

मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

(An Institute of National Importance)

# **MNITJ NEWS**

Azadi <sub>Ka</sub> Amrit Mahotsav



OCTOBER 2022

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#### Vision

To create a center for imparting technical education of international standards and conducting research at the cutting edge of technology to meet the current and future challenges of technological development.

### Mission

To create technical manpower for meeting the current and future demands of industry; To reorganize education and research in close interaction with industry with emphasis on the development of leadership qualities in the young men and women entering the portals of the Institute with to social development and eye for opportunities for growth in the international perspective.

#### From the Director's Desk

I am elated to present the quarterly issue of the MNITJ News and congratulate the editorial team for their unswerving and dedicated efforts in bringing out the issue.

The issue vividly portrays the multifarious activities organized in the campus from April to September 2022. It also details the involvement of faculty members and students in myriad fields. The issue highlights the remarkable steps taken in each field and propels us to achieve new heights in every endeavour.



The students contributing to the editorial board not only have a penchant for writing but also have worked day and night to make the MNITJ News a cynosure. Hope that this edition will be successful in seeing through all that is going on at MNIT and throwing extra rays on all the latest happenings and buzz around. This is a time for reminiscing the past, reflecting on the present, and reckoning the future. Looking into the future while revisiting the glorious past of the college, we have tried to think out of the box. While we have stuck to mainstream reporting, we have endeavoured to harmonize the newsletter with the metamorphosis of the college. As a corollary, it has received a complete facelift, but it has stayed true to its roots. What was achieved in the past is more than history; it is a call from our commitment to carry the torch and continue the race.

The issue, we hope, will remain as a memoir of activities held at MNIT premises and become a means of transforming the transient into something approaching some permanence in a lifetime. Daphne du Maurier's nameless heroine of 'Rebecca' wishes, "If only there could be an invention that bottled up a memory, like a scent.. when one wanted it, the bottle could be uncorked, and it would be like living the moment all over again". If this newsletter has the potential to do that even to a nano degree, we shall feel that we toiled not in vain! Most of the information submitted by the respective departments has been produced verbatim. The editorial pen has stayed to slay very few dragons of errors, typographical or otherwise, but never to change the content, never to add or detract from its essence. Some, especially those few who taxed our comprehension to the utmost, we have to admit were left unchanged to reflect like Snow- white's mirror 'the truest picture of them all. Changes in font, font size, and italics, were brought in for uniformity; we tender no apology for them.

So, sit back, relax and indulge yourself in feasting on this quarterly edition of the MNITJ News.

Prof. N.P. Padhy Director



#### CAMPUS BUZZ

• MNIT Jaipur organized its 55th Annual Athletics Meet from 8 to 10 April 2022. The 3-day event witnessed a gamut of sporting activities. Prof. N. P. Padhy, Director MNIT Jaipur, inaugurated the event. Students from various departments took part enthusiastically in all the activities, showcasing their talents. Winners of each activity were awarded for their exceptional performances.



- MNIT Jaipur organized its first-ever "Cyclothon" on 10 April 2022. Students, staff members, and faculty members participated in the event to cycle through a 5.5 km long path, beginning from Prabha Bhavan, MNIT Campus. Prof. N.P. Padhy, Director, MNIT Jaipur, declared the event open by waving a ceremonial green flag amidst a loud cheer from participants. Almost 650 participants, including faculty members, students, and staff members registered, and approximately 500 people witnessed the event.
- MNIT Innovation and Incubation Centre (MIIC) organized an online competition, "Tech-O-Thon: Technasia, the Hackathon," from 28 to 30 April 2022 for institute students, research scholars, and industry professionals. Participants engaged actively in tech brainstorming, in which ideas and innovations of social and technical usages were discussed. Cash prizes were awarded to the winners, and certificates were provided to all the participants.
- An Awareness Talk on "World Blood Donor Day" was conducted by Dr. Ashish Bhartiya on 14 June 2022 in Malaviya Sabhaghar, MNIT Campus. Every participant got apprised with the substantial talk about blood donation.
- An online 'Winter Training Programme' funded by the Ministry of Electronics and Information Technology, Govt. of India, was organized from 18 to 29 July 2022. The course allowed research scholars, industry professionals, and faculty members to gain hands-on experience with Additive Manufacturing, Process Chain, EDM and SLS Processes, Design for Manufacturability, Open Source for 3D Printing, and Biomedical Applications.



• MNIT Jaipur is concerned about the deterioration of the top layer of soil and has attempted to sensitize the people on how to save **धरा** and the need to nourish our mother earth by conducting awareness programmes such as nukkad nataks in numerous places. On 29 May 2022, the students of MNIT Jaipur organized a 'Nukkad Natak', based on the issue of soil conservation.



• MNIT Jaipur felicitated its graduating batch of 2022. As a token of appreciation and to have an imprint of their association with MNIT Jaipur, an official 'Farewell Ceremony' was organized on 03 June 2022 at Institute Central Lawn. Outgoing students were awarded for their excellent academic performances and other achievements.



• MNIT Jaipur has been assigned the responsibility of conducting the 'Centralized Admission Test (CAT)' for the courses of: M.Tech, M.Arch, and M.Plan, for admission to all IITs, NITs, IIITs, and other prestigious Government Colleges. The last date of registration for the exam was 12 June 2022. The institute ensured all necessary preparations for the successful and smooth conduct of the examination.



