five-year Master Research Agreement (MRA) with Mercedes-Benz Research and Development India Private Limited (MBRDI) to accelerate innovation in the mobility sector. This partnership will focus on creating intellectual property in breakthrough technologies and advancing industry-academia collaboration.

Guided by Prof. Poonam Goyal, Prof. Amit R Singh, and Prof. Navneet Goyal, the collaboration will include joint R&D projects, academic events, student and researcher exchanges, shared lab facilities, and co-funding opportunities. Key research areas will cover data and AI, electric mobility, and transformative technologies like generative AI.

Prof. Ramgopal Rao, Vice Chancellor, BITS Pilani, emphasised that this partnership will support groundbreaking discoveries and provide exceptional opportunities for researchers and students. Manu Saale, Managing Director and CEO of MBRDI, highlighted the value of industry-academia partnerships in driving sustainable innovation and fostering India's digital talent.

This agreement underscores BITS Pilani's role in strengthening India's digital ecosystem and leading the future of mobility innovation.

- BITS Pilani and MBRDI Partner for Innovation



Academia: a confluence of ideas

Seminars, Conferences, Workshops, and Training Programs: Enriching the Learning Experience Through Faculty Visits

Dr. Navneet Goyal and Dr. Poonam Goyal, Department of Computer Science & Information System, presented a paper titled "*Efficient representation learning of satellite image time series and their fusion for spatiotemporal applications*" in 38th AAAI Conference on Artificial Intelligence at Vancouver, Canada during February 20-27, 2024.

Dr. Pramod Eyyunni, Department of Mathematics, attended the Second Meru Combinatorics Conference 2024 at Graphic Era Hill University, Bhimtal, India on June 1, 2024.

Dr. Ashis Kumar Das, Department of Biological Sciences, attended the Genomics India Conference (GIC) at Shiv Nadar Institution of Eminence, Delhi NCR, India, from February 1-3, 2024. He chaired a session and presented a paper titled "*Genomic Approaches and Inferences: Investigating Markers of Drug Resistance in Random Isolates of Plasmodium sp. from Bikaner, Rajasthan, India.*"

Dr. Ashis Kumar Das, Department of Biological Science, attended the 4th International Conference on Recent Advances in Material Science and Computational Techniques (RAMSACT) at Manipal University, Jaipur, from April 4-6, 2024. He presented a paper titled "*Insights into the Transcriptome of Severe Plasmodium vivax Malaria.*"

Dr. Shilpi Garg, Department of Biological Sciences, attended the XI International Conference on Fe-S Proteins: Function, Biogenesis, and Regulation and presented her paper titled "*Iron-Sulphur [Fe-S] Cluster Assembly Protein Dre2 from Plasmodium: A Target for Artemisinin*" at Wake Forest University, North Carolina, USA, from June 3-7, 2024.

Dr. Shilpi Garg, Department of Biological Sciences, presented a paper titled "*Malaria Vaccines: Challenges and Current Status*" at "Special Talks by Chimera," an event organised by BITS Pilani, Dubai Campus, on May 21, 2024.

Dr. Shilpi Garg, Department of Biological Sciences, attended a training on Biosafety and Biohazards on March 16, 2024, organised by the Institute Biosafety Committee & Department of Biological Sciences at BITS Pilani, Pilani Campus, where she presented a talk titled "*Regulation and Guidelines on Bio Contaminants and Waste Management.*"

Dr. Sandhya Marathe, Department of Biological Sciences, attended a training on Biosafety and Biohazards organised by the Institute Biosafety Committee & Department of Biological Sciences and presented a talk titled "*Regulation and Guidelines for Recombinant-DNA Research*" at the Department of Biological Sciences, BITS Pilani, Pilani Campus, on March 16, 2024.

Dr. Mukul Joshi, Department of Biological Sciences, attended a KARYASHALA, a 7-day workshop sponsored by the SERB Accelerate Vigyan Scheme, where he presented a paper titled "*Unlocking Plant Genetic Potential: Training Program on Cutting-edge Genome Editing Tools*" at the Department of Biotechnology, Central University of Haryana (CUH), Mahendergarh, Haryana, India, from March 15-21, 2024.

