NIST Chronicle

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Next Gen Warfare

The Rise of Combat Drones

"You can't win current war with old technology"

General Anil Chauhan
Chief of Defence Staff (Indian Armed Forces)

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Friday, 28 February 2025

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MESSAGE FROM THE PRESIDENT

The NIST Chronicle team's diligence and dedication for publishing this journal with the latest happening at NIST and focusing on key articles relevant to education, technology, time, and society is laudable. It is indeed a great pleasure to know that this particular issue of NIST Chronicle is focused on the featured article: "Next Gen Warfare: The Rise of Combat Drone" is very timely given the geopolitical situation of the current world and the traditional warfare is becoming more and more obsolete with advancement of technology.

With rapid advancement of communication, computing and technologies the typical conventional warfare is becoming obsolete and seems no more effective and relevant. There is a foundational shift in modern military doctrine to achieve strategic objectives using advanced technology. Modern warfare is no longer limited to the battlefield alone. Among other options, it can be fought in many ways like:

Cyber Warfare: Where communication and cyber security technologies are widely used to attack adversaries or opponent country's utility grids, financial system, and networks infrastructure, potentially disrupting critical services including military operations. Cyber warfare is also used to get insight into an opponent's military capability and strategy before, during and after the war.

Information Warfare: The technologies such as social media are widely used for spreading disinformation, propaganda for influencing public belief and views and even manipulation of public opinion to topple the government.

Use of Autonomous Systems: It involves use of autonomous systems along with remote monitoring and control for an efficient, economic and lethal means of warfare. The use of AI-powered weapons such as drones, robots, surveillance and

reconnaissance systems, and machines involved in active combat operations is potentially reducing human casualties and changing the playbook of war.

Drone has been widely and actively used to support many aspects of warfare including supply logistics, surveillance, and even delivering missiles and weapons. Drone is not limited to use in above ground warfare but can be used underwater warfare as well. Drone is fundamentally changing the game of warfare due to its significant economic advantages with effective lethal capabilities compared to traditional fighter jets and submarines. More and more drones will be massively used (swarms) for warfare, thus changing the paradigm of traditional wars.

I congratulate the entire editorial team for their hard work, diligence and dedication for bringing out this wonderful edition of NIST Chronicle.

Dr. Sukant K. Mohapatra

MESSAGE FROM THE VICE CHANCELLOR

It is both a pleasure and a privilege to contribute to this upcoming issue of NIST Chronicle, especially as it focuses on the compelling and consequential theme: "Next-Gen Warfare: The Rise of Combat Drones" Drones represent the intersection of precise weapons and the rise of robotics. As global security paradigms shift rapidly, the evolution of drone warfare from ISR (Intelligence, Surveillance, Reconnaissance) platforms to autonomous targeted strikes, poses profound implications and demands urgent innovations.

In this emerging strategic landscape, India must accelerate indigenous research and deployment to keep pace with technological advances to meet increasing challenges from geopolitical adversaries. Our academic institutions have a vital role in supporting this mission through cutting-edge R & D and deeper partnerships with the defense establishment and industry.

I am pleased to share a focused framework of potential research thrust areas for NIST University and its collaborators, in alignment with the vision of Atmanirbhar Bharat. We can work on AI-driven swarm intelligence for autonomous missions, where biomimetic algorithms inspired by bird flocks and insect swarms can help us achieve decentralized coordination of drones. Alongside, there is a strong need to explore Anti-Drone Jamming using RF spoofing and AI-driven jamming techniques, and develop robust adversary-drone detection. It is also imperative to innovate sustainable high-altitude drones, solar or hydrogen-powered, for ISR roles in partnership with the likes of AADC, NAL, and ISRO. Equally important is the development of affordable stealth coatings using radar absorbent materials, as well as hybrid navigation methods for GPS-denied environments that combine inertial systems with celestial mapping. Drawing inspiration from the BrahMos program, we can study propulsion systems for hypersonic drones while also exploring next-generation Autonomous Underwater Vehicles for maritime surveillance and naval combat applications.

At NIST, we must step forward with courage and creativity to contribute to the nation's technological sovereignty. To our faculty and students, I urge you to engage with these frontiers, explore interdisciplinary solutions, and collaborate with national labs and industries. Together, we can turn today's threats into tomorrow's opportunities.

Congratulations to the editorial team for curating yet another bold and forward-looking edition.

Warm regards,

Prof. Priyadarsan Patra

MESSAGE FROM THE ADVISOR

Dear Readers,
It is with great pride and a sense of purpose that we present to you this quarter's edition of the NIST University Chronicle, which brings into focus a subject of immense relevance to our times the rise and growth of combat drones.

Combat drones, once the domain of futuristic imagination, are now redefining the global defense landscape. These unmanned aerial vehicles (UAVs) have become integral to military strategy, not only for their precision and efficiency but for how they are reshaping the nature of warfare, surveillance, and national security. India, too, stands at a critical juncture, embracing drone technology through indigenous innovation and strategic collaboration.

As we navigate this technological leap, it becomes evident that our youth, particularly students and researchers must play a central role. The future of defense innovation lies not just in laboratories or boardrooms, but in the classrooms, maker spaces, and research hubs of universities like ours.

The safety and security of our nation depend on how effectively we integrate scientific knowledge with patriotic purpose. This edition seeks to inspire a new wave of thinkers, innovators, and solution-builders among our students.

Through curated articles, expert insights, and student Contributions, we explore how drone technology is not merely a tool of warfare but a call to intellectual service for the country.

Let this issue be a spark: one that ignites curiosity, commitment, and courage among our scholars to envision and build a safer future for India. I congratulate the editorial team for steering this conversation with depth and direction.

Jai Hind!

Dr. Sabyasachi Rath

LETTER FROM EDITOR

Next-Gen Warfare: The Rise of Combat Drones

Warfare is undergoing a seismic shift with the advent of combat drones, autonomous or remotely piloted aerial systems that are redefining the battlefield. Once confined to reconnaissance missions, these next generation machines now execute precision strikes, surveillance, and electronic warfare with minimal human involvement. Nations are rapidly investing in drone technologies, driven by their cost-effectiveness, lower risk to personnel, and unmatched agility.

The rise of combat drones signals a transition from traditional warfare to algorithm-driven engagements. AI-powered drones can identify targets, adjust to real time battlefield changes, and even collaborate in swarms. Conflicts like those in Ukraine and the Middle East have showcased the decisive impact of drone warfare, altering military strategies globally. However, this technological leap comes with ethical and legal challenges. Questions about accountability, civilian safety, and autonomous decision-making remain unresolved. As warfare becomes increasingly digitized, international laws must evolve to govern drone deployment responsibly.

Combat drones represent both progress and peril, a powerful tool that, if misused, could escalate conflicts beyond human control. As we embrace this new frontier, the call for global dialogue on the regulation and humane use of drone warfare has never been more urgent. For countries like India, the rise of drone warfare presents both an opportunity and a challenge. With increasing threats along its borders and the need for rapid, cost-effective responses, integrating UAVs into national defense is crucial. Indigenous efforts like the DRDO's Rustom series, along with partnerships with global defense leaders, are helping build a robust drone ecosystem in India. However, this growth must be accompanied by clear regulations, ethical guidelines, and cyber resilience to prevent misuse and ensure accountability.

Here's to a time filled with discovery, discussion, and innovation!

Dr. Basant Kumar Sahu
Associate Professor
(Dept of Electrical & Electronics Engineering)

BOARD OF EDITORS

FEATURE STORY

NEXT GEN WARFARE: THE RISE OF COMBAT DRONE

The story of drones began during the First World War, when the U.S. and Europe experimented with rudimentary pilotless aircraft such as the "Kettering Bug". These early machines were crude, but they set the foundation for remote controlled warfare. By the Second World War, Germany's "V-1 flying bomb" and allied target drones marked a new era where unmanned systems were tested in real combat environments. The Cold War expanded this horizon, with the U.S. deploying "Ryan Firebee reconnaissance drones" over hostile territories. Israel revolutionised drone warfare in the 1970s and 1980s, using (Unmanned Aerial Vehicle) UAVs for intelligence and deception against Syrian forces, proving their efficiency in modern battlefields. By the early 2000s, drones like the Israeli "Heron" and domestically developed systems gained importance in India for surveillance and border management.

Today, drone warfare is defined not only by surveillance and strike capability but also by "counter drone strategy", where innovation and speed determine who dominates the skies. When Turkish made drones Bayraktar TB2 carrying Pakistani ammunition intruded into Indian territory, the threat was not just military but psychological. For the first time, people across India realised how drones could change the face of modern warfare, where once tanks symbolised ground dominance, unmanned systems now dictated the pace of battle. In response, India launched "Operation Sindoor", a coordinated strategy to neutralise the drone menace. The Indian Army relied on a mix of imported and indigenous technologies. Israeli made Heron drones provided long endurance surveillance, while Indian startups contributed tactical unmanned aerial systems for precision strikes and counter drone measures. Startups such as IdeaForge, NewSpace Research & Technologies, and Dhaksha Unmanned Systems worked closely with the defence forces, deploying compact quadcopters and swarming drones capable of rapid response.This collaboration highlighted India's evolving drone ecosystem. Unlike earlier wars, where heavy artillery and armoured vehicles significantly shaped outcomes, "Operation Sindoor" demonstrated how aerial intelligence, real time monitoring, and swarm tactics could alter the balance. It also underscored the growing role of artificial intelligence in decision making, where algorithms could track, predict, and intercept hostile drones in milliseconds. The success of the operation strengthened the confidence of the armed forces in homegrown defence technology and boosted the morale of the nation. It marked the beginning of a new doctrine in Indian defence where speed, agility, and precision outweighed sheer size and firepower. By fostering collaboration between the military, academia, and private startups, India has laid the foundation for a resilient drone warfare ecosystem.

This ecosystem is not limited to defence but extends to civilian applications like disaster relief, border management, and infrastructure monitoring. Thus, "Operation Sindoor" became a symbol of both military preparedness and technological self-reliance, showcasing India's readiness for the drone-dominated future of warfare.

STUDENT SURVEY

NEXT GEN WARFARE: THE RISE OF COMBAT DRONE

In an era where battles are fought with brains as much as with bravery, combat drones have become the face of next generation warfare. India's swift and precise execution of Operation Sindoor, where advanced drones played a critical role in striking enemy targets without risking soldier lives, has sent a clear message: the future of defense is unmanned, intelligent, and Indian. With indigenous drones like Tapas, Rustom-II, and the upcoming stealth UCAV Ghatak, India is taking bold steps toward Atmanirbhar Bharat in defense.

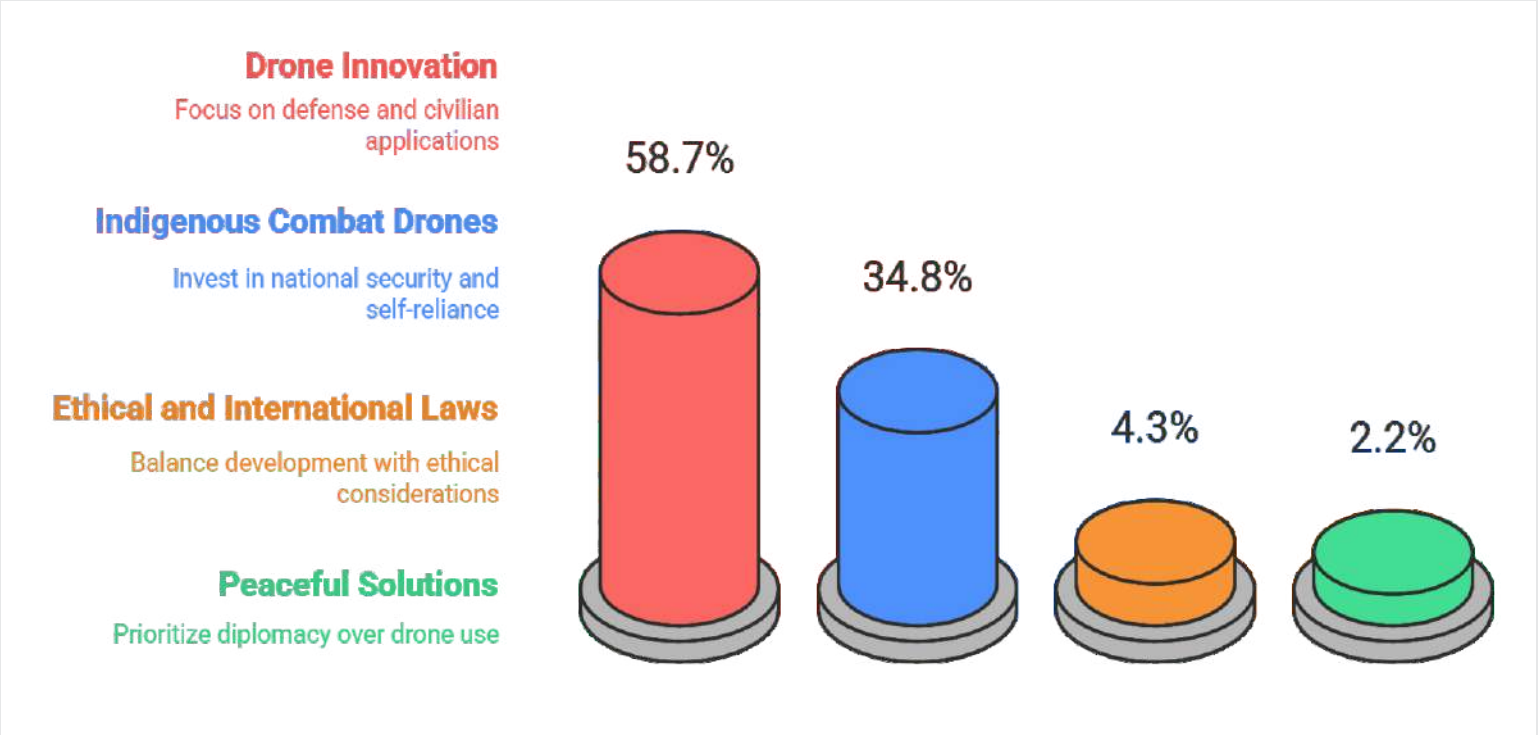
But this is not just about technology it's about strategy, innovation, and vision. Drones are reshaping doctrines of surveillance, precision strikes, and counter warfare, demanding new policies and ethical frameworks. India must now prioritize AI driven autonomy, swarm intelligence, and robust counter-drone systems to secure its skies. Strengthening global collaborations, investing in startups, and encouraging student research can position India as a global leader in drone warfare technology.The battlefield of tomorrow will not be won by numbers alone but by the speed of innovation and mastery of emerging technologies. Every drone built, every algorithm designed, and every policy shaped today will determine India's strength in safeguarding its sovereignty tomorrow.