- An online Faculty Development Programme (FDP) on "Role of Power Electronics & Advances in Infrastructure for e-Mobility in India" was organized by Electronics and ICT (E & ICT) Academy, in joint collaboration with the Department of Electrical Engineering, MNIT Jaipur, and the Department of Electrical Engineering, Warangal, from 11 to 19 July 2022. The course provided the participants an opportunity to learn about the fundamentals and recent advances in the areas of power electronics converters, control systems, and their applications in developing infrastructure for e-mobility in India. Lectures were delivered by eminent researchers and professors in the field, with significant participation of students, scholars, and industry professionals.
- A Memorandum of Understanding (MoU) was signed between MNIT Jaipur, Watershed Development and Soil Conservation Department (WDSCD), Govt. of Rajasthan on 20 July 2022. It was signed by Prof. N.P. Padhy, Director, MNIT Jaipur, and Smt. Rashmi Gupta, Director, WSDCS. It tends to establish a cooperative relationship to develop and foster soil conversation but is not limited to academic linkages between the two institutions. The objectives of the MOU include partnering and supporting each other for capacity building of WDSC officials, research and consultancy projects on watershed development and soil conservation, jointly organizing academic and scientific activities, and exchange of publications and other informational material of mutual interest.



- The third International Conference on "Paradigms of Communication, Computing and Data Sciences (PCCDS 2022)" was conducted in virtual format from 05 to 07 July 2022. It was organized in technical association with the Soft Computing Research Society (SCRS). A total of 18 technical sessions were conducted in which quality research was presented by a plethora of researchers, faculty members, and industry experts. The conference proceedings will be available in the Springer book series, 'Algorithms for Intelligent Systems.'
- On 23 September 2022, IEEE PES and APS Student Branch chapters, MNIT Jaipur jointly organized a 'Poster Making Competition' on multidisciplinary topics related to emerging technologies.



• MNIT Teaching-Staff Welfare Society organized a "Get Together Function" for the faculty and their family members on 17 August 2022. A cultural programme was organized wherein various activities such as dance, singing, and musical performance on patriotic themes were performed by the teaching staff members and their families. The function was graced by Dr. Nibedita Bisoyi as the Chief Guest and Prof. N. P. Padhy, Director MNIT Jaipur. The event was organized by Dr M. L Meena (President), Dr. Dinesh Kumar (General Secretary), Prof. Upender Pandel, and Dr. Meenakshi Tripathi. Around 300 faculty members and their family members graced the occasion.



• MNIT Teaching-Staff Welfare Society also organized a "Painting and Drawing Competition" for children of teaching staff on 15 August 2022. Winners of the painting and drawing competition were awarded certificates by the Chief Guest, Dr. Nibedita Bisoyi, and Prof. N. P. Padhy, Director, MNIT Jaipur, in the Get-Together function on 17 August 2022. The event was coordinated by the executive members of the society Dr. Lovejeet Singh and Dr. Ashish Tripathi.







• The inaugural lecture of the newly institutionalized, Institute Lecture Series (ILS) was held on 28 September 2022 at Malaviya Sabhagar, Prabha Bhawan. The lecture was delivered by Prof. Ashutosh Sharma, Professor at IIT Kanpur, and a former Secretary of DST, Government of India on "Science and Scientist in New Millennium: A Brief History of the Future."



- On the occasion of 'Sign Language Day' on 23 September, a painting competition was organized for the students on the theme, 'Sign Languages Unite Us'. The day is observed to raise awareness about the importance of sign language worldwide and is celebrated to extend support to the linguistic identity and cultural diversity of people who communicate with each other using sign language.
- An online lecture on "FOSS TCAD/EDA Tools SPICE and Verilog-A Modeling Flow" by Dr. Wladek Grabinski, R&D SPICE Manager, MOS-AK (EU) was conducted on 22 September 2022 by the IEEE Student Branch MNIT Jaipur in collaboration with the IEEE EDS Student Branch Chapter MNIT Jaipur.
- A team of MNIT Jaipur scholars researched the durability of roads, made of asphalt versus plastic waste, under PM Gram Sadak Yojana in Jaipur, Dausa, Sikar, Udaipur, Pali, Jodhpur, Nagaur, and Bikaner. The team asserted that roads made of plastic waste are better than asphalt roads. Field and laboratory tests revealed that problems like creaks and potholes on the roads of plastic waste are up to 80% less than that on asphalt roads.



6



The Valedictory Ceremony was organized by the Official Language Implementation Committee of MNIT Jaipur at the institutional level under the 'Hindi Saptah' Celebrations (14 – 21 September 2022). A large number of faculty members, staff, and students of the institute participated in various events conducted under the banner of Hindi Saptah to celebrate and propagate the Hindi language. Prof. Gunwant Sharma, Dean of Research and Consultancy was the Chief Guest and Prof. Kailash Singh, Dean of Faculty Welfare was the Guest of Honour for the event. Convener of the Rajbhasha Implementation Committee, Mr. Ashok Agarwal addressed the gathering and told that not only technical subjects but world-class books should also be translated into Hindi. On this occasion, all winners of various competitions were also honoured with certificates and prizes.



- A Tree Plantation Programme was organized under Swachhta Pakhwada by the Central Library under the guidance of Prof. Sanjay Mathur, Dean (PWD), Dr. Rajiv Agarwal, Convener Library, and Dr. Rishi Tiwari, Librarian. The endeavor to go green was supported by the whole library staff.
- A short-term course on "Smart Healthcare Technologies: Opportunities & Challenges" was organized by the E & ICT Academy from 25 July 2022. The course was coordinated by Dr. Amit Joshi. The course provided an opportunity for faculty members, industry personnels, and students to gain programming knowledge and skills required for becoming an influential researcher and teacher within the domain of smart healthcare. The workshop featured industry-led sessions, including rigorous hands-on sessions with smart systems, IoT, wearable devices, biomedical embedded systems, and assistive technologies.



• On the eve of Engineer's Day, 15 September 2022, Malaviya National Institute of Technology Jaipur signed an MoU with the Central University of Rajasthan. The MoU will benefit both institutions in the academic and research areas of mutual interest. The Hon'ble Director, Prof. N.P. Padhy, and the Dean International & Alumni Affairs, Prof. Rakesh Jain, represented MNIT Jaipur, whereas the Central University of Rajasthan was represented by the Hon'ble VC Prof. Anand Bhalerao, and the Registrar, Col. B Venkat.