Dr. Soumitra Ghosh, Department of Biological Sciences, attended the Second International Conference on Sexual Dimorphism in Cancer and presented a paper titled "*Hormones as Determinants of Sex Cancer Differences,*" drawing on his expertise in androgen receptor signalling in skin cancer, at the Olympic Museum in Lausanne, from April 17-19, 2024.

Dr. Paul Atish Tulshiram, Department of Pharmacy, was invited to visit the National Institute of Siddha (Chennai) to meet Director Prof. Dr. R. Meenakumari on July 23, 2024. He was also invited to the



AYUSH Scientist Meet as an expert to deliver a lecture on "*Natural Products and Traditional Medicines*" at the Center for Technology in Traditional Medicine, Anna University, Chennai.

Accolades and Achievements: Academic attainments of Faculty

Dr. S.K. Verma, Department of Biological Sciences, received the Lifetime Achievement Award from the Global Environmental & Social Assurance (GESA), New Delhi.

Dr. Rajdeep Chowdhury, Department of Biological Sciences, visited the Tokyo Institute of Technology, Japan, to engage in research at Prof. Nisisako's Lab as part of the University Immersion program.

Dr. Jitendra Panwar, Department of Biological Sciences, visited Dr. Jonathan A. G. Cox's lab at the School of Life & Health Sciences, Aston University, Birmingham.

Dr. Kamalesh Kumar, Department of Civil Engineering, was honoured with a Certificate of Excellence in Reviewing for outstanding contributions to multiple journals, including the International Journal of Environment and Climate Change, Asian Journal of Physical and Chemical Sciences, Asian Journal of Soil Science and Plant Nutrition, Journal of Experimental Agriculture International, and Advances in Research.

Dr. Kamalesh Kumar, Department of Civil Engineering, was awarded a Certificate of Reviewing in recognition of exemplary peer review for the manuscript titled "*Analysing the Effects of Soil Structure Interaction and Geometric Configuration on Structure*" for the STM Journals, Journal of Geotechnical Engineering.

Invited Lectures/Talks by Faculty

Dr. Mukul Joshi, Department of Biological Sciences, delivered a talk titled "*Unlocking Plant Genetic Potential: Training Program on Cutting-edge Genome Editing Tools*" at the SERB Accelerate Vigyan Scheme-funded KARYASHALA, a 7-day workshop held from March 15-21,

2024, at the Department of Biotechnology, Central University of Haryana (CUH), Mahendergarh.

Dr. Poonam Goyal, Department of Computer Science and Information Systems, delivered a talk on "*Generative AI & Its Applications in CAE*" at Mercedes-Benz Research & Development India, Bangalore, on May 20, 2024.

Distinguished Lectures

Dr. Sangram Bagh, Associate Professor, Saha Institute of Nuclear Physics, delivered a lecture on synthetic biology, reversible/irreversible computing, and machine learning at the Department of Biological Sciences, BITS Pilani on January 20, 2024.

Dr. Arun K. Somani, Distinguished Professor of Electrical and Computer Engineering, Iowa State University, Ames, IA, US, delivered a talk on '*Robust Hardware-Aware Neural Architecture Search (HW-NAS): Finding Faster AI Solutions*' on February 6, 2024.

Dr. Jayakumar Subramanian, Senior Research Scientist, Media and Data Science Research Lab, Adobe India, delivered a talk on "*Designing Customer Journeys for Optimal Customer Experiences*" on February 6, 2024.

Dr. Andrew Advani, Head of the Division of Endocrinology and Metabolism and Keenan Chair in Medicine at St. Michael's Hospital, University of Toronto, Canada, delivered a lecture on "*How does inflammation cause heart failure?*" at the Department of Biological Sciences, BITS Pilani on February 17, 2024.

