National University of Sciences & Technology

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NUSTIAN



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NUSTIAN
Jan-Jun 2025

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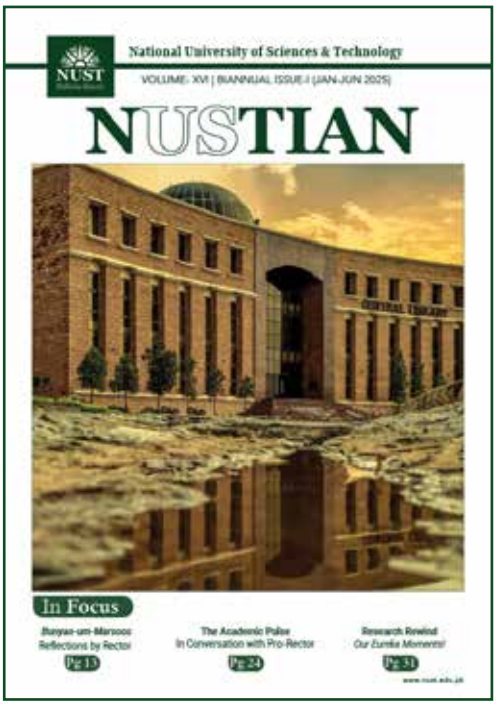

The cover features an artistic visual of NUST Main Library, with its reflection in still waters creating a composition of timeless elegance. As one of the university's iconic landmarks, the library stands as a quiet symbol of intellectual pursuit and excellence. The use of institutional branding, including the NUST logo, reinforces the university's identity and credibility in academic circles. In the context of ***Marka-e-Haq*** (the Battle of Truth), the use of green signifies steadfastness and commitment to serving the nation come what may.

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NUSTIAN Archive Portal

50 Editions. Countless Stories. Infinite Memories

Our Digital Vault of NUSTIAN is now live!

A tribute to Those Who Were, Are, and Will Be Part of Our Story, NUSTIAN Archive Portal is a treasure trove of every edition published since 2010. From nostalgic throwbacks to historic breakthroughs, the chronicle of growth is now just a click away.

Explore them all

https://nust.edu.pk/nust-magazine/



Editor's Note

The latest edition of NUSTIAN takes us through yet another remarkable chapter in NUST's glorious journey. From research and innovation to major projects and impactful global collaborations, particularly with our partners in China, NUST continues to raise the bar in higher education and knowledge creation. The honour of becoming the UNAI Hub Chair for SDG 12 marks a milestone in our commitment to sustainability and responsible consumption, as does the establishment of new research facilities aimed at solving real-world challenges.

In view of the growing scale and significance of institutional developments, the frequency of NUSTIAN has also been increased to a biannual format, allowing for a more comprehensive coverage of milestones. Complementing this shift in cadence is our growing emphasis on digital storytelling. One such initiative is the recently launched NUST podcast series, The Scholar's Avenue, by the Directorate of Marketing & Communications. Showcasing the voices of our accomplished academics and researchers, the series offers a thought-provoking lens into their intellectual journeys and societal contributions.Yet, the university's ecosystem is not solely about labs and lecture halls. The vibrant campus life, from marathons and cycling events to tree plantation drives and water conservation walks, mirrors our philosophy of holistic education that nurtures both mind and character.

We remain deeply grateful to the university's leadership for their kind patronage and strategic guidance in all our endeavours, and NUST institutions and directorates for keeping us updated on latest breakthroughs and myriad milestones.

Wishing you success in your future undertakings. Happy reading!

Faheem Khaliqdad

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HIGHLIGHTS



Chinese Ambassador calls for deeper Sino-Pak academic ties

Marking a momentous step forward in deepening bilateral academic cooperation, H.E. Mr. Jiang Zaidong, Ambassador of the People's Republic of China to Pakistan, visited the National University of Sciences & Technology (NUST) in the month of May. Welcoming the distinguished guest, Rector NUST Dr Muhammad Zahid Latif termed the occasion a "historic day". He hoped that it would mark the beginning of a glorious journey of collaboration between Chinese and Pakistani academic institutions.

Rector NUST also shared that the university maintains active academic ties with several higher education institutions in China. However, he called for leveraging the diplomatic channels to further bolster and streamline these academic and research partnerships. He also announced that NUST is set to launch the Jinnah School of Public Policy & Leadership in the near future, an initiative aimed at fostering informed and evidence-based policymaking in light of regional and global dynamics. In his remarks, H.E. Ambassador Jiang Zaidong lauded NUST's innovation-driven academic ecosystem and cutting-edge research infrastructure, comparing the university's technological landscape with that of China's prestigious Tsinghua University. "Such institutions are the need of the hour," he noted, stressing that reliance on science and technology is indispensable in addressing modern-day challenges.