• As a part of the 'Swachhata Pakhwada', from 1 to 15 September 2022, MNIT Jaipur took a big stride towards making the campus waste-free and making the surroundings a better place for everyone. The Cleanliness Drive volunteers visited the canteen and shops on campus to spread awareness about waste reduction. The initiative was followed by the Green Committee, MNIT Jaipur which hosted a plantation drive on 2 September 2022 by planting the auspicious Kadamba tree near the Institute canteen. In addition to this, a slogan-writing competition was organized on the theme 'Cleanliness' to instill a sense of responsibility among the students to maintain the surroundings neat and tidy.







• Ms. Swati Gangwar, PhD Scholar MNIT Jaipur, Prof. I.K. Bhat, and Dr. Amar Patnaik, Associate Professor, Department of Mechanical Engineering were granted a patent for their recent innovation on "Marble dust reinforced copper alloy composite fabrication". The editorial team congratulates them on the accomplishment.



• •To identify the unique contributions of some of the finest teachers who have been able to enrich the lives of the students, besides improving the quality of education, MNIT Jaipur introduced the "Outstanding Teacher Awards" on the auspicious occasion of teachers' day. MNIT Jaipur becomes the first NIT to start such an award honouring the exceptional teaching achievements of the faculty members to encourage a positive teaching and research environment. Three faculty members were awarded, including Dr. Dinesh Gopalani, Head, Department of CSE, Dr. Amar Patnaik, Department of Mechanical Engineering, and Mr. Sanjeev Agrawal, Department of ECE for their outstanding contribution.







• MNIT Jaipur organized a vaccination camp to administer second and booster doses of the Covaxin and the Covishield vaccines on 3 September 2022.





• International Yoga Day was celebrated with great enthusiasm in MNIT Campus on 21 June 2022. Keeping the tradition, a 'Yoga Summit' was organized at the Central Lawns, MNIT Campus, in which students, staff, and faculty members participated in large numbers. The participants opted for various exercises, Asanas, and meditation to keep both their body and mind healthy. Around 500 participants, including students, faculty, and staff members, participated in the event.







#### AZADI KA AMRIT MAHOTSAV

The Government of India has launched the "Azadi Ka Amrit Mahotsav" to commemorate and celebrate 75 years of independence as well as the illustrious legacy of its people, culture, and accomplishments. This Mahotsav is dedicated to the Indian people who have played a key role in the country's progress, and also encapsulates the strength and capacity to comprehend Prime Minister Narendra Modi's vision of enabling India 2.0, propelled by the spirit of 'Aatmanirbhar Bharat.'

The 75-week journey to our 75th anniversary of independence began on 12 March 2021, and the formal Azadi Ka Amrit Mahotsav voyage began on the same date and will end the post-a year on 15 August 2023. MNIT Jaipur joined in the celebration of 75 glorious and magnificent years of India's independence by hosting a variety of events under the banner of 'Azadi ka Amrit Mahotsav' from 11 to 15 August 2022, amongst which ISRO Regional Academic Center for Space (RACS) MNIT Jaipur conducted an exhibition for the celebration of Azadi ka Amrit Mahotsav 2022 at the Student Activity Center (SAC), VLTC on 15 August 2022. This event was inaugurated by Director MNIT Jaipur, Prof. N. P. Padhy, in which 75 posters and models were presented. The exhibition received an overwhelming response from the MNIT faculty members, staff, their families, UBA villages, IIIT Kota students, and MNIT students. It exhibited ongoing/upcoming ISRO and MNIT research projects, patented technologies, and innovative ideas. Additional attractions included Drone Exhibition, Robot Exhibition, and ISRO-Selfie Booth. The RACS ISRO Coordinator, Dr. Namita Mittal, MNIT Jaipur thanked ISRO RACS Team, Exhibitors, Visitors, and guests for the overwhelming performance, support, and enthusiasm.





MNIT Jaipur organized various events and activities during the five-day 'Azadi Ka Amrit Mahotsav' programme, including:

- As a part of the celebrations, MNIT Jaipur arranged a Cultural State Dress pageant on the theme 'Awaaz do, hum ek hain'. The ethnic attire and cultural performances, representing different states, enthralled the audience. An atmosphere of unity and national pride permeated the event.
- Another event was painting competitions for the art connoisseurs which was held with great fervour. The Dramatics Club at MNIT staged street plays throughout the evening at several sites across campus, infusing the air with the spirit of patriotism.
- MNIT Jaipur organized a Patriotic Musical Event to express gratitude for our liberation heroes. The event reverberated with Indian traditions and wide-ranging cultures which were depicted through poems and songs.
- Tricolor-themed caps glowed across the Jaipur roads when over 500 participants from MNIT Jaipur joined the cycle rally organized as a part of the Azadi Ka Amrit Mahotsav series of events to mark the 76th Independence Day of India. The huge rally was flagged off by Prof. N P Padhy, Director MNIT Jaipur and it was a showcase of tremendous vigour and solidarity.
- A rangoli-making competition was organized during the Azadi Ka Amrit Mahotsav week. Profuse use of the three colors—saffron, white, and green brought an appealing vibrancy all around the place.
- Prabhat Pheri was held in the early morning on 14 August 2022, to mark India's 76th Independence Day. More than 700 people, including students, faculty members, IIIT Kota students, and students from the government school on campus participated in the event, exuding immense joy and pride.



The "Har Ghar Tiranga" campaign was conducted in five villages under Unnat Bharat Abhiyan by MNIT Jaipur to mark the Azadi ka Amrit Mahotsav celebrations. The drive arranged different events involving the villagers like Tiranga rallies, National Flag distribution, painting competitions, plantation drives, and stationery distribution.