Significant Projects

S.No.	Principal Investigator	Department	Title of the Project	Funding Agency	Amount in Lakhs
1	Dr. Navneet Goyal	CSIS	Ensuring Food Safety through AI and Satellite Imaging Technology assisted Robust Agriculture at Scale	Ministry of Education	198.18
2	Dr. Radha Raman Mishra	MECH	Experimental and theoretical analysis of 3D Printed Hierarchical structures for Ballistic System	DRDO-ARMREB	91.35
3	Dr. Rahul Kumar	EEE	Phase and Bandgap Engineering of III-Oxides in Quest of Interfacial 2DEG	MoE	89.00
4	Dr. Syed Mohammad Zaferuddin	EEE	Multilingual AI for Controlled sensing and Communications	MHRD (IITKGP)	83.40
5	Dr. Pratik Narang	CS&IS	Sentiment-based Business Recommendations using Large-Language Models	Birdeye	80.00
6	Dr. Suvanjan Bhattacharyya	MECH	Encapsulated PCM-Based Magnetic nanoparticles and AI Applications for Optimising Separation of Carcinogenic Industrial Solvents Using solar Energy: Shaping Towards Sustainable Development	MHRD (IITKGP)	73.20
7	Dr. Amit Kumar	MECH	Shock wave governed high velocity forming of tailor welded blanks for automotive applications	EEQ	52.62
8	Dr. Raj Kumar Gupta	PHY	Interaction of ultrathin films of functionalized graphene with proteins at air-water and solid-water interfaces	SERB	42.45
9	Dr. Hemant Jadhav	PHARMA	Design, synthesis, and evaluation of novel dual inhibitors of Angiotensin-II type 1 receptor and Nephrylsin for the treatment of diabetic cardiomyopathy	ICMR	41.12
10	Dr. Gaikwad Anil Bhanudas	PHARMA	Pharmacological Intervention using α -Klotho with AT1 Receptor Blocker and Sodium-Glucose Co-Transporter 2 (SGLT-2) Inhibitor against Diabetic Kidney Disease	SERB	38.62
11	Dr. Anshuman Dalvi	PHY	All-solid-state supercapacitors using Li ⁺ ion garnet-polymer hybrid composites	SERB	37.21
12	Dr. Sidhu S	PHY	Studies of optoelectronic properties in new electroluminescent organic/inorganic materials for flexible organic light emitting devices	BRNS	34.82
13	Dr. Navneet Gupta	EEE	Design and Fabrication of Miniaturised Ultra Wide band (UWB) Flexible and Wearable Antenna for Breast Cancer Detection: A Non-invasive, Reliable and Low-Cost Approach	DBT	34.38
14	Dr. Surojit Pande	CHEM	Synthesis and Development of Efficient Single Atom Catalysts (SACs) for Energy Conversion	SERB	33.13
15	Dr. Sandhya Amol Marathe	BIO	Utilising the endogenous CRISPR-Cas system as an anti-pathogen strategy against antimicrobial-resistant Enteric pathogens	ICMR	32.52
16	Dr. Partha Saratha Addy	CHEM	Synthesis and Characterization of Stimuli Responsive Molecular Scaffolds for Bio-analyte Sensing and Cancer Diagnostics	BRNS	29.58
17	Dr. Geeta Bhatt	MECH	One-step stretchable PES laser scribed graphene IDEs for ultrasensitive non-enzymatic electrochemical sweat glucose detection	SERB	28.82
18	Dr. Sharda Tripathi	EEE	Holistic Integration of NTN for 5G and Beyond Wireless Communications: Connecting Anything, Anytime, Anywhere	SERB	27.33