Beyond defense, drone technology also holds the promise of civil applications in disaster management, agriculture, and border surveillance, further underlining its strategic importance.

For the youth, this is more than military advancement; it is a call to innovate, defend, and lead. As students, engineers, and future leaders, your voice matters in shaping how India adapts to and leads in this new era of dronepowered security.

Share your thoughts on how India can lead the drone revolution in modern warfare. Join the national conversation through the NIST CHRONICLE, August 2025.

What should be India's priority in the rise of combat drones after missions like Operation Sindoor?



FEATURE STORY

Dwarikanath Choudhury

Founder and CEO of Solidron Private Limited

Dwarikanath Choudhury is a truly inspiring young innovator who, at just 21 years of age, is making remarkable strides in defence and agri tech innovation. As the Founder of Solidron Private Limited, he leads cutting-edge research and product development that bridges advanced drone technology with agriculture and national security.A winner of more than five national hackathons and two national ideathons, Dwarikanath has consistently shown how technology can deliver scalable, real world solutions. His pioneering work spans drone-based defence applications, precision agriculture systems, and modular drone technologies, all contributing to India's vision of Atmanirbhar Bharat. What sets him apart is not just his technical brilliance, but also his entrepreneurial mindset and commitment to societal impact.

Beyond innovation, he actively engages with student communities, encouraging the next generation of technologists to think boldly and build responsibly. Dwarikanath's journey reflects a rare combination of talent, drive, and dedication, marking him as a youth leader shaping the future of Indian technology and nation-building.

In an era where technology is rapidly reshaping the landscape of warfare, the voices of visionaries and innovators carry unprecedented significance. In this edition, NIST Chronicle is honored to feature Mr. Dwarikanath Choudhury, Founder and CEO of Solidron Private Limited, under the theme "Next Gen Warfare: The Rise of Combat Drones."

As a trailblazer in defence technology, Mr. Choudhury provides profound insights into how combat drones are not only transforming modern military strategies but also redefining the balance of power on a global scale. His pioneering research, ground breaking innovations, and forward looking leadership shed light on the future of unmanned systems in combat readiness and national security. This dialogue goes beyond technology it underscores the intersection of innovation, policy, and vision that will shape the next generation of warfare. His perspective highlights the need for indigenous innovation, AI driven autonomy, and strong industry academia collaboration to ensure India leads in drone powered defence systems.

We are privileged to present his insights, which promise to inspire young minds, spark meaningful dialogue, and provide a roadmap for how innovation can secure the nation's future.

NEXT GEN WARFARE: THE RISE OF COMBAT DRONE

NC: How did the journey of Solidron begin with a vision toward high impact defence integration?

DC: The roots of Solidron's journey are deeply personal for me. My father, Dr. Bibhuti Bhusan Choudhury, is a PhD holder in industrial robotics and a respected figure in the field. Growing up in a household surrounded by robotic arms, microcontrollers, research papers, and engineering discussions, I didn't just learn technology I lived it.

My early exposure to robotics didn't feel like a subject; it felt like a natural language. That environment shaped my understanding of what machines can achieve when aligned with human purpose. As I matured both technically and professionally, I kept asking myself one question: "Where can robotics make the highest impact in the coming decade?" The answer was clear drone technology, particularly in defence and strategic sectors. In today's evolving geopolitical climate, drones aren't just machines; they are force multipliers.

From border surveillance and target acquisition to rapid response payload delivery and autonomous operations, drones represent the sharp edge of modern warfare. And the world is only scratching the surface of their potential. That's why I founded Solidron, not just to build drones, but to make the future of India's aerial supremacy.

NC: India's drone ecosystem is still evolving. How is Solidron addressing the current technological and operational gaps in the Indian unmanned aerial vehicle (UAV) market, especially in combat and surveillance domains?

DC: At Solidron, we are laser focused on bridging the critical gaps that exist in India's current UAV landscape, particularly in endurance, autonomy, adaptability, and secure networking. One of the major limitations we observed was the lack of long range, high resilience tactical drones with indigenous capabilities. To address this, we are developing a drone platform with a tested operational range of 62 km, optimized for both ISR (Intelligence, Surveillance, Reconnaissance) and tactical payload delivery.

These drones are engineered with interchangeable modular bays, allowing quick re configuration for combat, logistics, surveillance, or EW (Electronic Warfare) support. We're also pioneering drone swarming algorithms using onboard AI and edge computing, enabling fleets of drones to operate in coordinated missions with shared situational awareness. Our drones communicate over a self healing mesh network, allowing real time data synchronization and autonomous decision making even in GPS denied environments.

Additionally, we are working on integrating secure, encrypted mesh communications with fallback to long range and ultra high frequency for contested environments. What sets us apart is our commitment to building a fully indigenous tech stack from the carbon fibre frames and propulsion systems to our custom built avionics, real time kinematics GPS modules, and ground control software.

NC: Building combat ready drones in India must come with its share of obstacles. What have been the biggest technological or regulatory challenges for Solidron, and how have you tackled them?

DC: One of the biggest hurdles is navigating complex regulatory frameworks. While the government is working towards streamlining drone policies, obtaining flight permissions, security clearances, and certifications for defence grade applications is still time consuming and layered with bureaucracy. On the technology front, a major bottleneck is the shortage of indigenous electronic components. Many essential parts like AI chips, advanced GPS modules, and secure communication systems still need to be imported, which brings issues of cost, availability, and compliance with international restrictions. There's a clear need for India made tactical grade chips and flight controllers. Another gap we've faced is the lack of cost effective, dedicated testing zones. Access to large, secured airspaces for live range and swarm testing is very limited for startups. We've had to establish our own basic testing environments, which increases development time and cost.

NEXT GEN WARFARE: THE RISE OF COMBAT DRONE

NC: Cybersecurity and electronic warfare are major concerns in modern defense technology. How does Solidron ensure its drones are resilient to cyber threats, GPS jamming, and electronic countermeasures?

DC: At Solidron, resilience against cyber threats and electronic warfare is not an afterthought. It is built into the architecture from day one. We've moved beyond conventional communication models. Our drones operate on ciphered radio signals with multi layer encryption, making interception and spoofing extremely difficult.

To further enhance security, we implement automated channel hopping every three seconds across dynamic frequency bands, significantly reducing the risk of jamming or signal tracing. This gives our drones a tactical advantage in highrisk or contested airspaces.

Additionally, we are developing robust fallback communication protocols, including low range and ultra high frequency redundancy, to ensure uninterrupted command and telemetry even in partially jammed or contested environments. Onboard systems feature advanced fail safe logic, enabling drones to autonomously return to base or switch to pre loaded inertial navigation in the event of GPS spoofing, signal blackout, or other disruptions. To further enhance security, we are integrating custom firmware level hardening, eliminating reliance on unsecured, off the shelf software stacks that may contain backdoors.

All communication between the drone and the Ground Control Station (GCS) is routed through an authenticated handshake layer, ensuring that only verified and authorized commands are executed. Looking ahead, we are exploring AI driven anomaly detection, capable of identifying spoofing, injection attempts, or unusual behavior in real time. Our overarching goal is to make Solidron drones not only high performing but also secure, intelligent, and resilient, fully capable of operating under the harshest electronic warfare conditions. With these innovations, we aim to set a new benchmark in the convergence of performance, autonomy, and cybersecurity for next generation combat drones.

NC: With the push for 'Atmanirbhar Bharat', where does Solidron position itself in the global UAV race? How do you see Indian startups, including yours, competing with established international players?

DC: Solidron is fully aligned with the vision of Atmanirbhar Bharat, and we see ourselves as a next-generation defence tech company committed to building a 100% indigenous UAV ecosystem, both in design and production. We're not just assembling; we are building from the ground up. We've also begun designing our own custom PCBs, communication modules, and ground control software, replacing imported components with homegrown alternatives. Even our onboard AI inference systems for object detection and autonomous navigation are developed in house. While global players have scale and legacy on their side, Indian startups like Solidron bring agility, cost efficiency, and mission driven innovation. The ecosystem is maturing fast thanks to incubators, DRDO partnerships, and growing investor confidence. We are not just catching up to global standards; we are creating an Indian standard for drone warfare technology that's smart, secure, and self reliant.

NC: As a leading startup in next gen drone warfare, what is Solidron's long term vision for the future of UAVs in India both in defence and dual use civil applications?

DC: Our long term vision is twofold strategic dominance in defence and widespread drone adoption in civilian sectors. On the defence front, Solidron aims to be among the top five Atmanirbhar drone companies in India by 2028. Beyond the battlefield, our mission is to "normalize drones" eliminating fear, confusion, and complexity. Whether for agriculture, infrastructure inspection, logistics, or public safety, drones should become as commonplace as smart phones. We aim to achieve this through training, user friendly platforms, and trust driven adoption, particularly in rural and semi urban India.

NIST UNIVERSITY'S FIRST CONVOCATION

Convocation

NIST University hosted its first Convocation Ceremony at the Stephen Hawking Cineplex in the Atrium Building, marking a historic milestone. A total of 187 graduates received their degrees, with 10 awarded gold medals and 19 receiving silver medals. The ceremony was graced by Shri Brijendra Pratap Singh, Chairman cum MD of NALCO, as Chief Guest, and Padma Shri awardee Dr. Aruna Mohanty, renowned Odissi dancer, as Guest of Honour. On this occasion, eminent space scientist Dr. Harinarayana Kota was conferred with an Honorary Doctorate in Science, while celebrated Odia singer Smt. Namita Agrawal received an Honorary Doctorate in Literature.Founder and President Dr. Sukant K. Mohapatra congratulated the graduates, highlighting their success in national and international competitions.

He also announced an MoU with Celona to establish a Center of Excellence on campus for students' future development. Vice Chancellor Prof. Priyadarsan Patra presented the annual report, praised graduates for their achievements, and described the convocation as a landmark in the university's journey. In her address, Dr. Aruna Mohanty encouraged students to embrace both success and failure as part of learning. Dr. Kota Harinarayana emphasized lifelong learning, problem solving, and teamwork as keys to leadership. Smt. Namita Agrawal expressed gratitude for the honor, dedicating her success to Lord Jagannath and the people of Odisha. Chief Guest Shri Singh congratulated the Class of 2025, urging them to upgrade skills, uphold ethics, and remain rooted in their values while contributing to "Viksit Bharat." The presence of distinguished personalities and proud families made the event a truly memorable celebration.

The ceremony concluded with a vote of thanks by Dr. Bishnukar Nayak, Registrar (I/C), followed by a cultural showcase reflecting the vibrant spirit of NIST University.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SANKALP 2K25 A CELEBRATION OF INNOVATION, TALENT, AND CULTURE

MESSAGE FROM ISTE FACULTY ADVISOR

SANKALP 2025, the grand techno cultural fest of NIST University, was truly a festival of talent, innovation, and celebration. It brought the entire NIST fraternity together on one vibrant platform, creating an atmosphere filled with energy, creativity, and joy. From intense technical battles in Robo War, Code Crusade 3.0, and Mini Ideathon, to fun filled challenges like Human Ludo, Snake & Ladder, and Astro Hunt, every event showcased the brilliance and passion of our students. Equally captivating were the cultural extravaganzas NIST Idol, Arabian Nights, Confusion Funfusion, fashion shows, and mesmerizing dance and drama performances that added color, rhythm, and vibrancy to the campus. The highlight of the festival was undoubtedly the star night A Fusion of Tech, Fun & Entertainment. Bollywood sensation Yasser Desai enchanted the audience with his soulful melodies, while DJ Waseem elevated the celebration with electrifying beats, making the entire campus groove into the night. It was a magical experience that perfectly blended technology, talent, and entertainment.

SANKALP 2025 was more than an event it was an unforgettable journey of togetherness, creativity, and pride for every NISTian. The fest not only celebrated innovation and culture but also created lasting memories that will be cherished for years to come.I am grateful to the management for entrusting me with this responsibility and deeply thankful to the student volunteers, faculty members, and staff whose dedication and teamwork transformed this vision into a grand success.

Prof. Swadhin Mishra
ISTE Faculty Advisor, SANKALP 2025

SANKALP 2K25 A CELEBRATION OF INNOVATION, TALENT, AND CULTURE

SANKALP 2025, the grand techno cultural fest of NIST University, was nothing short of spectacular. The event brought together innovation, creativity, and cultural vibrance under one dynamic platform, serving as a melting pot of ideas, competitions, and performances that reflected the spirit and diversity of the NIST community.

The inaugural ceremony, organized by the ISTE Student Chapter, was graced by Chief Guest Shri Arun Rath, Head of Brownfield Projects, Odisha, AMNS, and Guest of Honour Shri Bibhu Mishra, Advisor, Hindalco Industries Limited, Aditya Birla Group. Also present were Founder and President Dr. Sukant K. Mohapatra, Vice Chancellor Dr. Priyadarsan Patra, Prof. Swadhin Mishra, Faculty Advisor; Sankalp Student President Mr. Arja Avinash, Secretary Mr. Manish Kumar Bhatta, and Treasurer Ms. Deeshanshi Sahu.With thrilling performances, groundbreaking competitions, and unforgettable memories, SANKALP 2K25 redefined what it means to celebrate tech , culture, and talent at NIST University.

The celebrations began with the National Service Scheme (NSS), which set the pace through activities like Unity Run, Cup Tower Relay, and Steady Hands Race, instilling teamwork and responsibility. The NIST Counselling Service added a light yet meaningful touch with Marshmallow Stack and Trouble Trivia. The excitement stretched beyond the Earth as the NIST Astronomy Club took students on a cosmic adventure with Astro Hunt and Stellar Wordplay. Meanwhile, the Robotics Club electrified the arena with adrenaline pumping events such as Blindfolded Roborace and the much awaited Robo War. Creativity and fun took center stage with Club Innova's Sherlock Homies and Bliss Bonanza. The Artsand Dramatics Club kept the cultural vibrancy alive with Confusion Funfusion 3.0, Class of Wills, and Sansiddhi, while Club Eureka engaged students with Squid Game 2 and Gutar Gu. For tech savvy minds, Club Excel organized Code Crusade 3.0 and CTRL+Win Showdown, while the Data Science Club showcased futuristic problem solving through a Mini Ideathon, CODM Gaming Tournament, and Reverse Coding. The Dance Club kept the audience grooving with Hook and Tip Tap Toe. Engineering, business, and strategy found unique expression across clubs. The Civeng's Club reinvented classics with Human Ludo, Snake & Ladder, and Setu Bandhan.