• MNIT Jaipur proudly joined the initiative of organizing the "Har Ghar Tiranga" campaign from 13 to 15 August 2022. To make this event a grand success, 1,000 National Flags were distributed to students, faculty members, staff members, and the residents of the five villages adopted under Unnat Bharat Abhiyan. To ensure the sanctity and dignity of our National Flag, MNIT Jaipur prepared a list of DOs and DON'Ts, which were shared along with the distribution of flags, shedding light on topics such as hoisting, display of the national flag, and regulations pertaining to our National Flag.











- A one-day "Har Ghar Tiranga" campaign was conducted on 10 August 2022, in the village Dhab ka Nala, Tehsil Amber, by UBA cell, MNIT Jaipur, to mark the beginning of "Azadi ka Amrit Mahotsav" celebrations. The UBA Team visited several Government Primary Schools in the village. Numerous activities ranging from Tiranga rallies by villagers, National Flag distribution, painting competitions, plantation drives, and stationery distribution were organized during the event. Dr. M. L. Meena, Coordinator, UBA, faculty advisors Dr. Manviri Rani, Dr. Anup Malik, and students were also present on the occasion to make the event a grand success.
- Unnat Bharat Abhiyan Team visited the village Pahadiya, Tehsil Phagi to celebrate the 75th Independence Day of India on 12 August 2022. The tricolor rally was organized by the villagers. MNIT team organized many activities such as National Flag Distribution, Painting Competition, Tree Plantation Campaign, Screening of Documentaries, and Stationery Distribution. Dr.M. L. Meena, Coordinator, UBA, Dr. Amit Joshi, Dr. Amit Singh, students of MNIT, Principal Shri D.P. Singh, teachers, and students were also present in large numbers.



• The Independence Day festivities commenced with a march by the institute's security personnel, welcoming Institute Director and Chief Guest, Prof. N P Padhy. The Director delivered the address, invoking contributions in all areas from faculty members and students. A felicitation ceremony was also held for the winners of the various competitions held during the 5-day long 'Azadi Ka Amrit Mahotsav.' The proceedings were capped off with a patriotic dance performance by students of IIIT Kota, a yoga showcase, and a spellbinding "Nukkad Natak" by the Dramatics Society of MNIT.







## UNNAT BHARAT ABHIYAN INITIATIVES

• The Unnat Bharat Abhiyan (UBA) team of MNIT Jaipur inaugurated a 50 kW Solar Grid at Government Senior Secondary School in Bhurthal village on 07 September 2022. On this occasion, the Chief Guest of the program, Managing Director, JVVNL Jaipur, Shri Ajit Kumar Saxena, discussed the importance of wind and solar energy as an alternative source of energy. The honorable guest included UNSW Australia, Prof. Himanshu Roy Pota, Prof. Mahesh Jat, Mrs. Sarita Meena, Dr. Makhan Lal Meena, Dr. Rohit Bhakhar, Dr. Arun Kumar Verma, and Dr. Krishna Kumar. The program was also attended by students and staff of MNIT, school students, teachers, and villagers of Bhurthal. Mrs. Sarita Meena, Sarpanch of the village addressed the gathering on the utilization of solar power for the villagers and school students. She also requested her villagers for this project's security and maintenance to make it more sustainable and beneficial.



• The UBA team of MNIT Jaipur organized several camps for the prevention, treatment, and awareness of Lumpy Skin Disease at Tamariya village and Dhab Ka Nala village. Dr. M. L. Meena, Dr. Anup Malik, Dr. Manviri Rani, and several staff members and students of MNIT Jaipur, visited Tamariya village on 12 September 2022. Subsequently, Dr. Praveen Kumar, Joint Director, Department of Animal Husbandry and Dairying, and his team, including Dr. Neeraj Shukla, Sr. Veterinary Officer, Amber, Sh. Santosh Gaur, LSA, and Sh. Mukesh Yadav, LSA advised precautionary measures to prevent the spread of the disease in other animals. The UBA team also visited Dhab ka Nala village on 17 September 2022 under the supervision of Dr. Minaxi Sahu and her team, including Sh. Harshay Sain, Miss Kavita Sunda, and Miss Manju. The team distributed free medicines to treat 250 cows in the villages and worked tirelessly to prevent further infection in animals.



• MNIT Jaipur's UBA team organized a series of events to celebrate Swachhata Pakhwada, a mission by the Government of India from 1 to 15 September 2022. Dr. M.L. Meena, Dr. Amit Joshi, Dr. Ritika Mahajan, staff, and 25 students from MNIT visited Tamaria village in Chaksu Tehsil of Jaipur district, to spread awareness about cleanliness and hygiene. The visit was started with a plantation drive where teachers, students, and villagers planted trees in the village. After the plantation drive, the UBA team spread awareness about maintaining cleanliness in the environment and surroundings by cleaning the school premises. MNIT student volunteers also organized several contests based on cleanliness for 200 school students.



• On 07 September 2022, the UBA team visited Bhurthal village to celebrate Swachhata Pakhwada. Prof. Mahesh Jat, Dean SW, Dr. M.L. Meena, Coordinator, UBA, Dr. Krishna Kumar, and Dr. Rajnish Dhiman visited the village Bhoorthal along with 40 students and staff of MNIT Jaipur. A series of events were organized, like a painting competition, a quiz competition based on Swachhata, and the cleaning of the school premises to spread awareness. Mrs. Sarita Meena, Sarpanch of the village, and Mr. Ashok Meena, Principal, Government Sr. Sec. The school at Bhurthal village addressed the gathering about cleanliness and encouraged the school students to participate in the activities.