S.No.	Principal Investigator	Department	Title of the Project	Funding Agency	Amount in Lakhs
19	Dr. Sudeshna Mukherjee	BIO	Understanding the therapeutic potential of modulating endoplasmic reticulum stress and autophagy in human brain cancer cells undergoing epithelial to mesenchymal transition	CSIR	26.57
20	Dr. Kamlesh Tiwari	CS&IS	Non Invasive Intoxication Detection through Computer vision & AI	WAISL Ltd	25.70
21	Dr. Sandhya Amol Marathe	BIO	Repurposing the endogenous CRISPR-Cas system as an anti-Salmonella strategy	SERB	25.38
22	Dr. Syed Zafaruddin	EEE	Reconfigurable Holographic Surfaces for Wireless Communication: Physical Layer Algorithms and Protocol Design	SERB	23.63
23	Dr. Niladri Sarkar	PHY	Implications of Inelastic Scattering and Spin Dephasing Mechanisms in Graphene Nano Ribbon-Based Spintronics	SERB	20.92
24	Dr. Ram Kinkar Roy	CHEM	Exploring the Mechanism of Aggregation Induced Emission (AIE) and Aggregation Enhanced Emission (AEE) Phenomena Through DFT and Wave Function Based Methods	SERB	20.18
25	Dr. Sumanta Pasari	MATH	Statistics of Powerful Earthquakes: Formulation and Physical Relevance	SERB	18.88
26	Dr. R Srinivas	CIVIL	Smart Crop Planning: AI (Artificial Intelligence) based Decision Support System for Crop Diversification	ISRO	18.53
27	Dr. Banasri Roy	CHE	Catalytic Reforming of Simulated Bio Oil for Hydrogen Production	CSIR	15.62
28	Dr. Deepak Chitkara	PHARMA	New therapeutic approach for corneal dystrophy via CRISPR mediated SLC4A11 gene correction in an in-vitro and in-vivo system using advanced cRGD decorated lipo-polymeric nanoplexes	SERB	13.64
29	Dr. Vinay Chamola	EEE	Enhancing Generative AI-based Creativity using Multi-Modal Input for Better Output Generation	RITVITECH & CO, Bengaluru	10.00
30	Dr. Vinay Chamola	EEE	Designing AI-empowered IoT Framework for Oil & Gas Operation and Maintenance Management	E73 AI Innovations Pvt Ltd	10.00
31	Dr. Shibasish Chowdhury	BIO	Identification of structural and functional hotspots of Human genome through graph theory and machine learning algorithms	SERB	6.60
32	Dr. Bhanuvaradhan Reddy Kuncharam	CHE	Mathematical multiscale modelling and simulation of the conversion of carbon dioxide (CO ₂) to methanol in a catalytic mixed matrix membrane reactor for efficient CO ₂ capture and utilisation	SERB	6.60
33	Dr. Jay Pandey	CHE	Copper Cathode Quality Improvement & Reduction in Bleed to ETP	Hindalco Industries	6.23
34	Dr. Minmoyee Basu	CHEM	Copper Cathode Quality Improvement & Reduction in Bleed to ETP	Hindalco Industries	6.06
35	Dr. Aneesh A M	MECH	Heat transfer characterization of enhanced condenser tubes for a typical two-phase immersion cooling system	DroneVionics Pvt. Ltd	5.14
36	Dr. Balakrushna Padhi	ECO & FIN	Consultancy Grant	CYSD (Centre for Youth and Social Development) Bhubaneswar, Odisha	1.25

Student round up

APOGEE '24 - A Celestial Epiphany

Hosted at BITS Pilani, Pilani Campus, APOGEE 2024 invited participants on an exhilarating journey from April 4-7, 2024, transforming the campus into a nexus of space exploration and innovation under its theme, "Celestial Epiphany." In its 42nd year, this annual technical festival offered a blend of knowledge, creativity, and fun.

APOGEE captivated attendees with thrilling events like Robo-Wars, strategic Case Competitions, hackathons, quizzes, escape rooms, and Model United Nations (MUNs). Competitions boasted over INR 10 Lakh in cash prizes, along with internship opportunities and certificates, driving curiosity and engagement among all involved.

Adding to the excitement were talks by prominent speakers, including Shivshankar Menon, Sanjaya Baru, and Zed Shaw, inspiring discussions on cutting-edge ideas and global topics. Renowned artists Mohit Chauhan and Talwinder enchanted audiences with musical performances, while comedian Samay Raina brought humour to the fest, making APOGEE 2024 an unforgettable blend of exploration and celebration.

- Highlights of APOGEE 2024



Ms. Sakshi Priya (2021PHXF0459P) has been granted Certificate of "Registration of Design" on January 5, 2024 by The Patent Office, Govt. Of India on design of MODIFIED DONOR-IMMERSED FRANZ DIFFUSION CELL with Design No. 400419-001.

Mr. Shreyansh Sharma (2022A1PS1568P), a second-year Chemical Engineering student at BITS Pilani, Pilani Campus,

emerged as the National Winner and Gold Medalist in IndiaSkills 2024 - Chemical Laboratory Technology. This prestigious victory

has earned Shreyansh a place in the Indian contingent for WorldSkills 2024 in Lyon, France, where he will represent the nation among 60 of India's finest talents selected from over 2.5 lakh competitors.