The Management Club displayed entrepreneurial flair with Biz Tales, Stockopoly, and Startup Saga. The CAT Club tested intellect and strategy with Beat the Bidder and Grand Master. Digital creativity shone at Club Multimedia with Techno Mind and Valorant, while the Electronics Hobby Club encouraged innovation through Sampratya Prastuti, Poster Presentation, and Circuit A Thon. The Cloud Computing Club fueled digital exploration with Idea Presentation, Battle Royal Tournament, and Cloud Arena.Sustainability and innovation took focus with the Renewable Energy Club's Navottan Prastuti 3.0, Yukti Margam, and Navchetna Jnanam.

Foto Folks beautifully captured moments with The Balanced Duo, Clue Chasers, and Photo Pocket 2.0. Adding to the richness, the NIST Musical Society enthralled with NIST Idol and Open Mic, while the Fashion & Cultural Club dazzled with Arabian Nights and Indian Heritage. But SANKALP 2K25 was not just about competitions it was an unforgettable experience. From intense tech battles in robotics, coding, hackathons, and quizzes to magical cultural nights featuring Bollywood sensation Yasser Desai and electrifying DJ Waseem, the festival's energy was unmatched.The presence of industry leaders added further prestige.

OFFICE BEARERS OF NIST ISTE SANKALP 2K25

Arja Avinash
PRESIDENT

Manish Kumar Bhatta
SECRETARY

Deeshanshi Sahu
TREASURER

NIST FOUNDATION DAY

NIST UNIVERSITY CELEBRATES 28 YEARS OF EXCELLENCE AND ITS 1ST UNIVERSITY FOUNDATION DAY

On January 20th and 21st, 2025, NIST University proudly celebrated a historic milestone its 28th NIST Foundation Day and the 1st University Foundation Day. The two day celebration was a blend of reflection, recognition, and cultural vibrance, showcasing the institution's journey of nearly three decades as a center of academic excellence, innovation, and regional transformation.

INAUGURAL CEREMONY: WISDOM FROM THE NATION'S LEADERS

The celebrations began with a grand inaugural ceremony graced by eminent dignitaries. Prof. Sukumar Mishra, Director of IIT Dhanbad, joined as the Chief Guest, while Brigadier Jagdeep Chauhan, Head of Army Air Defence College, and Prof. Ashok Ganguli, Director of IISER Berhampur, attended as Guests of Honour. Shri Sashi S. Mohanty, CEO of Essar Steel, delivered an inspiring keynote address as the Chief Speaker. The program was formally inaugurated by Dr. Sukant K. Mohapatra, Founder & President of NIST, who warmly welcomed the distinguished guests and attendees. Prof. Priyadarsan Patra, Vice Chancellor, highlighted the institution's achievements over the years, including a significant grant of over half a crore from AICTE for the establishment of the IDEA Lab. Each dignitary shared thought provoking insights with the students. Brigadier Chauhan reflected on his own college days, praising NIST's role in grassroots development and encouraging students to rise to their full potential. Prof. Ganguli stressed the importance of communication and writing skills alongside technical expertise and reminded students to embrace challenges as opportunities for growth, citing Ratan Tata as an inspiration. Shri Mohanty emphasized academia industry collaboration, hands on learning, and skill development in the age of intelligent systems, while lauding NIST's legacy since its inception in 1996.The Chief Guest, Prof. Sukumar Mishra, captivated the audience with his address on research, artificial intelligence, and startups. Drawing parallels from Hindu mythology, he urged students to derive lessons from stories, nurture creativity, and pursue innovation with courage. Echoing the Hon'ble Prime Minister's call for "Jai Anusandhan," he underlined the importance of fostering a culture of research and technology readiness. The inaugural session concluded with a heartfelt vote of thanks by Dr. Bishnukar Nayak, Registrar In Charge, who expressed gratitude to the dignitaries, faculty, students, and staff for making the event memorable.

FOUNDATION DAY EVENING: TRADITION, TALENT, AND TOGETHERNESS

The Foundation Day cultural evening on January 20th was a true celebration of NIST's spirit. The event began with an Award Ceremony recognizing the achievements of faculty, staff, and students. This was followed by an enchanting lineup of performances. The NIST Dance Club and talented students showcased breathtaking classical and folk dances, filling the stage with rhythm, color, and energy. Adding glamour to the evening, Team Urbane presented a mesmerizing ramp walk themed around goddesses and traditional attire, blending cultural pride with artistic creativity. The evening was a spectacular expression of unity, tradition, and youthful exuberance. The 28th Foundation Day and 1st University Foundation Day were not just celebrations of the past but also a reaffirmation of NIST's vision for the future. With its legacy of academic excellence, strong industry connections, and commitment to fostering innovation, NIST University continues to stand as a beacon of knowledge, shaping the leaders, researchers, and innovators of tomorrow.

KURUKHETRA 2025

NIST UNIVERSITY'S GRAND INTER COLLEGE SPORTS FEST

NIST University proudly hosted the 15th edition of Southern Odisha's premier inter college sports fest Kurukshetra 2025. From 10th to 15th February 2025, the university campus transformed into a vibrant arena of passion, grit, and glory, as athletes from leading institutions across Odisha came together to compete for championship honors. The Grand Indoor Stadium of NIST University served as the pulsating heart of the fest, echoing with cheers, energy, and adrenaline throughout the six day extravaganza. Competitions spanned a wide range of sports including Basketball, Badminton, Cricket, Table Tennis, Kabaddi, and several other thrilling events, showcasing both individual brilliance and team strategy. What set Kurukshetra 2025 apart was not just the fierce competition but the spirit of sportsmanship, camaraderie, and resilience that every athlete brought to the field. Each match was a testament to teamwork, perseverance, and determination, creating moments of inspiration for participants and spectators alike. The fest also featured exciting cultural and recreational activities that engaged students beyond the playing field, fostering a sense of community and celebration throughout the campus. Faculty, students, and visitors alike witnessed nail biting finishes, extraordinary performances, and the unifying power of sports in bringing people together. This year's edition lived up to its illustrious legacy, blending the thrill of victory with the invaluable lessons of discipline, resilience, and fair play. As the curtains fell on Kurukshetra 2025, the message was clear sports are not just about winning, but about celebrating friendship, dedication, and the indomitable spirit of youth. Relive the excitement, cherish the memories, and carry forward the legacy of Kurukshetra where talent meets passion, and every game tells a story!

STATE BASKETBALL CHAMPIONSHIP

THE 61ST STATE BASKETBALL CHAMPIONSHIP AT NIST UNIVERSITY

The 61st State Basketball Championship (Junior Boys & Girls), organized by the Odisha Basketball Association, Cuttack, was ceremoniously inaugurated at the Indoor Stadium of NIST University. The grand opening witnessed an inspiring presence of Dr. Sarvana Vivek M., IPS, SP Berhampur, who graced the occasion as the Chief Guest.The event was further dignified by the presence of esteemed personalities including Dr. P. Rajesh Kumar, Dean of NIST University, Shri Gyanaranjan Parida, President of the Odisha Basketball Association, Shri Ashok Kumar Sahu, General Secretary, Shri Sarat Mahapatra, Vice President and Chairman of the Technical Committee, Shri Niroj Bandhu Yadav, Vice President, Shri Pradeep Kumar Behera, Treasurer, along with Council Members Shri Santosh Mahanti and Shri Satish Sahu.This year's championship has drawn remarkable participation, with 29 boys' teams and 14 girls' teams representing districts and clubs across Odisha. The opening day itself witnessed 17 matches, setting the tone for a spirited and competitive tournament. In total, more than 640 participants, including players, officials, and volunteers, are contributing to the vibrant atmosphere of the championship. Commencing on 29th June and continuing until 2nd July, the championship promises to be a celebration of sporting excellence and youthful energy. The seamless organization of the event stands as a testament to the dedicated efforts of NIST University's staff and volunteers, whose commitment has ensured the smooth execution of this prestigious tournament.The 61st State Basketball Championship not only highlights the athletic talent of Odisha's youth but also reinforces NIST University's role as a hub for nurturing sportsmanship, teamwork, and holistic development.

WELCOME TO NEW FACES OF THE NIST FAMILY

Mr. Ajay Kumar Kedia

Director IT

The illustrious Ajay Kumar Kedia steps into the role of Director of IT, bringing an awe-inspiring 29 years of exemplary leadership in IT strategy, infrastructure management, and ERP development. A visionary Commerce Graduate who boldly transitioned to IT out of sheer passion, he holds an Executive Postgraduate Certificate in Data Science and AI from the prestigious IIT Roorkee (2024). His masterful expertise spans project portfolio management, team leadership, and strategic IT planning, bolstered by an impressive array of certifications including PMP, ITIL, Oracle Database, Power BI, and Data Analyst. His unwavering commitment to harmonizing technology with organizational aspirations fortifies our IT framework with brilliance and innovation.

Dr. Aashhis Mohanty

Dean (Admission)

Dr. Aashhis Mohanty currently serves as Dean–Admission at NIST, bringing with him an extensive career spanning 35 years across industry and academia. He has recently defended his Ph.D. on "Student Perception towards Higher Education – A Study of Select Private Northeastern Universities of India" at the University of Science & Technology, Meghalaya. An alumnus of L.N. Mithila University, he completed his MBA in Marketing (1990) . With rich expertise in strategic business planning, alliances, financial growth (EBIDA-focused), sales, marketing, and digital outreach. His leadership is further distinguished by strong people and resource management skills, coupled with a flair for presentations, counselling, and value-driven communication.As Dean–Admission, Dr. Mohanty's vision and dedication continue to strengthen institutional growth, foster meaningful student engagement, and shape the future of higher education with innovation and purpose.

Dr. Jagannath Panda

Assistant Professor (Chemistry)

Dr. Jagannath Pandaholds a Ph.D. from KIIT Deemed University (2019) with a research focus on Metal-Organic Frameworks (MOFs) for adsorption, catalysis, and drug delivery applications. A postgraduate in Chemistry from Berhampur University (2014), Dr. Panda has held several prestigious positions, including Research Professor at Pukyong National University, South Korea, and Postdoctoral Fellow at IISER Berhampur.His research interests . include MOF/COF-based energy systems, membrane science, and electrocatalysis. A recipient of multiple accolades such as the Best Oral Presentation Award (ESMAC-2021) and editorial board member of the American Journal of Physical Chemistry, Dr. Panda continues to contribute significantly to materials science and environmental.

Dr. Madhusudan Mishra

Assistant Professor (Electronics and Comm. Engg.)

Dr. Madhusudan Mishra earned his Ph.D. from the Institute of Radio Physics and Electronics, University of Calcutta, on "Design and Analysis of BTO-clad Silicon Waveguide Components for Compact Photonic Integrated Circuits" (Sept. 2023). He completed his Master's in Electronic Science from Berhampur University in 2013, receiving the University Gold Medal. He has worked as Assistant Professor at Berhampur University, Research Associate under DAE, Project Associate at IIT Madras, and Mobility Researcher at Politecnico di Milano, Italy.Focusing on optical sensors, Dr. Mishra has authored 17 journal papers, 16 conference papers, 5 book chapters, and holds 1 patent.

Honors include the INSPIRE Fellowship, EM LEADERS Scholarship, Outstanding Paper Award (CODEC-2019), a Government of India innovation award, and a university award for high-impact publications.

WELCOME TO NEW FACES OF THE NIST FAMILY

Ms. Swetaleena Panda

Assistant Professor
(Dept of Management Studies)

Swetaleena Panda joins as Assistant Professor in the Department of Management Studies, with an M.Tech in Power Electronics from RVCE, Bangalore (2015). With 10 years of industry expertise and 2 years of mentoring experience, she brings valuable practical insights to academics. Her interests span Business Analysis, Analytics, Product Management, and Sustainable Development, and she is also a Certified Counsellor and IKS Trainer.

Dr. Sanjit Kumar Acharya

Assistant Professor
(Computer Science and Engineering)

Dr. Sanjit Kumar Acharya has joined the Department of Computer Science and Engineering at NIST as an Assistant Professor, bringing over 20 years of academic and industry experience. He earned his Ph.D. in 2019 from CMJ University, Meghalaya, and an M.Tech in Computer Science from Berhampur University (2008). His research interests include Cloud Computing, Edge Computing, and Blockchain Technologies. With his expertise, Dr. Acharya enhances both teaching and research in emerging areas of computer science.

Dr. Biman Kar

Lab In charge
(Dept of Physics)

Biman Kar has joined as Lab In-Charge in the Physics Department after successfully defending his Ph.D. on May 23, 2025, at NIT Rourkela, with a thesis on "Investigation of Magnetoelectric Properties in Lead-free Ba0.95Ca0.05Ti0.95Sn0.05O3-Ni0.7Zn0.3Fe2O4 Composites." He holds an M.Sc. in Physics from Vidyasagar University (2014) and brings three years of teaching experience at NIT Rourkela. His research interests include Ferroelectricity, Magnetism, and Multiferroic systems, and he is also a CSIR-UGC NET qualifier (Dec 2017).

Ms. Sumita Acharya

Laboratory Assistant
(Computer Science and Engineering)

Ms. Sumita Acharya completed her MCA in 2024 from Khallikote Unitary University, working on projects titled "Car Rental Portal" and "Online Banquet Booking System." A fresher in academics, her interests include artificial intelligence, machine learning, databases, and Python programming, along with expertise in web development and an O-Level certification.

Ms. Mahasweta Majhi

Admission Assistant
(Admission)

A Zoology graduate from Andhra University (2024), she brings two years of professional experience to her role. Passionate about excelling in professional jobs, she is also known for her active participation in sports and debates. Her dedication and versatile talents make her a valuable member of the university community.

Ms. Priyanka Patro

Laboratory Assistant
(Computer Science and Engineering)

Ms. Priyanka Patro completed her MCA in 2025 from NIST University with a project on "Marine Stewards: The Role of Underwater Robotics in Protecting Ocean Ecosystems." Her interests include Python programming, machine learning, databases, and full stack development, reflecting her passion for software and applied technologies. She is eager to apply her skills to innovative projects and guide students in emerging technology fields.

INNOVATION & RESEARCH FRONTIER

JOURNAL PUBLICATION

- **Dr. Abinash Dutta,** Assistant Professor, Department of Biotechnology, published a research article entitled "Immunopathology of psoriasis: A focus on Th17/Treg dynamics & their potential impact on disease recurrence" in the Journal of Solid Waste Technology and Management, Dec. 2024. Authors: R. G. Kerry, A. Ray, P. C. Panda, V. Nayak, S. Patra, R. Pandey, B. S. Mohanty, A. Dutta, G. K. Maurya, J. R. Rout, S. Nayak.