#### DEPARTMENT VIBES

- An online expert talk titled "From Bioinspired Structure Formation to Metamaterials" was organized on 03 May 2022 by the Materials Research Centre. The resource person for the talk was Dr. Andreas Fery, a Professor at Leibniz Institute for Polymer Research, Germany. He gave a brief overview of bioinspired structures and their replication by using various materials and discussed the synthesis of meta-atoms with participants.
- An expert talk on "Sustainable Nano-carbon Based Functional Materials for Renewable Energy Technologies" was conducted by Dr. Kumud Malika Tripathi, Assistant Professor, IIPE, Visakhapatnam on 28 July 2022. The resource person gave a brief overview of the green synthesis of multifunctional nanomaterials for use in energy generation, and healthcare and shared her work in fields such as nanomaterials, self-charging power units, and energy storage devices.
- An online expert talk was held on 26 August 2022 titled, "Supramolecular Nano biomaterials for Mimicking Ubiquitous Natural ECM". Prof. Asish Pal, Scientist-F, Institute of Nano Science and Technology, Mohali conducted an online expert talk on Supramolecular interactions to develop nanoscale materials that can be utilized for targeted drug delivery and mimic natural extracellular matrices.



- On 09 September 2022, a 'Cleanliness Drive' was undertaken by the faculty members, staff, and students of the Materials Research Centre under the mission of Swachhta Pakhwada.
- Prof. Ragini Gupta, Department of Chemistry, MNIT Jaipur, was invited as an external expert for the 2021-2022 Academic Audit at Sant Longowal Institute of Engineering & Technology, Longowal, on 02 September 2022. She was also appointed as the Subject Expert in the Board of Studies (BoS) of the Department of Chemistry, SKIT Jaipur on 12 September 2022.



- The Metallurgical and Materials Engineering Student Society (METMASS) organized "Meta-Minds," an online quiz on 23 April 2022. The quiz covered various topics related to metallurgy and industrial processes. The event drew considerable participation from students of the department as well as other departments of MNIT.
- An Industrial Tour of Shriram Pistons & Rings Ltd, Bhiwadi was conducted by the Department of Metallurgical and Materials Engineering on 16 May 2022. The tour helped students gain first-hand knowledge about the workings and processes used in modern industries.
- Department Day of Metallurgical and Materials Engineering was celebrated on 18 March 2022 at MNIT Central Lawn. The event's theme was "Prom Night" and it included performances by the members of the department as well as cultural performances. Students of the 2018-2022 batch were also felicitated for their achievements and exceptional performances in various domains. The Department Day also acted as a bridge to help acquaint the students of the new batch with college life and provided an opportunity for them to interact with their seniors and faculty members.
- METMASS, in association with FindMyTest, organized a webinar to help students in devising strategies to prepare for competitive exams and to motivate them for their future careers. The resource persons for the event included Mr. Deepak Patel, Scientific Officer, BARC, and Mr. Vishal Bohara, Founder, FindMyTest Pvt Ltd, who spoke about exam preparation strategies for GATE aspirants and shared their experiences with young minds.
- Prof. Nikhil Gupta from Tandon School of Engineering, NYU, New York, along with five research scholars, visited the Department of Metallurgical and Materials Engineering under the US National Science Foundation-sponsored project on 19 July 2022. The project aims to facilitate US citizens and permanent resident students to travel to India for an eight-week-long research programme. To provide a cultural experience alongside the technical research experience, the programme recruited a cohort of students in India to work collaboratively with the US participants.
- An Expert Talk was conducted by the Department of Metallurgical and Materials Engineering on "Role of modeling in the development of steelmaking processes: An overview" on 26 July 2022. The resource person for the talk was Dr. Prince Kumar Singh, Assistant Professor, IIT Ropar.
- METMASS celebrated Teacher's Day on 5 September 2022 at the APJ Abdul Kalam Hall in MNIT Campus. Cultural performances and speeches during the event aimed to pay gratitude to faculty members for guiding their students on the path of progress.



- Dr. Preeti Bhatt, Department of HSS, conducted a session on 'Technical Reports, Manuscripts, Thesis' for the FDP on Research Methodology organized by Electronics and ICT Academy from 25 July to 05 August 2022.
- Dr. Niraja Saraswat, Department of HSS, presented an invited talk on 'An insight into digital transformation in Pedagogy' in a Faculty Development programme on "The Art of Effective Teaching in the Light of NEP". It was organized by Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur from 13 to 17 September 2022.
- Dr. Preeti Bhatt, Department of HSS, conducted a session on "Teaching Academic Writing to Students" in a Faculty Development programme on "The Art of Effective Teaching in the Light of NEP". It was organized by Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur from 13 to 17 September 2022.
- Dr. Preeti Bhatt, Department of HSS, chaired a session in A Three-day International Conference on "Cultural Trajectories through Language, Literature, and Media" which was organized in virtual format at the LNM Institute of Information Technology, Jaipur from 29 April to 01 May 2022.
- Dr. Niraja Saraswat, Department of HSS, presented an invited talk on 'Digital Transformation in Pedagogy' in a five-day faculty development programme on "Recent trends in Science and Technology" on 03 May 2022. It was organized by Arya College of Engineering and IT, Jaipur.
- Dr. Niraja Saraswat, Department of HSS, was invited as a resource person on "Digital Transformation in Effective Classroom Management" in a Refresher Course in Towards Linguistic Diversity. It was organized by the UGC Human Development Centre, University of Rajasthan, Jaipur on 05 August 2022.
- A one-week online GIAN Course on "South Asian Literature and Film: 1990 Present" from 30 May to 04 June 2022 was organized by the Department of HSS, MNIT Jaipur. The course was coordinated by Dr. Preeti Bhatt and Dr. Nidhi Bansal. Prof. Ulka Anjaria, Director, Mandel Center for the Humanities, Brandeis University, Massachusetts, USA, delivered insightful sessions.