Organised by the Ministry of Skill Development and Entrepreneurship, IndiaSkills is India's largest skill competition, highlighting exceptional talent across various fields. Held from May 15-19, 2024, the event concluded with Shreyansh's achievement being celebrated by distinguished guests, including Shri Atul Kumar Tiwari,



Secretary of the Ministry of Skill Development; Shri Ved Mani Tiwari, CEO of NSDC; and Dr. Nirmaljeet Singh Kalsi, Chairman of NCVET.

Ms. SONALI J JAIN (2022PHXF0402P)

has been granted a German patent on January 26, 2024, for her innovative work titled "A System for Developing Diatomite Nanopowder for Latent Fingerprint Detection and Composition." This utility model patent highlights advancements in forensic nanotechnology.



Mr. Anagh Sinha (2020B1A81600P)

1. Has been awarded the prestigious Amgen Undergraduate Summer Research Fellowship at The University of Tokyo. He will work under Prof. Keisuke Goda at the Serendipity Lab, focusing on bioengineering research. This opportunity is part of a globally recognized program managed by Harvard University, offering invaluable exposure to cutting-edge research in biotechnology.



- At the Amgen Asia Symposium, Anagh presented his work and won the Best Poster Presentation Award. He also had the honour of being the Master of Ceremony, which brought together scholars from leading universities such as Tsinghua University, National University of Singapore, and the University of Melbourne.
- Anagh has been selected to conduct research at ETH Zürich, ranked #7 globally. He will work on responsive nanosystems for disease diagnosis and treatment under Prof. Dr. Simone Schürle-Finke. This research will be conducted at the Medical Microsystems Laboratory. He is grateful for the support of Prof. Dr. Rajdeep Chowdhuri, Head, Department of Biological Sciences at BITS Pilani, for his continued guidance throughout this journey.

Mr. Ojasva Goyal (2021A2PS2378P)

- At Nucleus 1.0, organised by the Institution Innovation Council (IIC) BITS Pilani and BITS-Technology Enabling

Centre (BITS-TEC) on February 29, 2024, Team Robocon, led by Vice-Captain Ojasva Goyal, achieved 1st place in the Startup Track. Competing against established startups, the team presented their project, "Autonomous UAV for GPS Denied Navigation," featuring an autonomous quadcopter prototype and a mini-quadcopter prototype for indoor environments. Their outstanding work was awarded a prize of INR 10,000.

- Was selected for the "Microsoft for Startups Founders Hub" for his startup, ePlast, an automated plastic recycling venture co-founded during the Environmental Sustainability Ventures course.



Introducing new faculty

S.No	Name of Faculty	Designation	Department
1	Soumitra Ghosh	Assistant Professor, Gr-I	Biological Sciences
2	Shashi Prakash Singh	Assistant Professor, Gr-I	Biological Sciences
3	Dhruv Kumar	Assistant Professor, Gr-I	Computer Science & Information Systems
4	Aditya Sharma	Assistant Professor, Gr-I	Economics and Finance
5	Govind Prasad	Visiting Assistant Professor	Electrical & Electronics Engineering
6	Prashant Kumar	Visiting Faculty	Electrical & Electronics Engineering
7	Ankush Vashishtha	Visiting Assistant Professor	Electrical & Electronics Engineering
8	Eirini Anastasiadou	Visiting Assistant Professor	Humanities and Social Sciences
9	Anubhav Roy	Assistant Professor, Gr-I	Humanities and Social Sciences
10	Pabitra Biswas	Professor of Practice	Management
11	Debasmita Dey	Assistant Professor, Gr-I	Management
12	Dhiraj Kumar Das	Assistant Professor, Gr-I	Mathematics
13	Biswadip Shome	Professor of Practice	Mechanical Engineering
14	Sunil Sinhmar	Assistant Professor, Gr-I	Mechanical Engineering
15	Rajit Ranjan	Assistant Professor, Gr-I	Mechanical Engineering
16	Jagpreet Singh Sidhu	Assistant Professor, Gr-I	Pharmacy
17	Gautam Kumar	Assistant Professor, Gr-I	Pharmacy
18	Ankit Jain	Assistant Professor, Gr-I	Pharmacy

Editorial team

Editor



Prof. Gajendra Singh Chauhan
Faculty In-charge,
Publications and Media Relations

Student Member



Aditya Sandeep Thole (2022B3A70374P)

Special Thanks



Mr. Ramesh Sharma
Publications and Media Relations

mediaspeak