- **Dr. Sasmita Padhy and Dr. Preeti Ranjan Sahu,** Faculty, Department of Electrical and Electronics Engineering, published "MSOA-optimized FOFPID controller for frequency stability of distributed power system under the influence of cyber-attacks" in the Journal of Electric Power Systems Research, Jan. 2025, pp. 111736. Researchers: S. Padhy, P. R. Sahu, R. K. Khadanga, Y. Arya, S. Panda.

- **Dr. Preeti Ranjan Sahu,** Associate Professor, Department of Electrical and Electronics Engineering, published "Application of Enhanced Self-Adaptive Virtual Inertia Control for Efficient Frequency Control of Renewable Energy-Based Microgrid System Integrated with Electric Vehicles" in IEEE Access, Mar. 2025, pp. 43520–43531. Researchers: Sonalika Mishra, Preeti Ranjan Sahu, Ramesh Chandra Prusty, Sidhartha Panda, Taha Selim Ustun, Ahmet Onen.

- **Dr. Barada Prasad Sethy,** Assistant Professor, Department of civil Engineering, published "Artificial intelligence models for predicting unconfined compressive strength of mixed soil types: focusing on clay and sand" in Asian Journal of Civil Engineering, Mar. 2025, pp. 1955–1972. Authors: Barada Prasad Sethy, Umashankar Prajapati, Neelashetty K, Debendra Maharana, Nageswara Rao Lakkimsetty, Sudhanshu Maurya.

- **Dr. Biswajit Panda,** Assistant Professor, Departments of Physics, published "Simultaneous measurement of NO2 and NH3 using a quantum cascade laser coupled wavelength modulation spectrometer in the mid-IR region" in Laser Physics, May 2025, p. 055701. Authors: Indrayani Patra, Soumyadipta Chakraborty, Biswajit Panda, Manik Pradhan.

- **Prof. Padminee Samal,** Assistant Professor, Department of Civil Engineering, published "Flood analysis using HEC-RAS 1D model for the delta of Brahmani river, Odisha, India" in Natural Hazards, Jan. 2025, pp. 7941–7966. Authors: Padminee Samal, Prakash Chandra Swain, Sandeep Samantaray.

- **Prof. Md. Rizuddin, Prof. Santosh Kumar Panda, and Prof. Achyutananda Parida,** Department of Mechanical Engineering, published "Heat transfer analysis of a mild-steel based arc welding" in Materials & Metallurgical Engineering, Mar. 11, 2025, DOI: 10.37591/JOMME.v15i02.0. Authors: Md. Rizuddin, Santosh Kumar Panda, Achyutananda Parida, G. Vasudev.

- **Dr. Sasanka Sekhar Bishoyi,** Associate Professor, Department of Mathematics, published "MOPSO-driven optimization for sustainable retrofitting: balancing time, cost, and environmental impacts" in Asian Journal of Civil Engineering, Mar. 18, 2025, DOI: 10.1007/s42107-025-01305-y. Authors: Rekha Singh, Viswanadham Sangeeta, T. C. Manjunath, Prachi Singh, Sasanka Sekhar Bishoyi, Aditya Kumar Pati.

- **Dr. Trinath Sahu,** Professor, Department of Physics, published "Effect of asymmetric doping on electron transport mobility in In0.53Ga0.47As/In0.52Al0.48As wide quantum well FET structure" in Physica B: Condensed Matter, Apr. 2025, DOI: 10.1016/j.physb.2025.417207. Authors: Sangita R. Panda, Trinath Sahu.

- **Dr. Yerra Shankar Rao,** Assistant Professor, Department of Mathematics, published "Mathematical Modeling for Virus Immunization and Vaccination" in Engineered Science, Mar. 7, 2025, pp. 1–16, DOI: 10.30919/es1440. Authors: Ashish Kumar, Dinesh Kumar Saini, Yerra Shankar Rao.

- **Dr. Susanta Kumar Indrajitsingha,** Assistant Professor, Department of Mathematics has published research article "A Green Inventory Model for a Green house Firm System with Controllable Deterioration under Stock Dependent Demand" in the journal of "Process Integration and Optimisation for Sustainability". The other authors are Dr. U K Mishra and W A Jauhari.

INNOVATION & RESEARCH FRONTIER

- **Prof. Sumanta Kumar Patnaik,** Assistant Professor, Department of Physics, published "Glucose Sensing Using Pristine and Co Doped Hematite Fiber Optic Sensors: Experimental and DFT Analysis" in LANGMUIR (ACS Publications), Mar. 26, 2025, pp. 8866–8875, DOI: 10.1021/acs.langmuir.5c00206. Authors: Namrata Pattanayak, Preeti Das, Mihir Ranjan Sahoo, Padmalochan Panda, Monalisa Pradhan, Kalpataru Pradhan, Reshma Nayak, Sumanta Kumar Patnaik, Sukanta Kumar Tripathy.

- **Prof. Padminee Samal,** Department of Civil Engineering, published "Assessment of runoff using GIS based SCS CN approach on Badanadi sub watershed of Rushikulya basin" in Proceedings of the Indian National Science Academy, Jul. 30, 2025, DOI: 10.1007/s43538-025-00505-z. Authors: Padminee Samal, Prakash Chandra Swain.

- **Prof. Durgamadhab Padhy, Dr. Amarnath Padhi, Dr. Akankshya Patnaik, Dr. Bhanu Prasad Behera,** Department of Management Studies, published "Driving Sustainable Mobility: Cost, Convenience, and Environment Consciousness in Electric Two Wheeler Adoption" in Dalian University of Technology, Jul. 2025. Authors: Durgamadhab Padhy, Amarnath Padhi, Akankshya Patnaik, Bhanu Prasad Behera.

- **Dr. Ratikanta Nayak,** Assistant Professor, Department of Physics, published "Property enhancement of alternating glass/carbon fibre laminated FRP composite by glow discharge post plasma irradiation" in Composites Part B: Engineering, 2025, p. 112299. Authors: Dibyajyoti D. Pradhan, A. P. Chakraverty, T. Badapanda, R. Nayak, U. K. Mohanty, M. R. Das.

- **Dr. Ratikanta Nayak,** Assistant Professor, Department of Physics, published "Recent advances in optimized polybenzimidazole based membranes for vanadium redox flow battery applications" in Journal of Energy Storage, 2025, p. 117372. Authors: Subhrakali Swain, Kamakshi Brahma.

- **Dr. Jagannath Panda,** Assistant Professor, Department of Chemistry, published "Advances in Triboelectric Nanogenerators for Sustainable Wastewater Treatment" in Advanced Sustainable Systems, 2025. Authors: Raj Mohanty, Kushal Ruthvik Kaja, Swayam Aryam Behera, Swati Panda, Sugato Hajra, Hoe Joon Kim, Nguyen Phi Long, Venkateswaran Vivekananthan, P. Ganga Raju Achary.

- **Dr. Puspanjali Jena**, Assistant Professor, Department of Mathematics, has published a research article entitled, "Development of conformable fractional numerical methods of constant order using fractional power series theorem" in "Jordan Journal of Mathematics and Statistics" 18(2) 233-241, 2025, along with Prof. A. K. Pati .

- **Dr. Puspanjali Jena**, Assistant Professor, Department of Mathematics, has published a research article entitled "Optimising thermal performance of chemically reactive and thermally radiative nanofluid flow with convective heating and triboelectric effect of nanoparticles" in "Multiscale and multidisciplinary modelling, experiments and design" 8(336)2025, along with Prof. A. K. Pati.

- **Mr. Aswini Kumar Khuntia, Mr. Santosh Kumar Panda, Dr. Souren Misra, Mr. Alok Patra** have published a research article entitled "Flow Measurement Through Orifice-Metre With Decision Tree Regression Method" in "Digital Twins and Applications", 2: e70006, 2025.

- **Mr. Santosh Kumar Panda and Mr. Balaji Kumar Choudhury** have published a research article entitled "Psychrometric Analysis of an induced cooling tower in a humid condition" in "Journal of Thermal Engineering and Applications, Vol. 12(3), 24-33, 2025.

- **Mr. Santosh Kumar Panda, Mr. Alok Patra, and Mr Aswini Kumar Khuntia** have published a research article entitled "Forced convection study through a circular duct with ML-based regression analysis" in WSEAS Journal of Heat and Mass Transfer, 20, 45-54, 2025. The other authors are Ansuman Muduli and Suresh Kumar Mohanty.

- **Mrs Minakhi Das**, Assistant Professor, Department of English, has published a conference paper entitled "Domain-Adaptive Transfer Learning Framework for Multimodal Technical Communication in VLSI Engineering," in "International Conference on Innovations in Intelligent Systems: Advancements in Computing, Communication, and Cybersecurity (ISAC3)", Bhubaneswar, India, 2025. The other authors are K Subhamraj Patra, G Sai Chaitanya, Minakhi Dash, and Rosysmita Bikram Singh.

- **Mrs Minakhi Das,** Assistant Professor, Department of English has published conference paper entitled "Emotion-Centric AI Interventions for Experiential Learning in Higher Education," 2025 International Conference on Innovations in Intelligent Systems: Advancements in Computing, Communication, and Cybersecurity (ISAC3), Bhubaneswar, India, 2025. The other authors are A. Bharadwaj, A. Sahu, L. A. K. Das, P. S. Kumar, M. Dash and R. R. Patro.

INNOVATION & RESEARCH FRONTIER

- **Dr Bibhudutta Mishra**, Assistant Professor, Department of Biotechnology has published a research article entitled "The mechanism underlying the oncogenic potential of AAA+ ATPase PSMC4 in cancer is revealed by mutations and copy number amplifications. In the journal of "Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis" 830 (111901). The other authors are Mallick S., Qamar Q., Mishra B., and Nayak A.

- **Dr. Bibhudutta Mishra**, Assistant Professor, Department of Biotechnology, has published a research article entitled "In Silico Design and Discovery of Pan Coronavirus Small Molecule Anti-Virals Targeting 3CLPRO Protease" in the "Journal of Biomolecular Structure and Dynamics" DOI:10.1080/07391102.2024.2439581. The other authors are Manjhi S K., Kattuparambil A A., Mishra B., Ballaney P., Tiwari P., and Aduri R. 2024.

- **Dr. Manoj Kumar Pradhan**, Assistant Professor, Department of Chemistry, has published a research article entitled "Corrigendum to "Fluorescent tetrazolylpyrene unnatural nucleoside in sensing BSA protein" in the journal of "J. Photochem. Photobiol. A: Chem" 463 (2025) 116290. The other authors are Subhendu Sekhar Bag , Hiranya Gogoi, Sujata Roy & Sangita Talukda

- **Dr. Duryodhan Sahu**, Associate Professor, Department of Chemistry has published a research article "Evaluation of shape recovery stress and motion derivatives in 4D printed shape memory polymers for actuator application" in "International Journal of Polymer Analysis and Characterization" 2025:1–14. The other authors are Namathoti S, Kumar Sahu S, Shanmugam R & Sreekanth PSR.

- **Dr. Amit Patnaik**, Assistant Professor, Department of Biotechnology and **Dr. Duryodhan Sahu**, Associate Professor, Department of Chemistry, have published a research article entitled "Ethno-Medicinal Plants as Potential Sources for Cervical Cancer Treatment" in "Toxicol. Environ. Chem. 2025, 107 (6), 917–930. The other authors are Sinha, A.; Oraon, V.

- **Dr. Amit Patnaik**, Assistant Professor, Department of Biotechnology and **Dr. Duryodhan Sahu**, Associate Professor, Department of Chemistry, have published a research article entitled "Wastewater: A Reservoir of Antibiotic Resistance – Exploring the Impact on Public Health and the Environment". The other authors are Basu, S. Patro, L. P. P. Patro.

CONFERENCE

- **Prof. Santosh Kumar Panda,** Assistant Professor, Dept. of Mechanical Engineering, presented a paper entitled "Geometry Driven Optimization of Orifices for Multidisciplinary Engineering Applications" in the International Conference on Innovations in Thermo Fluid Engineering and Sciences (ICITFES-2025) on 8th Feb. 2025.

- **Dr. Yerra Shankar Rao,** Assistant Professor, Department of Mathematics, presented a research article entitled "Mathematical Model for the Spreading of Computer Virus and Its Stability Analysis" in the International Meet on Computational Mathematics and Applications & 52nd Annual Conference of the Odisha Mathematical Society (online), held from 11th 12th Jan. 2025.

- **Dr. Shrabani Mahata,** Associate Professor, Department of Chemistry, presented a research article entitled "pH Dependent Potent Cocktail Approach of EDTA Ligand for CdS QD's Surface Passivation: A New Insight on Effective Passivation and Enhanced Photocatalytic Activity" in the 11th International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (AFTMME-2025) on 15th Feb. 2025. The researchers are B. Padhy, S. S. Mahato, and S. Mahata.

- **Dr. Shrabani Mahata,** Associate Professor, Department of Chemistry, presented a research article entitled "Exploring Dramatic J Aggregation of Butea Monosperma Dye on Citrus Limon Extract Capped CdS QD's Surface for Artificial Photosynthesis" in the 11th International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (AFTMME-2025) on 15th Feb. 2025. The researchers are B. Padhy, S. S. Mahato, and S. Mahata.

- **Dr. Shrabani Mahata,** Associate Professor, Department of Chemistry, presented a research article entitled "Investigation of the Interaction Between Chlorophyll and TMA Capped CdS Quantum Dots: A Detailed Study on Chlorophyll Fluorescence Quenching" in the 5th International Conference on Current Trends in Materials Science and Engineering (CTMSE-2025) on 18th Feb. 2025. The researchers are T. Sahu, M. Suresh, S. S. Mahato, and S. Mahata.

INNOVATION & RESEARCH FRONTIER

- **Dr. Shrabani Mahata,** Associate Professor, Department of Chemistry, presented a research article entitled "Introducing Zingiber Officinale Extract as a Novel Passivating Agent for the Synthesis of CdS QD's" in the 5th International Conference on Current Trends in Materials Science and Engineering (CTMSE-2025) on 18th Feb. 2025. The researchers are N. Deepa Rao, S. Mahato, and S. Mahata.

- **Dr. Shrabani Mahata,** Associate Professor, Department of Chemistry, presented a research article entitled "Spectroscopic Investigation of the Interaction Between -Carotene and EDTA Capped CdS Quantum Dots" in the 5th International Conference on Current Trends in Materials Science and Engineering (CTMSE-2025) on 18th Feb. 2025. The researchers are J. Satapathy, S. S. Mahato, and S. Mahata..