19



- An Expert Lecture was conducted by Dr. Preeti Bhatt on 'Key Texts and Major Concerns in Contemporary Indian Fiction, Postcolonial Theory, and Indian Diaspora Writers' on 31 May 2022 as part of the one-week online GIAN Course on "South Asian Literature and Film: 1990 Present" from 30 May to 04 June 2022 organized by the Department of HSS, MNIT Jaipur.
- Dr. Dipti Sharma, Head, Department of HSS, expressed views on the Energy security session of "Locally Determined Choices for Nationally Determined Contributions" organized by the Centre For Community Economics & Development Consultants Society on 09 August 2022 at SWARAJ, Jaipur.
- A session of HUMPALS, titled, "Library Orientation-cum-Training Program" was organized in the Central Library by the Department of Humanities and Social Sciences on 23 September 2022. The session was coordinated by Prof. Manju Singh and Dr. Nidhi Bansal. The activity's objective was to foster open discussion among research scholars to enhance their research skills and knowledge.



- The Department of HSS organized an expert lecture session entitled "Contemporary Issues in Research" on 31 May 2022. Prof. K. Shanmugan, faculty at the Department of Business Economics, Faculty of Commerce, The MS University of Baroda, Vadodara was the expert speaker. The session was coordinated by Dr. Nidhi Sharma and was chaired by Dr. Dipti Sharma, HoD, HSS.
- Department of Chemistry organized a plantation and cleanliness drive under the leadership of Prof. Jyoti Joshi, as part of 'Swachata Pakhwada'.





- An International Faculty Development Programme (FDP) on "Research Methodology and Reviewing Manuscripts" was organized by the Department of Electronics and Communication Engineering, in association with IIT Guwahati, PDPM IIITDM Jabalpur, NIT Patna, and IIT Roorkee from 25 July to 05 August 2022. The speakers, Dr. M. Ravi Kumar and Dr. Amit M. Joshi gave valuable insights about the importance of research methodology and its use in writing and reviewing manuscripts. The course covered topics such as Technical Writing and Research Methodology, Language support tools, and writing manuscripts in Latex working with figures and tables. Other topics included reviewing manuscripts, responding to reviewers' comments, and mastering the language by improving communication and writing skills.
- Department of Civil Engineering, in association with MoRT&H and IRC, organized a 15-day certification course for Road Safety Auditors from 28 May to 11 June 2022, under the supervision of Prof. B L Swami and Dr. Arun Gaur. Two distinguished keynote speakers Dr. H.M. Naqvi, Chief General Manager of NHAI, and Prof. P. K. Sikdar, Adviser of International Road Federation India and former Director, CRRI New Delhi, addressed the gathering on 'Road Engineering Measures to improve road safety on National Highways' and 'Crash data analysis and blackspot treatment to reduce the accident rate in India' respectively.



- A three-day Training Program for RIICO Engineers was conducted by Dr. Arun Gaur and Dr. Mahesh Jat from 04 to 06 August 2022. Participants of the program included Executive and Assistant Engineers.
- Students from the Department of Civil Engineering were deputed on NH-12 on the Jaipur-Tonk-Deoli line for its operation and maintenance under the supervision of Prof. B.L. Swami on 06 August 2022. They were also deputed to the Jaipur-Kishangarh Highway (NH-8) for its operation and maintenance on 15 July 2022.



- Prof. A.B. Gupta delivered a keynote address on "Advances in sewage treatment for reuse in irrigation: Can we ignore the WEF nexus?" on 10 June 2022 as part of a two-day online International Conference titled "Congress of Biotechnology – 2022." The conference was organized by Dr. B. Lal Institute of Biotechnology, Jaipur.
- Many students from the Department of Civil Engineering were designated for the construction of balance works for the six-laning of Jaipur Ring Road under NHDP Phase-VII on 29 July 2022, under the supervision of Prof. B.L. Swami.
- A keynote address titled "Advances in sewage treatment for reuse in irrigation: Can we ignore the WEF nexus?" was delivered by Prof. A.B. Gupta at the International Symposium on Sustainable Developments. The symposium was conducted at MSRUAS, Bangalore from 28 to 29 July 2022.
- To celebrate India's rich culture and convey its importance, women faculty members of MNIT, Jaipur celebrated the festival of Teej by taking part in "Lehariya Utsav", hosted by the Department of Civil Engineering on 01 August 2022.



- Under the supervision of Prof. B.L. Swami, students from the Department of Civil Engineering were deputed to the Manoharpura-Dausa highway on NH-14 for training and internship on 09 August 2022.
- A lecture was delivered by Dr. Dhiraj Raj, Assistant Professor, Department of Civil Engineering at the Earthquake Risk Reduction Training Program. The event was organized by NIDM, New Delhi, and held from 02 to 29 August 2022.



- The Department of Civil Engineering, MNIT Jaipur, in collaboration with IWWA, Jaipur Chapter, celebrated Engineers Day on 15 September 2022. The theme of the event was "Water Engineering".
- The Department of Civil Engineering organized an expert lecture on "Solid Waste Classification and Scientific Approach towards Domestic Hazardous Waste" by Dr. Anupam Singhal, Professor & Head, BITS Pilani (Pilani Campus), on 02 September 2022 in the department seminar hall. Prof. Singhal discussed his research and spoke about his experiences in dealing with domestic hazardous waste. The lecture was attended by faculty members, Ph.D. Scholars, and MTech. students from the Department of Civil Engineering. The event was coordinated by Dr. Amit Kumar.