The Ambassador also echoed Rector NUST's views on the need to enhance academic and research linkages, particularly in the fields of social sciences, and highlighted the importance of experience-sharing between the two nations at academic, governmental, and cultural levels.

During the visit, the Ambassador was given an overview of some of NUST's flagship initiatives. He also visited the National Centre of Artificial Intelligence (NCAI) and the School of Interdisciplinary Engineering and Sciences (SINES), where he observed NUST's cutting-edge work in emerging technologies, such as AI, etc, and cross-disciplinary innovation. He also engaged in a lively exchange of ideas and perspectives with NUST students, urging them to pursue excellence in life.







Chinese delegation discusses avenues of academic cooperation

NUST Institute of Policy Studies (NIPS) hosted a high-level Chinese delegation at the university's main campus in April. The visit was aimed at exploring avenues of academic collaboration between NUST and China's leading universities, research institutions, think tanks, and policy centres. Mr Amir Yaqub, Director NIPS, moderated the session, particularly highlighting the cultural dimension of cooperation between the two countries.

In his opening remarks, Mr Muhammad Arif Malik, NUST Pro-Rector Planning & Resources, warmly welcomed the delegation and emphasised the importance of deepening academic collaboration between Pakistan and China. The delegation was led by H.E. Mr. Lei Xin, Deputy Director General, Information Center, International Department of the Central Committee of the Communist Party of China. In his remarks, he underscored the significance of the visit, highlighting China's commitment to deepening academic, cultural, and people-to people ties with Pakistan.

One of the key highlights of the visit was an interactive session between the Chinese delegation and the faculty and students from NUST School of Social Sciences & Humanities (S3H) and NUST Centre for International Peace & Stability (CIPS). The discussion was primarily focused on joint initiatives, and possible student & scholars exchange programmes. Later, the delegation was given a guided tour of the NUST campus, providing a glimpse into the university's state-of-the-art academic and research facilities, and the robust innovation ecosystem.







Dr Zahid Latif leads NUST delegation to China for







QS Regional Summit | Chengdu, China

Rector Dr Muhammad Zahid Latif led the NUST delegation at the QS Regional Summit held in Chengdu, China from April 9-10, 2025.The summit brought together senior leadership of universities, enterprises, diplomats, education experts and technology avengalists. Key themes included enhancing graduate employability, bridging the academia-industry gaps, and rethinking university strategies amid geopolitical, technological, and environmental transformations.

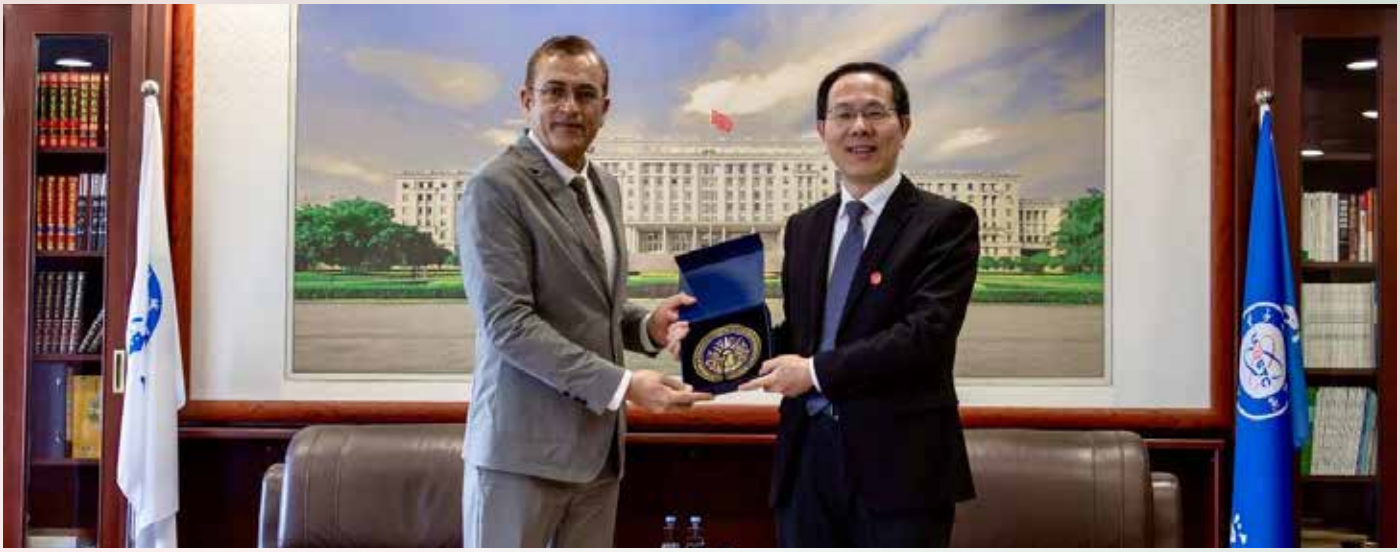
Southwest Jiaotong University in Chengdu, China