- **Dr. Sabyasachi Rath,** Professor, Department of Management Studies, presented a research article entitled "The Impact of Artificial Intelligence on Marketing and Strategy Innovation in Startup Enterprises" in CEN 2025, National Conference on Economics, Bucharest, Romania, on 14th–15th May 2025.

- **Dr. Akankshya Patnaik,** Associate Professor, Department of Management Studies, presented a research article entitled "Application of Artificial Intelligence for Sustainable Human Resource Management" in the Proceedings of Data Analytics and Management on 9th July 2025.

- **Dr. Susanta Kumar Indrajitsingha,** Assistant Professor, Department of Mathematics, has presented research work on "Optimal pricing inventory model for deteriorating seasonal food products with time and selling price sensitive demand " in the proceedings of the International Conference on Recent Development in Mathematical Research and Artificial Intelligence on 25th December 2025.

- **Dr. Susanta Kumar Indrajitsingha,** Assistant Professor, Department of Mathematics, has presented research work on "A circular economy inventory model deteriorating item using preservation technology cost" in International conference of Pure and Applied Mathematics organized by Department of mathematics, Berhampur University on 13-14Feb 2025.

- **Dr. Susanta Kumar Indrajitsingha,** Assistant Professor, Department of Mathematics, has presented research work on "A sustainable supply chain circular economy inventory model" in a "National Seminar on Partial Differential Equation: An application to optimization Technique" organized by Khallikote University on 22-23 Feb 2025.

- **Dr. Susanta Kumar Indrajitsingha,** Assistant Professor, Department of Mathematics, has presented research work on "A sustainable economic order quantity inventory model with circular indicator" in an international conference on Mathematical and OR model for sustainable VIKSIT BHARAT" organized by Parala maharaja Engineering College, Berhampur on 21-22 Feb 2025.

BOOK CHAPTER

- **Dr. Ratikanta Nayak,** Assistant Professor, Department of Physics has published book chapter "Evaluation of a novel biopolymer matrix: A sustainable biomass packing" in book "Sustainable Packaging Strengthened by Biomass" with page 375-406. The authors of this book chapter are, Kamakshi Brahma, Smita Sameekhya Mishra, Bibhuti Bhusan Sahu, Sushil Kumar Verma

- **Mr. Padarobindo Panda, Dr. Preeti Ranjan Sahu, Sahu and Dr. Sasmita Padhy**, Department of Electrical and Electronics Engineering, have published a book chapter entitled "An Approach for Dual Stage-Frequency Control Using Running City Game Optimiser" in the book "Renewable Energy, Green Computing, and Sustainable Development" with Springer publication.

- **Dr. Prasanta Kumar Behera**, Assistant Professor, Department of Chemistry, has published a book chapter entitled "Smart Nano-materials for Catalytic Hydrogen Evolution Reactions" in the book "Synthesis, Application and Future Perspectives of Smart Nano-materials-Part 1" by Bentham Science Publishers, along with Amit Kumar, Sudipta Mahana & Daya Shankar Pandey.

INVITED SESSION CHAIR

- **Dr. Basant Kumar Sahu,** Associate Professor, Department of Electrical and Electronics Engineering was invited as session chair at the "3rd IEEE International Conference on Industrial Electronics: Developments & Applications (ICIDeA 2025)", scheduled during February 21-22, 2025, at the School of Electrical Engineering, KIIT Deemed to be University, Bhubaneswar, India.

INNOVATION & RESEARCH FRONTIER

FDP ATTENDED

- **Dr. Sasanka Sekhar Bishoyi,** Associate Professor, Dept. of Mathematics, attended a National level virtual workshop titled "Theory and Applications of Optimization in Machine Learning" organized by VIT-AP University from 4th–8th April 2025.
- **Dr. Basant Kumar Sahu,** Associate Professor, Department of Electrical and Electronics Engineering, attended an AICTE-recognized Faculty Development Programme (ATAL FDP) on "Smart Communication in IoT: Security & Future Applications and Possibilities" conducted by the CSE Dept., St. Joseph College of Engineering, from 24th February to 1st March 2025.
- **Dr. Basant Kumar Sahu,** Associate Professor, Department of Electrical and Electronics Engineering, attended an AICTE-recognized Faculty Development Programme (ATAL FDP) on "Supercomputing (High-Performance Computing, AI, Quantum Computing)" conducted by the CSE Dept., Amrita Vishwa Vidyapeetham, Coimbatore Campus, from 17th–22nd February 2025 (One Week).
- **Dr. Basant Kumar Sahu,** Associate Professor, Department of Electrical and Electronics Engineering, attended an AICTE recognized Faculty Development Programme (ATAL FDP) on "Power-Efficient VLSI Based Hardware Accelerators in High Performance Computing (HPC)" conducted by the Electrical and Electronics Engineering Dept., BITS Pilani, Hyderabad Campus, from 20th–25th January 2025 (One Week).
- **Dr. Basant Kumar Sahu,** Associate Professor, Department of Electrical and Electronics Engineering, attended an AICTE recognized Faculty Development Programme (ATAL FDP) on "Advanced Materials Processing, Characterization and Optimization Techniques" conducted by the Mechanical Engineering Dept., NIST University, Berhampur, from 6th–11th January 2025 (One Week).
- **Dr. Yerra Shankar Rao,** Assistant Professor, Department of Mathematics, attended an ATAL FDP on "Advanced Manufacturing in the Context of Industry 4.0 and Industry 5.0" organized by GIET Ghangapatana, from 17th–22nd February 2025.
- **Dr. Yerra Shankar Rao,** Assistant Professor, Department of Mathematics, attended an ATAL FDP on "Cyber Security" organized by EXCELR, from 14th–20th February 2025.
- **Dr. Shrabani Mahata,** Associate Professor, Department of Chemistry, attended an ATAL Online 6 Day Faculty Development Programme (FDP) on "Recent Advancements in Solar Photovoltaic Technology & Research Opportunities" organized by Government Polytechnic Nagpur, from 13th–18th January 2025.
- **Dr. Shrabani Mahata,** Associate Professor, Department of Chemistry, attended a One Week Online FDP on "Electric Vehicles: Advanced Charging Technologies, Solar Powered Charging Infrastructure Design & Optimization (EVS-2025)" organized by Annant Gyan Knowledge and Skills Pvt. Ltd., from 20th–25th January 2025.
- **Dr. Shrabani Mahata,** Associate Professor, Department of Chemistry, attended an AICTE-sponsored ATAL Online 6 Day Faculty Development Programme (FDP) on "Vacuum Technology in Semiconductor Manufacturing and Packaging" organized by the Department of Multidisciplinary Engineering (MDE), The NorthCap University, Gurugram, Delhi, from 24th February–1st March 2025.
- **Dr. Abinash Dutta,** Assistant Professor, Department of Biotechnology, attended a One Week International Faculty Development Programme titled "Research Methodology, AI Tools, and Publication Strategies" organized by GIET, Bhubaneswar, India, from 21st–26th July 2025.
- **Dr. Abinash Dutta,** Assistant Professor, Department of Biotechnology, attended a Five-Day National Faculty Development Programme titled "Smart Biomedical Processing: Leveraging IoT, Edge Computing, and ML" organized by the Electronics and ICT Academy, IIT Roorkee, India, from 12th–16th July 2025.
- **Dr. Abinash Dutta,** Assistant Professor, Department of Biotechnology, attended a Seven Day National Faculty Development Programme titled "Research Methodology with a Focus on Qualitative Data Analysis Using SPSS" organized by Digi Skill Development Centre and Training Institute, Mumbai, India, from 4th–10th June 2025.
- **Dr. Ratikanta Nayak,** Department of Physics, attended an AICTE sponsored 8-Day UHV-II Residential Faculty Development Programme (FDP) at Biju Patnaik University of Technology, Rourkela, from 3rd–10th July 2025.
- **Prof. Manoj Kumar Sahoo,** Department of Computer Science & Engineering., attended AICTE sponsored 8-Day

INNOVATION & RESEARCH FRONTIER

UHV-II Residential Faculty Development Programme (FDP) at Biju Patnaik University of Technology, Rourkela, from 3rd July to 10th July 2025of Murugappa Polytechnic College and Vel Tech Technology Incubator, Chennai on 4th and 5th February 2025.

- **Dr. Puspanjali Jena**, Assistant Professor, Department of Mathematics has attended AICTE Training and Learning (ATAL) Academy Faculty Development Program on Manufacturing & Industry 4.0: Robotic Applications using Artificial Intelligence at NIST UNIVERSITY from 09/07/2025 to 15/07/2025.

- **Dr. Puspanjali Jena**, Assistant Professor, Department of Mathematics has attended AICTE (VAANI) on Robotic Applications using Artificial Intelligence at NIST UNIVERSITY from18/07/2025 to20/07/2025.

- **Dr. Ashwini Kumar Behera**, Assistant Professor, Department of Physics, has attended International Faculty Development Programme on Research Methodologies, AI Tools and Publication Strategies organised by the R&D cell, GIET Ghangapatna, Bhubaneswar (Odisha), India, from 21st to 26th July 2025.

- **Dr. Ashwini Kumar Behera**, Assistant Professor, Department of Physics, has attended a National Level virtual workshop titled as 'AI Tools for effective research writing and publishing' conducted by DIGI Skill Development Centre and Training Institute on 26th and 27th April 2025.

- **Dr. Ashwini Kumar Behera**, Assistant Professor, Department of Physics, has attended the Faculty Development Programme on Entrepreneurship, Innovation and IPR conducted by the Department of Mechanical Engineering of Murugappa Polytechnic College and Vel Tech Technology Incubator, Chennai on 4th and 5th February 2025.

- **Mr. Santosh Kumar Panda**, Assistant Professor, Department of Mechanical Engineering, has attended a faculty development program on "Fostering Innovation and Entrepreneurship: Bridging Academic and Industry", organised by the Institution's Innovation Council (IIC), Gayatri Vidya Parishad College of Engineering (Autonomous), GVPCE(A) held from 12th to 17th May 2025 (Hybrid Mode)

WORKSHOP, SEMINAR AND CONFERENCE ATTENDED

- **Dr. Shrabani Mahata,** Assoc. Professor, Department of Chemistry, has attended NPTEL online workshop on "Computational Chemistry Techniques" organized by Dept. of Chemistry, Ashoka University in collaboration with NPTEL Coordinator IIT , Madras., held from 18th to 19th January, 2025.

- **Dr. Abinash Dutta,** Assistant Professor, Department of Biotechnology has attended a National level virtual workshop titled as "AI tools for effective research writing and publishing" Organized by DIGI Skill Development Centre and Training Institute, during 26th April.2025 to 27th April 2025.

- **Dr. Abinash Dutta,** Assistant Professor, Department of Biotechnology has attended a National level virtual workshop titled as "Data visualization using Power BI and Tableau" Organized by Digi Skill Development Centre and Training Institute, Mumbai, India, during 30th May.2025 to 1st June 2025.

- **Dr. Abinash Dutta,** Assistant Professor, Department of Biotechnology has attended Two days National level workshop titled as "Unlocking the power of Tex Studio on scientific writing" held on 29.05.2025 to 30.05.2025 organized by Digi Skill Development Centre and Training Institute, Mumbai, India.

- **Dr. Ashwini Kumar Behera**, Assistant Professor, Department of Physics has presented his work on "Unified Analytical Treatment of Plasma-Screened Hydrogen Atom via Hulthén and Manning Rosen Potentials Using Jost Formalism" at the National Conference on "From the Microscopic to the Cosmic: Advances in Modern, Physics (MiCo-AMP 2025)" held at Dept. Physics, Dharanidhar University, Keonjhar, Odisha during 21st- 22nd August 2025.

- **Dr. Bibhudutta Mishra**, Assistant Professor, Department of Biotechnology, has presented his work on "Identification of Potent small molecules as ligands to exhibit potential binding to the protease of Coronaviruses" in a three-day International conference on "VIROCON 2024", DRDE, Gwalior

- **Dr. Subrata Kumar Sahu**, Associate Professor, Department of Mathematics, has presented a paper in the National Seminar on Partial Differential Equation: An Application to Optimisation Techniques (PDEAOT-2025), Khallikote Unitary University, Berhampur, Odisha, India, February 22nd -23rd, 2025.

- **Dr. Yerra Shankar Rao,** Assistant Professor, Department of Mathematics has attended Two day workshop on Latex for Technical writing, organized by JNU New Delhi, held from 29th Apr. 2025 to 30th Apr. 2025.

INNOVATION & RESEARCH FRONTIER

- **Dr. Basant Kumar Sahu,** Associate Professor, Department of Electrical and Electronics Engineering has attended National Seminar on "Energy access and security in emerging energy transition" organised by Indian Energy Congress, Indian Institute of Technology, and NIST University Berhampur, held at IIT Bhubaneswar, from 17th to 18th March 2025.

- **Dr. Shrabani Mahata,** Assoc. Professor, Department of Chemistry, has attended Two Days workshop on Structural Analysis using Powder X ray diffraction, Rietveld Refinement, HRTEM & SAED Analysis" organized by Centre for Nanoscience and Nanotechnology, International Research Centre & Advanced Characterization Facility, Sathyabama Centre for Advanced Studies, SATHYABAMA Institute of Science and Technology, Chennai, held from February 24 -25, 2025.

KEYNOTE SPEAKER

- Dr. Puspanjali Jena, Assistant Professor, Department of Mathematics, has delivered a keynote address on "Development of conformable fractional numerical methods of constant order using fractional power series theorem" during the two-day International seminar on computational aspects of Mathematics and its applications, organised by City College Ambapua, Berhampur on 10th and 11th February 2025.

- Dr. Bibhudutta Mishra, Assistant Professor, Department of Biotechnology, has delivered his keynote speech in the Virtual Round Table Discussion on "Virology" held on 17th June, 2025, organised by Microbiologists Society, India.

FDP AND WORKSHOPS ORGANIZED

- **Dr. Basant Kumar Sahu and Dr. Aswini Kumar Nayak,** faculty members, Dept. of Electrical and Electronics Engineering, organized an AICTE sponsored Six Day Faculty Development Programme under ATAL FDP on "Manufacturing and Industry 4.0 (Robotic Applications using Artificial Intelligence)" (Theme: Manufacturing and Industry 4.0) from 9th–15th July 2025. Application ID: 1744185793. The FDP was conducted at NIST University, Institute Park, Pallur Hills, Berhampur, Odisha, India – 761008.

- **Dr. Basant Kumar Sahu and Dr. Aswini Kumar Nayak,** faculty members, Dept. of Electrical and Electronics Engineering, organized an AICTE sponsored Three Day Workshop under AICTE VAANI on "Manufacturing and Industry 4.0 (Robotic Applications using Artificial Intelligence)" (Theme: Manufacturing and Industry 4.0) from 18th–21st July 2025. Application ID: 2827683744, F. No. AICTE/A VAANI Scheme/2025. The workshop was conducted at NIST University, Institute Park, Pallur Hills, Berhampur, Odisha, India – 761008.