- International Ozone Day was celebrated by the Department of Civil Engineering on 16 September 2022. ISHRAE, Jaipur Chapter assisted the department in organizing the event, and the activities were coordinated by Dr. Nivedita Kaul. Various activities were conducted to mark the event:
  - A seminar was organized on "Montreal Protocol @35: Global Cooperation protecting life on Earth", in which eminent speakers like Prof. S.C. Bhaduri and Prof. Manoj Pandit shared their vast experiences on various environmental issues with the students.
  - Activities and competitive events like crafting 'Best out of Waste', English Essay Writing, etc were also organized for UG and PG students. The winners were felicitated by Prof. N.P. Padhy, Director, MNIT Jaipur, during the inaugural session of the seminar.
  - An Awareness session on Ozone Depletion and other pertinent issues was also organized for the children of the Government School in the MNIT Campus.
  - A special online lecture on "Temporal Evolution of Ozone Layer Recovery" was conducted by Dr. Jayanarayanan Kuttipurrah, CORAL, IIT Kharagpur on 19 September 2022.



• A two-week Online Global Summer Faculty Development Programme on "Advanced Optimization Techniques and hands-on with MATLAB/SCILAB" was conducted by the Department of Electronics and Communication Engineering from 08 to 19 August 2022, under the guidance of Prof. Vineet Sahula, Dr. S J Nanda, and Dr. Ila Sharma. The main theme of the training programme was oriented towards exploring the state-of-the-art methods for advanced optimization techniques with MATLAB/SCILAB. It was open to all industrialists and doctoral students of Indian organizations.



- An International Short-Term Course on "Zero to Chip Design Workshop using OpenPOWER cores (IBM)" was organized under the guidance of Prof. Vineet Sahula and Dr. Menka Yadav of the Department of Electronics and Communication Engineering from 22 August to 02 September 2022 at MNIT, ICT Academy Jaipur in virtual mode. The course was designed to impart programming knowledge and skills that are required by an effective researcher/teacher within the domain of IBM FPGAs-based design. The Course was open to faculty members, industrialists, and doctoral students. It included sessions on Chip design & verification using IBM OpenCore, instruction set architecture, FPGA implementation, open-source LibreSoC, etc.
- Dr. Sangita Sen, Assistant Professor, IISER Kolkata, was invited for an expert talk on the topic, "Isotropic Response of An Atom to a Uniform Magnetic Field", conducted by Department of Chemistry on 25 July, 2022 at Malaviya Sabhagar, MNIT Campus.



- A five-day International Workshop on "Trends in Analysis and Topology" was conducted by the Department of Mathematics in hybrid mode from 08 to 12 September 2022. It was coordinated under the guidance of Dr. Anubha Jindal, Dr. K. Palpandi, and Dr. Varun Jindal. The workshop specifically covered topics related to fixed point theory, operator theory, Sobolev spaces, measure theory, hyperspace and function space topologies, topological dynamics, etc. 191 participants attended the workshop, including 75 faculty members, 87 research scholars, and 29 postgraduate students.
- A five-day international workshop on "Advanced Numerical Techniques for Differential Equations (ANTDE-22)" was organized in online mode from 06 to 10 June 2022. It was coordinated by several faculty members of the Department of Mathematics, including Dr. Om P. Suthar, Dr. Kushal Sharma, and Dr. K. Palpandi. The workshop had sessions of speakers from prestigious institutes in India and abroad. A total of 160 participants registered for the workshop which included 37 faculty members, 96 research scholars, and 27 postgraduate students.
- A five-day short-term course titled "Machine Learning for Non-coders" was hosted by the Department of Mathematics. It was organized in association with the Indian Institution of Industrial Engineering, Mumbai, Department of Mechanical Engineering, and Department of Electrical Engineering, MNIT Jaipur from 04 to 08 July 2022. 57 participants from various reputed institutions and industries benefited from the course.



• Dr. Madhu Agarwal, Associate Professor, Department of Chemical Engineering, along with her scholar, Mr. Pushpendra Kushwaha, and Ms. Neha Pal represented MNIT Jaipur in "International Conference on Advances in Chemical and Materials Sciences (ACMS 2022)", organized by Indian Institute of Chemical Engineering, Kolkata, from 14 - 16 April, 2022. The main objective of the conference was to review Value Added Materials from Jarosite Hazardous Waste.



- Research scholars, Mr. Pushpendra Kushwaha, and Ms. Neha Pal, along with their supervisor Dr. Madhu Agarwal, Associate Professor, participated in the conference titled "CHEMCONFLUX22", jointly hosted by Motilal Nehru National Institute of Technology (MNNIT), Allahabad and University Sains, Malaysia from 14 - 16 April 2022. The objective of the conference was to investigate the Guar Gum/Agar Composite for the Synthesis of Silver Nanoparticles: Green Synthesis, Characterization, and Antibacterial Activity.
- A one-week GIAN course titled "IoT Solutions for Real World problems" was organized from 6 to 11 June 2022. The resource speaker for the series was Prof. Sandip Ray, University of Florida. Dr. Amit M. Joshi and Prof. Vineet Sahula from the Department of ECE coordinated the event.
- Department of Mechanical Engineering conducted a SERB Sponsored one-month Training cum Skill Internship VRITIKA on "Data Analytics for Sustainability" from 20 June to 17 July 2022 in offline mode. Dr. Rajeev Agrawal conducted the internship, providing an opportunity for postgraduate students and early-stage Ph.D. scholars from MNIT Jaipur and other representatives from the institute to enhance their skills through hands-on experience in the R&D skills practised by premier institutes like IITs and NITs. SERB New Delhi sponsored this scheme under its VRITIKA component under ACCELERATE VIGYAN scheme.





- A five-day industrial workshop was conducted on "Materials Testing and Characterization for Academia and Industries" from 22 to 26 July 2022. It aimed to provide working knowledge on various techniques and how these methods are used to characterize the properties of materials.
- First-year MBA students of the Department of Management Studies, MNIT Jaipur, visited 'Anokhi Museum of Hand Block Printing' on 6 May 2022 under the supervision of Dr. Ritika Mahajan and Dr. Sridev Devji. The field visit was organized as a part of the Business Research Methods course. The purpose was to gain insights into the local art form, its evolution, supply chain, and challenges experienced by the artisans. The student groups worked on business ideas for preserving and promoting the art. Besides, they explored the dying art of Jajam textile printing and brainstormed on reviving the art using a renewed business approach.