- **Dr. Akankshya Patnaik,** Dept. of MBA, and Dr. Prajapati Naik, Dept. of Mechanical Engineering, organized an AICTE sponsored Three Day Workshop under AICTE VAANI, F. No. AICTE/VAANI/2.0/2025-26/130/2726759507. The workshop was conducted at NIST University, Institute Park, Pallur Hills, Berhampur, Odisha, India – 761008.

INVITED TALKS

- **Dr. Abinash Dutta,** Department of Biotechnology, was invited as a resource person at the 5th ICEACBS 2025, held from 07.06.2025 to 08.06.2025, organized by Voice of Indian Concern for the Environment (VOICE), Society for Microbiology, Biochemistry, and Biotechnology (SMBB), Somnogen Canada Inc., Toronto, Canada, and All India Institute of Training and Education (AIITE), New Delhi, India.

- **Dr. Ayesha Tasnim,** Assistant Professor, Department of English, delivered a talk on "Blended Learning and Flipped Classroom: Redesigning Teaching" during the Five Day International Faculty Development Programme on "Teaching in the Age of Technology", organized by the Department of Visual Communication, S.A. College of

PHD AWARDED

- **Dr Santosh Kumar Kar,** Senior Assistant Professor, Department of Computer Science and Engineering, was awarded PhD degree from the Dept. of Computer Science and Engineering, Chandra Mohan Jha University, Meghalaya, with thesis entitled "Comprehensive Test Coverage Analytical Approaches In Object Oriented Programming" under the guidance of Dr. Brojo Kishore Mishra and Dr. Sanjit Kumar Acharjya in 12th Feb 2025.

WORKSHOP, SEMINAR & TALK

Expert Talk on Research and Innovation at NIST University, Berhampur

Prof. (Dr.) Ganapati Panda, former Deputy Director of IIT Bhubaneswar (2010–2013) and former Director of the National Institute of Technology, Jamshedpur (2005–2006), visited NIST University, Berhampur, where he delivered an expert talk on Research and Innovation.

NIST University Unveils Bi-Annual E-Magazine Compute at NIST in Grand Ceremony

The bi annual e magazine Compute@NIST (ISBN: 978-93-342-2133-6) of the Department of Computer Science and Engineering was officially released on March 1, 2025, at the Galaxy Auditorium by Prof. (Dr.) C. R. Tripathy, former Vice Chancellor of Biju Patnaik University of Technology (BPUT), Rourkela, and Sambalpur University.The ceremony was graced by the esteemed presence of Dr. Sukant K. Mohapatra (Respected President, NIST University), Prof. Priyadarsan Patra (Hon'ble Vice Chancellor), and Dr. Devashree Tripathy (Keynote Speaker & Assistant Professor, Department of Computer Science, IIT Bhubaneswar).

Also in attendance were Prof. Bimal Mishra (Member, Board of Governing Committee, NIST University), Dr. Preeti Ranjan Sahu (Associate Dean, Student Welfare), along with faculty members of the CSE department and enthusiastic student representatives.

MCA 2024 Batch Celebrates 'Incredible India' with Style and Creativity at NIST University

Education meets entertainment, innovation weds creativity, and beauty joins brains! The MCA 2024 batch of NIST University, dressed in vibrant Indian ethnic attire, delivered a spectacular extempore on the theme 'Incredible India'. Fantastic work, everyone keep shining and inspiring!

SBI General Insurance Conducts Campus Placement Drive at NIST University

SBI General Insurance visited NIST University for a campus placement drive, offering students exciting career opportunities in the insurance sector. The event provided a platform to explore professional roles, understand industry trends, and gain insights into skill requirements and career growth. Students actively participated, eager to take their first step towards a promising career. we continues to strengthen industry connections, preparing students for successful professional journeys and bridging the gap between academic learning and real world opportunities.

WORKSHOP, SEMINAR & TALK

Mastering Research Proposal Writing: Insights from Dr. Sibarama Panigrahi

Dr. Sibarama Panigrahi, Assistant Professor in the Department of Computer Science and Engineering at NIT Rourkela, delivered an engaging session on crafting impactful research proposals. He shared practical strategies and valuable insights into securing funding opportunities, inspiring young researchers to enhance their proposal writing skills and pursue innovative research with confidence.

IIT Bhubaneswar Seminar on Energy Transition

The National Seminar on Energy Access & Security in Emerging Energy Transition 2025 was inaugurated at IIT Bhubaneswar, jointly organized by IEC, IIT Bhubaneswar, and NIST University. Leaders from academia and industry emphasized sustainable energy, security challenges, and research collaboration. The seminar provided a platform for knowledge exchange and partnerships, inspiring researchers and professionals to work together for a sustainable energy future.

Alumnus Talk: Insights from FMCG Industry

Mr. Rahul Kumar Dash, alumnus of the MBA batch 2022-24 and now Territory Manager at Nestlé India Limited, interacted with current MBA students in an engaging session. He shared valuable insights on strategic market penetration, distribution optimization, and building strong relationships with retail partners in the FMCG sector.

Enterprise Connectivity & Private 5G Session

NIST University was privileged to host Manan Shah, Director of Technology Sales at Celona, for an engaging session on Private 5G. He shared insights into the future of enterprise connectivity, its transformative role in industries such as mining, and its impact on digital transformation.

Dr. Sukant K. Mohapatra's Talk on IoT and the Future

WORKSHOP, SEMINAR & TALK

Dr. Sukant K. Mohapatra, Hon'ble Founder & President, delivered an insightful talk on "Harnessing IoT for Smart and Sustainable Innovations." The session engaged B.Tech 3rd-year students and faculty, exploring IoT applications in healthcare, smart cities, automation, and sustainability while highlighting global trends, challenges, and future opportunities.

Dr. Sukant K. Mohapatra Leads Network Architecture Workshop

The Department of Electronics and Communication Engineering, NIST University, organized an engaging workshop on Network Architecture at the Volga Conference Center. Led by Founder & President Dr. Sukant K. Mohapatra, the session explored network design, security, and emerging technologies, inspiring curiosity through his dynamic and interactive presentation.

Faculty Development Program on Next-Gen Networks & Cryptography

The Department of ECE, in collaboration with BSNL India, is hosted a three day Faculty Development Program on "Next Generation Networks & Digital Cryptography" from 8th to 10th May 2025. Experts from BSNL Training Center, Visakhapatnam, will guide participants through advanced computer networks, security design, and 5G wireless communication.

ICSCC-2025: International Conference on Smart Computing & Communication

The Department of Computer Science and Engineering, NIST University, in collaboration with DRIEMS University and the Next Generation Research and Innovation Hub, is organized the International Conference on Smart Computing and Communication (ICSCC-2025) virtually on 7th June 2025. The conference will highlight global advancements in AI, IoT, 5G/6G, cloud, and smart technologies.

ATAL FDP on AI & Robotics in Industry 4.0

NIST University's Department of Electrical & Electronics Engineering hosted a six day AICTE sponsored ATAL Faculty Development Program on "Manufacturing & Industry 4.0: Robotics Applications using Artificial Intelligence" from July 9–15, 2025. The program will empower faculty, researchers, and professionals with cutting-edge insights into AI driven smart manufacturing and robotics. Sessions will be led by distinguished experts from academia and industry, covering advanced topics in automation, machine learning, and industrial robotics. This FDP aims to bridge the gap between theoretical knowledge and practical implementation, preparing participants to contribute to the evolving landscape of Industry 4.0.

WORKSHOP, SEMINAR & TALK

CSE Department Hosts Project Training for BCA Students

The CSE Department of NIST University successfully organized a 10 day project training program for the BCA 3rd year students of Chikiti Mahavidyalaya.We extend our sincere thanks to Dr. Pradeep Jena, Dr. Charulata Palai, Prof. Swetanjali Maharana, Prof. Debasish Padhy, and Mr. Siba for their valuable contributions. Special appreciation goes to Dr. Bhabani S. Gouda for IT support, Dr. Preeti Ranjan Sahu for coordinating food arrangements, Mr. Damburu for transport assistance, and everyone who supported the program directly or indirectly.We also thank the authorities of NIST University and Chikiti Mahavidyalaya for their unwavering encouragement and best wishes, which made the program a great success.

NIST University Welcomes the 2025 Batch of Postgraduate and PhD Students

NIST University hosted a grand welcome ceremony for its new MBA, MCA, M.Tech, and M.Sc students at the Indoor Stadium. Hon'ble Founder and President, Dr. Sukant K. Mohapatra, welcomed the freshers and highlighted the role of the Global Innovation Centre and CREs in fostering excellence. Vice-Chancellor, Prof. Priyadarsan Patra, emphasized values and academic guidance, while Dean (Academics) Dr. P. Rajesh Kumar reiterated the university's commitment to growth. Key insights on academics, examinations, career development, hostel rules, and discipline were shared by senior faculty and deans. Students and parents expressed their expectations, and the ceremony concluded with a vote of thanks.

NIST Celebrates World Entrepreneurs' Day 2025, Showcasing Student Innovation

NIST University proudly celebrated World Entrepreneurs' Day on 21st August 2025, jointly organized by the Institution's Innovation Council (IIC) and the NIST Incubation Foundation. The event recognized the invaluable contributions of entrepreneurs in driving innovation, solving real world challenges, and creating opportunities for employment and growth. Eight student teams showcased innovative ideas spanning education, healthcare, agriculture, and everyday convenience. Selected projects will be nurtured with pre incubation support, mentorship, and resources under the NIST Incubation Foundation. A special highlight was a student from Maa Manikeshwari University who presented an idea tackling cellphone addiction among teenagers and helping aspirants of competitive exams like NEET maintain focus and discipline. Expertly coordinated by Dr. Sushanta Sahu and Dr. Bibhudutta Mishra, the event saw enthusiastic participation and reaffirmed NIST's vision to foster entrepreneurship and nurture changemakers of tomorrow.

WORKSHOP, SEMINAR & TALK

NIST Signs MoU with Army Air Defence College

NIST University signed a Memorandum of Understanding (MoU) with the Army Air Defence College (AADC), Gopalpur, under the aegis of ARTRAC, to foster technology driven training and strengthen Academia Defence collaboration. The partnership will focus on joint research, innovation, and technology integration in Artificial Intelligence, Machine Learning, 5G, and Advanced Electronics. It also opens opportunities for faculty student exchanges, guest lectures, and technical seminars, creating a platform for knowledge sharing and impactful contributions to defence training. This collaboration aims to drive innovation, skill development, and national service through technology led initiatives.

NIST Astronomy Club Celebrates National Space Day

The NIST Astronomy Club proudly celebrated National Space Day on 23rd August 2025 at the Volga Conference Center, NIST University. The event aimed to ignite curiosity and inspire young minds about India's advancements in space research and exploration.The celebration was graced by Chief Guest Dr. Rahul Sharma, Assistant Professor of Physical Sciences, IISER Berhampur, along with dignitaries including Dr. Bishnukar Nayak (Registrar I/C), Dr. P. Rajesh Kumar (Dean of Academics), and Dr. Asish Kumar Mohapatra (Advisor, Astronomy Club).In his keynote, Dr. Sharma highlighted India's remarkable milestones—Chandrayaan-3's successful landing of Vikram and Pragyan, the Mars Orbiter Mission (Mangalyaan), Aditya-L1, and the upcoming Gaganyaan mission. He also spoke on the applications of space science in communication, weather forecasting, agriculture, defense, and navigation, while encouraging students to pursue opportunities in premier institutions like ISRO, PRL, IISERs, and IITs.The session concluded with an engaging Q&A, where students enthusiastically explored future missions and India's growing role in global space science. The event not only sparked scientific curiosity but also strengthened students' resolve to contribute to space research and technology.

Launch of NAVACHAR Research and Incubation Center at NIST University

The "NAVACHAR Research & Incubation Centre" has inaugurated at NIST University in collaboration with BSNL, Vizag. This center will focus on driving technology innovation in future telecom and communication domains, while also leveraging the 5G core stack sponsored by Celona.Special thanks to the relentless efforts of Dr. Rajesh Panakala (Dean Academics), Dr. Pradyumna Patra (PIC, 5G GIC), and Prof. Swadhin Mishra, whose dedication made this milestone possible.

WORKSHOP, SEMINAR & TALK

Institute Innovation Council (IIC) Hosts "Idea to Impact" Session

NIST University's Innovation Council hosted an engaging session on "Idea to Impact", featuring entrepreneur A. Surendra Nath, CEO of Vaisali Dairy. Sharing his inspiring journey, he urged students to embrace Odisha's start up ecosystem and seize opportunities in emerging markets. The interactive session highlighted entrepreneurship as a mindset of courage, creativity, and resilience, motivating students to transform ideas into actionable ventures. The program also fostered dialogue on innovation-driven growth, encouraging young minds to explore entrepreneurial pathways that contribute to regional and national development.

Prof. Vishwas Chavan Leads Innovation Workshop at NIST

NIST University hosted a two day workshop, "Story of Innovation," at the Stephen Hawking Cineplex, led by Distinguished Professor Vishwas Chavan. Over 20 faculty members participated, gaining insights into self innovation, creativity, and research excellence. Prof. Chavan's inspiring journey and practical tools encouraged a culture of discovery and forward thinking at NIST.

NIST Hosts AICTE-Sponsored Workshop on Robotics & AI

The Department of Electrical Engineering, NIST University, successfully organized a 3-day workshop on "Industry 4.0 and Smart Manufacturing: Robotic Applications using Artificial Intelligence," sponsored by AICTE under the VAANI initiative, from 19th to 21st July 2025. The workshop aimed to equip educators with advancements in Industry 4.0 and AI-driven robotics, fostering innovation and research. The inaugural session was graced by Chief Guest Dr. Kanungo Barada Mohanty (Professor, NIT Rourkela) and Guest of Honour Shri. Balaram Behera (DGM, Rail Services, Paradip Port Trust), alongside the presence of Prof. Priyadarsan Patra, Vice Chancellor, NIST University, and senior academic leaders. With participation from 60+ faculty members across engineering colleges, the event highlighted strong interest in upskilling and collaboration. Coordinated by Dr. Basant Kumar Sahu and Dr. Amruta Pattanayak, the workshop marked a key step in strengthening industry-academic tie-ups.

START UP AND INDUSTRY COLLABORATION

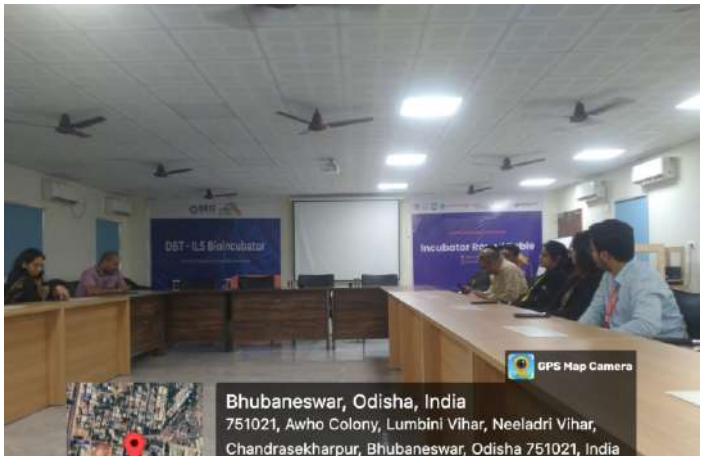
Visit of Dr. Gordhan Patel (J.P. Lab, USA) for Collaboration with NIST University

NIST Science Talent Search (NSTS) Prize Distribution at DPS Miyapur, Hyderabad

NIST Science Talent Search (Annual SDG-STEM Hackathon)

Dr. S. K. Sahu Attends FDP on Innovation and Entrepreneurship at GITAM University

Participation of Prof. S. Sahu in Level Incubator Meet



NIST Incubation Centre Delegation Visits ZSI for Collaboration Exploration

Collaboration between NIST Incubator and T-Works, Hyderabad

NIST Officials Present NSTS-2024 First Prize at DAV, Kalinga Nagar

ARTICLE : SCIENCE/ ENGINEERING/ MANAGEMENT

NEXT GENERATION WARFARE: BEYOND THE BATTLEFIEL

War has always been a paradox , a destructive means to secure peace. When dialogue, negotiation, or diplomacy fails, nations often turn to war as the last resort. But the ways in which wars are fought have evolved drastically, shifting from swords and shields to cyberattacks and drones. Wars are fought for survival, dominance, and ideology. Some seek to expand territory, some to strengthen economies, and others to impose political influence. Yet, as Sun Tzu wisely said centuries ago: "He will win who knows when to fight and when not to fight." In today's world of overlapping economies and fragile geopolitics, his words are more relevant than ever.

Historically, wars were largely conventional, fought between large armies on battlefields, following agreed rules. Mythologies like the Mahabharata or Greek epics depict massive, rule bound clashes. But tactics like Sri Krishna's strategic diversions, or the Kauravas' ploys, also highlight the roots of unconventional warfare. Unconventional warfare today includes guerilla, asymmetric, cyber, information, and psychological warfare. Guerilla tactics, for instance, enabled Marathas and Rajputs to resist the Mughals, and Vietnamese fighters to defy American might. Even in the Russia Ukraine conflict, Ukrainian forces employed guerilla style ambushes and drones to offset Russia's advantages. Asymmetric warfare arises when one side vastly outmatches the other in resources or technology. Yet, superiority does not always guarantee victory. In Vietnam, U.S. forces found themselves outmaneuvered on unfamiliar terrain. Similarly, in Ukraine, inexpensive drones like the Turkish Bayraktar inflicted disproportionate damage on Russian infrastructure. Both nations demonstrated that persistence and ingenuity can flip asymmetry into an advantage. The battlefront has shifted to cyberspace. With billions of connected devices, cyber

warfare now targets power grids, aviation networks, and even personal smartphones. Distributed attacks triggered through malicious apps are increasingly common, prompting governments to ban phones in high security zones. Equally dangerous is information warfare the deliberate spread of fake news, manipulated videos, and propaganda. With generative AI making near perfect fake content, hostile actors can craft narratives that destabilize societies. Instead of bombs, psychological warfare uses stories, half truths, and propaganda to divide communities and erode trust in governments. If unchecked, it can escalate into civil unrest or even internal collapse. Modern conflicts are no longer fought only by armies but also by non state actors and surrogate forces militias, hackers, or proxy groups supported by powerful nations. Social media platforms, too, have been accused of influencing politics and elections. The lines between war and peace, soldier and civilian, truth and falsehood, have blurred.

From Theory of Mind (ToM) tactics in ancient strategy to the use of AI driven data gathering today, the essence of warfare remains the same: understanding the enemy better than they understand you. Even free video games may quietly map the combat responses of young players, collecting data that could one day shape military AI systems. The next generation of warfare will not be confined to borders or battlefields. It will be fought in cyberspace, in minds, and in narratives often without a single shot fired. The challenge for humanity is to recognize these hidden wars before they consume the peace they claim to protect.

Mr. Prabhas Raj Panigrahi

Dr. Sushanta Kumar Sahu

(NIST Incubation Foundation)

EVENTS & CLUB ACTIVITIES

FOTOFOLKS

FOTOFOLKS captured timeless moments, beginning with the Alumni Meet, Bengaluru Chapter, on January 5, 2025, and the vibrant Foundation Day cultural night (January 20–21). They immortalized Republic Day (January 26), Saraswati Puja (February 2), and NIST Talent Search (February 7), alongside the spirited Kurukshetra (February 10–15) and National Science Day (February 28). Memorable shots from Women's Day (March 8), Farewell Party (March 19), and Convocation Day (May 13) joined Yoga Day (June 21) and the thrilling 61st Odisha Basketball Championship (June 29), marking a year of pride and unity.

NIST Fashion and Cultural Club (NFCC)

The newly formed Fashion Club made its mark during Foundation Day (January 20–21, 2025) with thematic ramp walks, including the Goddess, Traditional, and Faculty Ramp Walks, seamlessly blending culture and creativity. Their participation in Sankalp 2K25 (February 20–21) with Arabian Nights and Cultural Walk themes added vibrancy to the fest, promoting inclusivity and artistic expression. The club also organized a Poster Making Competition to showcase participants' talents and a Debate Competition (March 8, 2025) to highlight creative and critical thinking skills.

NIST Musical Society (NMS)

The NIST Musical Society (NMS) captivated audiences during the NIST Foundation Day Live Music event (January 20–21, 2025), drawing over 1,000 attendees with soulful performances. Their regional debut at Berhampur Mahotsav 2025 on February 6 was a resounding success, while the Flashmob for Sankalp 2025 on February 21 built excitement and anticipation. Sankalp 2K25 Day 1 (February 28) featured a standout set, and the Bidding Aiden Farewell (March 19) offered a nostalgic acoustic session. An Acoustic Jamming event on April 26 closed the semester on a high note, fostering unity and camaraderie among students.

NIST Renewable Energy Club

The REC Club kicked off the year with "Tinker to Tech" (August 26–27, 2024), a hands-on workshop on sensors and microcontrollers for the 2023 batch. Their Foundation Day project showcase (January 20–21, 2025) impressed dignitaries, while Navottan Prastuti (February 28–March 1) highlighted innovative solutions. Navchetnam Jnanam (February 28) encouraged idea presentations, and Yukti Margam (March 1) engaged students in a tech treasure hunt. The Senso-Tech workshop (April 11–12) equipped the 2024 batch with practical skills in sensor technology.

NIST Dance Club

The NIST Dance Club started the year with an energetic performance at the NIST Family Get-Together. Their captivating acts at the 28th Foundation Day (Jan 20–21, 2025) and Brahmapur Mahotsav 2025 (Feb 6) earned widespread applause. Highlights included the Flashmob for Sankalp 2025 Poster Reveal (Feb 20), a solo showcase at AIIMS Charisma Fest, Sankalp Day 1 debut (Feb 28), the graceful International Women's Day performance (Mar 8), and a memorable Farewell act for Batch 2021–2025 (Mar 24).

Art and Drama Club (AD Club)

The AD Club hosted "The Cabaret" on February 18, 2025, celebrating

EVENTS & CLUB ACTIVITIES

performance arts with over 80 participants, earning widespread acclaim. “Sankalp 2K25” (February 28) featured “Confusion Funfusion 3.0” and “Nukkad Natak”, engaging first and second year students with impactful performances. “Art O Rama” on April 19 showcased artistic talent, drawing over 30 participants and featuring a guest artist session.

National Cadet Corps

From January to April 2025, the NCC Unit of NIST University inspired cadets through a vibrant mix of adventure, training, and service. The year began with a Trekking Camp at Nabarangpur (17–24 Jan), where cadets built fitness, teamwork, and environmental awareness. Cadet A. Pratik Kumar brought laurels by representing Odisha at the prestigious OSD Camp (23 Jan–16 Mar) across Singapore, Cambodia, Vietnam, Indonesia, and Thailand. The 76th Republic Day parade radiated patriotism, followed by Para Sailing thrills at Jeypore (24–28 Feb). Certificate exams, World Water Day rallies (22 Mar), and Simulator Firing (5 Apr) capped a season of confidence, discipline, and national pride.

STUDENT SUCCESS STORY

NISTian Shines on National Stage

The Department of Information Technology at NIST University proudly congratulates Ms Aditi Padhi for becoming a finalist on Sa Re Ga Ma Pa Ustadnka Ustad aired on ZEE Sarthak. Honored by renowned Bollywood singer Krishna Beuraa, this remarkable achievement highlights her extraordinary talent, dedication, and hard work. Balancing rigorous academic commitments with a passion for music, Ms Aditi Padhi has set a shining example for fellow students. This accomplishment not only celebrates personal excellence but also brings pride to NIST University, inspiring peers to pursue their passions with commitment, perseverance, and confidence on national platforms.

NIST Civil Engineering Alumni Shine in GATE 2025

NIST University proudly congratulates its Civil Engineering alumni Utkarsh Verma (BTech, 2018-22), K. Jaganmohan (BTech, 2019-23), and Nikhil Kumar (BTech, 2020-24) for their remarkable achievement in qualifying GATE 2025! Their success reflects the excellence of NIST's Civil Engineering Department, known for its cutting edge laboratories, industry aligned curriculum, expert faculty, and hands on learning through real world projects.

NIST Team Wins Best XR Innovation Award at FICCI BAF Awards 2025

NIST University's Team MetaAchievers brought pride to the institution by winning the Best XR Innovation Award at the prestigious FICCI BAF Awards 2025, held at Hotel Sofitel, Mumbai. Organized by the Federation of Indian Chambers of Commerce & Industry (FICCI), the event celebrated excellence in animation, VFX, gaming, and extended reality. The team, led by Arvind Kumar Sahu (3rd Yr, B.Tech-CSE) and guided by Prof. Santosh Kumar Kar, impressed industry experts with their innovative project, Mahakumbh VR Experience.The recognition highlights NIST University's commitment to fostering creativity, cutting edge technology, and experiential learning.

The team's achievement not only showcases their technical expertise but also positions NIST as a hub for innovation in immersive technologies, inspiring other students to explore the transformative potential of XR in storytelling, education, and cultural experiences.

STUDENT SUCCESS STORY

NISTians Selected for INSA Summer Research Internship 2025

NIST University proudly congratulates our talented students on their prestigious selection for the Indian National Science Academy (INSA) Summer Research Internship 2025. This achievement reflects their dedication, curiosity, and academic excellence. The internship will open new horizons of knowledge, research, and innovation, and we are confident they will make the most of this opportunity while bringing pride to NIST.Congratulations to: Abhisekh Padhy, Amisha Sukla, Aswi Rani Sahu, Bidya Sahu, Rajkumari Padhi, and Subhashree Sahu. Wishing them an enriching research journey ahead!

NIST Students Shine at ZSI Hackathon

NIST University proudly congratulates its 2nd year B.Tech students G. Om Prasad Dora (IT), V. Durgeshwar Rao (CSE), and Amrit Kumar Prasad (CSE) for securing the 1st position in the Best Presentation Award at the ZSI Hackathon Level 1, organized by the Zoological Survey of India, Sundarban Regional Centre, Canning, West Bengal, on 28th May 2025. Centered on "Mangrove Biodiversity," the event celebrated "Biodiversity Conservation & Climate Change." Their outstanding performance earned them selection for the National Level. NIST applauds their success and wishes them the best ahead.

NIST Team Shines at Infosys Global Hackathon 2025

NIST University congratulates Team MetaAchievers for securing the 2nd Runners Up position at the Infosys Global Hackathon 2025 with their groundbreaking project SkillBridge, an AI and AR/VR powered skill development platform designed to empower students through guided learning pathways, practical upskilling, and enhanced job readiness.

The project stood out for its AI driven personalized course recommendations, immersive AR/VR learning modules, and career focused tools bridging education and employment. Team members Arvind Kumar Sahu (Leader), Saumik Chakraborty, Gyana Ranjan Sahu, and Debadutta Rout showcased remarkable innovation throughout their journey.

STUDENT SUCCESS STORY

NIST Student Secures Prestigious Research Internship at NTNU

NIST University proudly congratulates Mr. Subhasish Das, a third year B.Tech student from the Electronics and Computer Engineering branch, on securing a fully funded summer research internship at the Department of Physics, National Taiwan Normal University (NTNU). This prestigious opportunity is offered under the Taiwan Experience Education Program Asia Plus (TEEP Asia Plus), supported by the Ministry of Education, Taiwan. His achievement reflects his dedication and excellence while bringing immense pride to NIST University and reinforcing its commitment to nurturing global talent.

Research Paper Publication

Ms. Subhrakali Swain, a 2nd-year M.Sc. student at NIST University, has achieved a remarkable milestone by publishing her research paper titled “Recent Advances in Optimized Polybenzimidazole Based Membranes for Vanadium Redox Flow Battery Applications” in the prestigious Journal of Energy Storage (Vol. 129, Page 117372, Impact Factor: 8.9). Impressively, this achievement came just two weeks after completing her final lab work.

NIST University proudly celebrates her outstanding contribution to advanced energy storage research.

Book Chapter Publication

NIST University proudly announces a significant academic milestone as Ms. Smita Sameekshya Mishra (M.Sc Physics, 2nd year) and Mr. Bibhuti Bhusan Sahu (B.Tech, CST, 3rd year) from the Novel Material Research Laboratory, Department of Physics, have published their first book chapter titled “Evaluation of a Novel Biopolymer Matrix: A Sustainable Biomass Packing.”The chapter has been featured in Elsevier’s renowned publication, Sustainable Packing Strengthened by Biomass, underscoring their contribution to the global pursuit of eco friendly and sustainable material solutions.

This remarkable achievement reflects NIST University’s culture of research, innovation, and interdisciplinary collaboration, encouraging young scholars to address pressing environmental challenges. It also stands as an inspiration for students and researchers to push the boundaries of knowledge and contribute towards a greener, more sustainable future.