- MNIT CAM Society endeavored to stir up innovative minds by conducting an Interactive Offline Workshop followed by a Competition on 'Innovative Product Development on Autodesk Fusion 360<sup>®</sup>' from 27 April to 12 May 2022. The five-day workshop was aimed at familiarizing students with the CAD/CAM software along with a special emphasis on the Surface Modelling and Sheet Metal Designing module: Autodesk Fusion 360<sup>®</sup>, and encouraging them to launch their innovative self by exploring the designing software. The workshop was coordinated by the members and volunteers of the MNIT CAM Society (www.camsociety.in) under the guidance of the faculty coordinator, Dr. Harlal Singh Mali. MNIT CAM Society members, including Fusion360<sup>®</sup> student experts Abhinandan Tailor, Ananya Maheshwari, Chirayu Rankawat, Devansh Garg, Mohit Khemchandani, Shailesh Suthar, Trisha Goyal, and Vikas Kumar contributed in the teaching-learning process of this tool. Approximately 150 students from all branches of B. Tech. First Year and Mechanical Engineering B. Tech. Second Year participated in the workshop. The final submissions for the event were submitted on 12 May 2022 for evaluation and selection of winners.
- An event held on 13 May 2022, sponsored by Autodesk India, winners of the competitions held in 2021 and 2022 were felicitated. The CAM Society senior executives were also accorded farewell at the event and new executives were welcomed. The programme was presided over by Prof. ML Mittal, Head of the Mechanical Engineering Department, MNIT Jaipur.



• A Memorandum of Understanding (MoU) was signed on 06 October 2022 between MNIT Jaipur and Shraman Foundation. The foundation is a private non-profit organization founded by Dr. Vinay Jain and family, intending to provide educational scholarships to talented but financially underprivileged students (with an annual household income of less than Rs. 2.5 lacs) to support them in achieving their career and professional goals. The financial assistance under this initiative is up to Rs. 25,000 per semester per student, with maximum assistance of Rs. 2.0 lacs (up to 8th semester) till the completion of their degree.



- A felicitation ceremony for 'SAE Autonom 2021' was organized by SAE NIS (Society of Automotive Engineers, North India Section) on 22 July 2022, where winners of the competition were provided with trophies and presentation cheques. The final result and winners of the competition were declared on 2 July 2022. Awards were presented to position holders, with total prize money reaching up to Rs. 1,90,000. Four students of the CAM Society, Ananya Maheshwari, Trisha Goyal, Chirayu Rankawat, and Shailesh Suthar, participated in the competition in two teams, with Dr. Harlal Singh Mali as the faculty advisor of one of the teams.
- SAE NIS organized 'SAE Autonom 2021', focusing on autonomous vehicles with consideration of the Indian road and traffic scenario. The competition kicked off on 8 November 2021, focusing on getting solutions in the form of sensor model serving/assisting drivers in India. The competition involved 40+ teams from various colleges across India, with a team size of 5 to 10 members and 2 faculty advisors, and was divided into four rounds. It was supported by leading brands of automobiles, sensors, and ancillaries, including Tata Motors, Maruti Suzuki, MG Motors, Continental, Bosch, Spark Minda, ATS, IPG, Mobility Outlook, ICAT, and Aspire.









# UG AND PG PLACEMENTS



Branch	No. of UG students placed
Chemical Engineering	30
Civil Engineering	10
Computer Science and Engineering	73
Electrical Engineering	40
Electronics and Communication Engineering	55
Mechanical Engineering	15
Metallurgical and Materials Engineering	26



Branch	No. of PG students Placed
Centre for Energy and Environment	5
Civil Engineering	2
Computer Science and Engineering	5
Electrical Engineering	7
Electronics and Communication Engineering	5
Mechanical Engineering	5

# EDITORIAL TEAM



FRONT (Left to Right): Dr. Menka Yadav, Dr. Aakanksha Kataria, Dr. Priyanka Harjule, Dr. Niraja Saraswat, Dr. Geetanjali Chattopadhyay, Dr. Neetu Kumari, Dr. Surajit Ghosh BACK (Left to Right): Pratham Tharwani, Moordhan Songade, Dushyant K Paliwal, Dhairya Singh, Anushka Yadav, Apeksha Pareek, Akanksha Joshi, Ritik Garg, Jatin Thakur

## STUDENT MEMBERS:

Akanksha Joshi (Research Scholar, Department of Management Studies) Ritik Garg (Research Scholar, Department of HSS) Apeksha Pareek (Research Scholar, Department of HSS) Dushyant K Paliwal (B.Tech, Department of ECE) Dhairya Singh (B.Tech, Department of ECE) Moordhan Songade (B.Tech, Department of CSE) Pratham Tharwani (B.Tech, Department of CSE) Anushka Ritesh Yadav (B.Tech, Department of CSE) Jatin Thakur (B.Tech, Department of CSE)

# FACULTY MEMBERS:

Dr. Niraja Saraswat (Assistant Professor, Department of HSS) Dr. Priyanka Harjule (Assistant Professor, Department of Mathematics) Dr. Menka Yadav (Assistant Professor, Department of ECE) Dr. Aakanksha Kataria (Assistant Professor, Department of Management Studies) Dr. Geetanjali Chattopadhyay (Assistant Professor, Department of Mathematics) Dr. Neetu Kumari (Assistant Professor, Department of Chemical Engineering) Dr. Surajit Ghosh (Assistant Professor, Department of Chemical Engineering)

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