STUDENT SUCCESS STORY

NIST Student Presents Research at International Conference in Japan

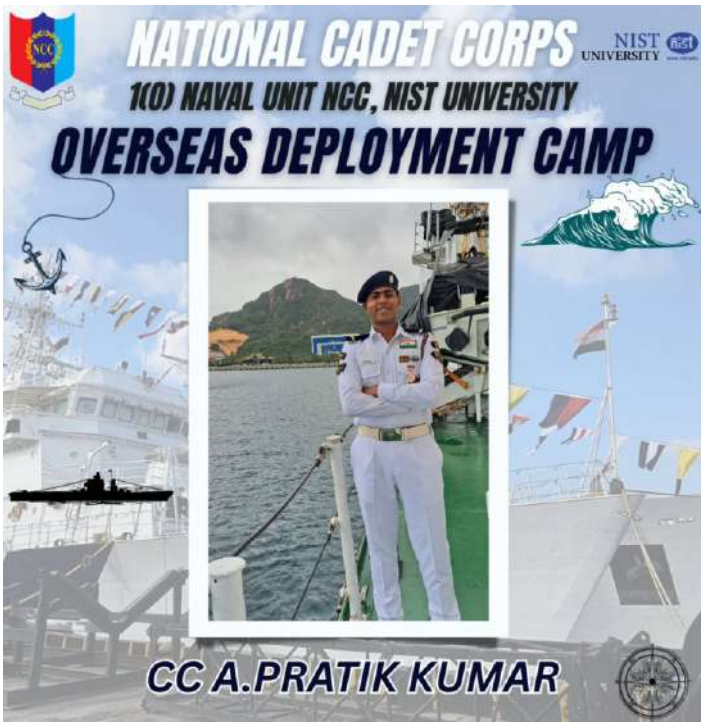
Aayushman Bhava Padhy, a fourth-year undergraduate student from the Department of Computer Science & Engineering, NIST University, presented his research work titled "A Secure Job Application Verification System using OpenID4VC, OpenID4VP, and Blockchain" at the 19th International Conference on Complex, Intelligent, and Software Intensive Systems (CISIS-2025).

The research was carried out under the guidance of Prof. Ch. Sree Kumar from NIST University and Prof. Mauro Migliardi from the University of Padova, Italy. The prestigious conference was hosted at the Fukuoka Institute of Technology, Japan, and brought together leading researchers and professionals from across the globe.

Honored with Recognition at T$0 Gen-AI Hackathon

NIST University congratulates Suryakanta Mahanta, Sujata Kumari, Shreya Kumari, and Bikash Bisoyi for their achievements at the T$0 Gen AI Hackathon organized by JAZZEE Technologies at IIT Bhubaneswar from July 3–5, 2025. The team received the Certificate of Excellence, the People's Choice Award, and the Finalist Award in recognition of their innovation, problem-solving skills, and dedication. This performance reflects the talent, hard work, and innovative spirit nurtured at NIST University.

NIST NCC Cadet Represents India on a Global Stage

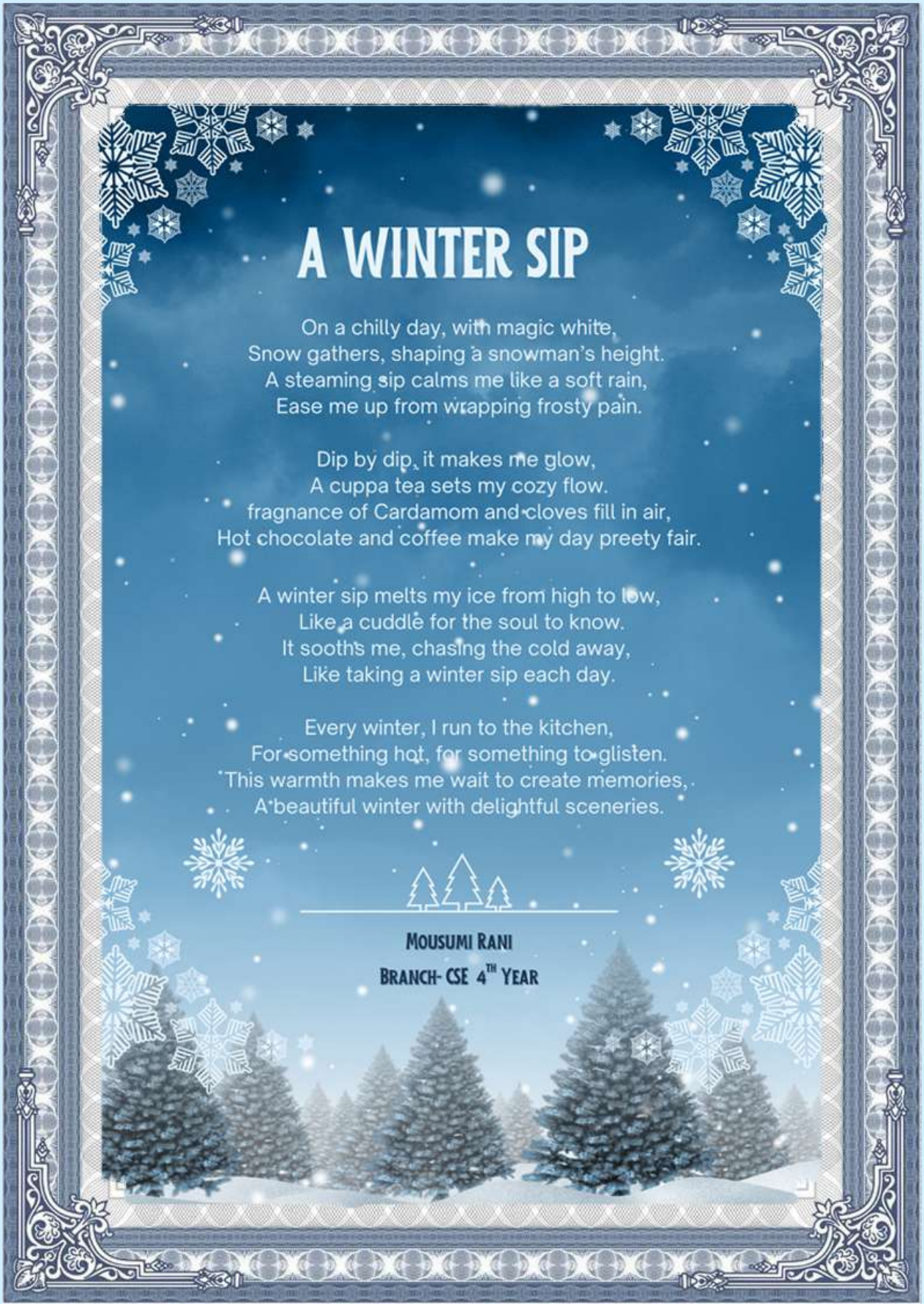


A proud milestone for NIST NCC as Cadet Captain A Pratik Kumar successfully represented India at the prestigious Overseas Deployment Camp. This international camp brought together cadets from across the globe, fostering cross-cultural exchange, leadership development, and international camaraderie. Cadet Captain A Pratik Kumar showcased exemplary discipline, confidence, and dedication-truly reflecting the spirit of Indian NCC on a global platform. His achievement not only brings immense pride to NIST University but also inspires fellow cadets to aim higher and serve with honor. This accomplishment reinforces NIST's commitment to nurturing future leaders with global perspectives.

LITERATURE, ART & PHOTOGRAPHY

Literature

Poetry



LITERATURE, ART & PHOTOGRAPHY

Art & Photography

Mr. Ramshankar Patro
(B.Tech, CSE 2nd Year)

Ms Sanjana Senapati (B.Tech, CSE 2nd year)

Mr. Manab Behera
(B.Tech, CSE 3rd year)

ALUMNI SPEAK

Mr. Dibyajyoti Mohapatra
Current Engagement: Manager, C&I
National Aluminium Company Limited
Branch: Electronics and Instrumentation Engg.
Batch: 2008-2012

Dibyajyoti Mohapatra (DM) is currently serving as Manager, C&I at National Aluminium Company Limited. A graduate in Electronics and Instrumentation from the 2008–2012 batch, Mr. Mohapatra has built his career with a strong technical foundation, applying his expertise in control and instrumentation to contribute to the growth and operational excellence of the organization.

NC: What is your story related to joining NIST?

DM: I aspired to pursue a B.Tech in Computer Science or a related field from one of the top institutes in Odisha based on my OJEE rank. However, only electronics-related streams were available at both Silicon Institute and NIST. After careful consideration and recommendations favoring NIST over Silicon, I chose NIST and looking back, I'm grateful I made the right decision.

NC: What is one remarkable memory with friends that you made while you were at NIST?

DM: There are many memorable moments with my close friends at NIST, but one experience stands out. During our visit to ITER for a robotics competition, our team, formed entirely of first-timers in manual robotics, took on the challenge with no prior experience. We worked tirelessly to understand the problem statement and build our robot. Teaching our friend Subhransu Kumar Sahoo (EEE) how to drive the robot through the obstacle course, while Avinash Kumar (EEE) designed and set up the course without any official support, was an unique experience.

We didn't even have confirmed train tickets or approved attendance, but we pushed forward. Against all odds, we won the competition and to top it off, it happened on the same day that the legendary Sachin Tendulkar scored the first-ever double century in ODI cricket. That day remains truly unforgettable.

NC: Do you recall any location at NIST reminds you of getting motivated or changing your course of action?

DM: Yes, the rock garden near the Octagon at NIST holds a special place in my heart. It was more than just a scenic spot. It became a space for reflection, growth, and bonding. After long, tiring classes, I often sat there with my friends, talking freely about life, academics, careers, or sometimes just random things that made us laugh. We clicked countless pictures there, capturing memories that still bring a smile. Those moments reminded me that no matter how stressful things got, I had friends who would support me, whether it was offering career advice or simply helping me through moments of loneliness. That place quietly motivated me and played a part in shaping both my personal and academic journey.

NC: You must be remembering your teachers. Who were the key influencers and why?

DM: Yes, I fondly remember many of my teachers, but a few truly stood out as key influencers during my time at NIST. Dr. Abhro Mukherjee, Dr. Sasmita Padhy, and Mr. M. Suresh played a significant role in shaping my academic and personal development. They were always approachable, patient, and deeply involved in addressing our queries, which made us feel both supported and responsible. I'm especially grateful to Dr. Abhro Mukherjee, who personally guided me through important career decisions. Their encouragement and mentorship left a

ALUMNI SPEAK

lasting impact on me.

NC: What are your college friends doing now a days? Are you in touch with them?

DM: In my opinion, our batch was one of the best, thanks to the diverse pool of talented students and their outstanding performances across various fields. Most of my friends are now placed in the IT sector, while some pursued MBA and are working in multinational companies. A few of us have secured positions in PSUs, and some have even moved abroad for career opportunities. As for me, I'm primarily in touch with my close friends, although I do occasionally get calls from others. It's always great to catch up and see where life has taken everyone.

NC: If a student of +2 or high school would seek your advice on making a career, what would be your advice? Or may be you would like to give them a mantra or a few thumb rules. Anything?

DM: If a student from +2 or high school were to ask for advice on choosing a career, I'd suggest they should focus on their strengths and passions. Ultimately, whatever field you choose, you should feel fulfilled and happy with your decision in the long run. However, once you've committed to a particular path, stick to it. Seeking advice from too many people can sometimes create confusion and make you second-guess your choices. For example, if someone is passionate about technology, enjoys learning, and wants to pursue research and development, then opting for B.Tech followed by M.Tech and PhD might be the best route. It's important not to get swayed by job offers or salary packages alone after completing your M.Tech, but rather focus on aligning your career with your interests. In short, my mantra would be: "Stick to it, and you will win."

NC: Let's say we have invented time machine. And you have been authorized to do a time travel (round trip) once. What would be that, which you would like to change if possible?

DM: If I had the chance to travel through time and change something, I would focus on encouraging a shift in the approach to student success. I would request all the faculties to understand that attendance alone is not the key to a student's growth. What truly matters is the active involvement in their learning journey. Teachers should play a more hands-on role in motivating students to participate in various technical events outside the institute, where they can gain real-world experience. These experiences often prove to be more valuable than just theoretical knowledge. In the end, it's the lessons learned and the exposure gained that guide a student through difficult situations and shape their future.

NC: What is your take on earning? Desk job, field job, research, entrepreneurship, or even free loading: what works best?

DM: When it comes to earning, I believe the first step should be to secure a stable job that ensures financial independence. Whether it's a desk job, a field job, research, or entrepreneurship, the priority should be to earn and save early. Once you've established a financial foundation, you can then explore your true passions and decide how to shape your life. Wealth-building through smart investments can give you the freedom to choose the path that truly resonates with you in the long run.

NC: Any message that you would like to give to the new students?

DM: To all the new students, my advice would be simple: Make meaningful friendships, gain as much experience as you can, and take responsibility for your own growth. Focus on developing practical skills and start learning about investing early on. Avoid falling into the unnecessary debt trap just to impress others with a lifestyle that doesn't truly bring happiness. Stay focused on your goals, and no matter what challenges come your way, stick firmly to them and push forward until you achieve what you've set out to do.

NIST IN NEWS


NIST University Celebrates its First Convocation
NIST UNIVERSITY
Welcomes you to the
1ST CONVOCATION
Three-Day Workshop on Data-Driv
Decision Making Held at NIST Univers
ଜାତୀୟ କନିଷ୍ଠ ହ୍ୟାଣ୍ଡବଲ୍ ପାଇଁ ଓଡ଼ିଶା ଦଳ
ନିଷ୍ଟରେ ଜାତୀୟ ବିଜ୍ଞାନ ଦିବସ ପାଳିତ
ଆଇଆଇଟିରେ ଜାତୀୟ ଆଲୋଚନାଚକ୍ର
'ନିଷ୍ଟ'ରେ ବିଜ୍ଞାନ ପ୍ରତିଭା ସନ୍ଧାନ ପ୍ରତିଯୋଗିତା
ପକଡିର ସରକ୍ଷା ଆମର ଦା
ନିଷ୍ଟ ବିଶ୍ୱବିଦ୍ୟାଳୟର ପ୍ରଥମ ସମାବର୍ତ୍ତନ ଉତ୍ସବ
Navachar Research and Incubation Centre at NI
INCUBATION CENTER
ବିଜ୍ଞାନ ପ୍ରତିଭା ଅନ୍ୱେଷଣ କାର୍ଯ୍ୟ
GRAND FINALE
ବାଳକରେ ଗଞ୍ଜାମ, ବାଳିକାରେ କଟକ ବିଜୟୀ

THE **OTHER SIDE** OF US