On the sidelines of QS Regional Summit, Rector NUST also visited Southwest Jiaotong University (SWJTU) in Chengdu, China on April 10, 2025. The objective was to strengthen academic ties and explore impactful collaboration under the Belt and Road Initiative. The visit included a meeting with President Yan Xuedong and a discussion with Vice President Zhou Zhongrong, along with SWJTU's internationalization and academic leadership teams. A Document of Understanding (DoU) was signed to formalise joint initiatives focusing on collaborative student training, research programmes and academic exchanges.

As a leading institution in Railway and Civil Engineering, SWJTU's global vision and Chengdu's strategic location along the BRI route position it as a valuable partner for NUST in advancing research, innovation and international academic cooperation.

QS summit and strategic academic partnerships





Visit to Sichuan University

Led by Rector NUST, the delegation also held meetings with President Wang Jinsong and Vice President Liu Chao at Sichuan University (SCU) on April 8, 2025. The visit also included interactions at the School of Public Administration and the School of International Studies — institutions with which the Rector shares a longstanding relationship, having previously served as a visiting professor. Discussions centered around deepening faculty and student exchanges, co-developing academic programmes, and exploring collaborative research opportunities. The visit to the Pakistan-China Study Center further reaffirmed both institutions' shared commitment to fostering regional understanding and partnership.

University of Electronic Science and Technology of China

Earlier, during the visit to University of Electronic Science and Technology of China (UESTC) on April 7, 2025, the delegation met with President Hu Jun and the university's senior leadership. Discussions centered around NUST's strengths in digital and computing disciplines and UESTC's recent advancements in AI and tech innovation. Both sides expressed strong interest in developing a long-term partnership, with emphasis on collaborative research, academic exchange and joint talent development initiatives.



NUST Selected as

UNAI Hub Chair for SDG-12

Responsible Consumption & Production (2025-2027)

This honour speaks volumes of NUST's efforts towards advancing sustainable practices, fostering innovation, and championing global responsibility.

KEY HIGHLIGHTS

Selected from **333** institutions worldwide

Among **17** universities globally

Only university from Pakistan

Our commitment to the SDGs reflects our conviction that education must lead the way in shaping a better, greener world.

MAIN OFFICE

Rector NUST outlines his vision at inaugural address to faculty and staff

In his inaugural address to the faculty, officers and staff on February 12, 2025, Rector NUST Dr Muhammad Zahid Latif commended the immense contributions of the university's successive leadership, faculty and staff towards achieving excellence in education, research and innovation. An esteemed academic and a practitioner himself, the Rector outlined his vision of an integrated strategic framework – entailing academic excellence research quality, interdisciplinary approach and , sustainability initiatives. Acknowledging the university's strong foundation in science and technology along with its highly capable human resource, he expressed great optimism that together we could position NUST among the top 100 universities of the world. In addition to our focus on engineering and allied disciplines, the Rector said that we must also strengthen our social science disciplines for their integral role in providing insights into statecraft, policymaking , conflict resolution, and align technological advancements with the societal needs.





NUST INSTITUTE OF POLICY STUDIES

Pragmatic mutual cooperation ideal for Pak-US ties

The NUST Institute of Policy Studies (NIPS) organised a keynote address on "Pak-U.S. Relations" by H.E. Rizwan Saeed Sheikh, Pakistan's Ambassador to the United States on January 2, 2025. Rector NUST Dr Muhammad Zahid Latif, greeted the honourable guest upon arrival, and briefly apprised him of the university's multidimensional knowledge capabilities.

Moderated by Dr Ashfaque Hasan Khan, DG NIPS, the session was attended by statesmen, former senior civil and military officials, veteran ambassadors, public officials, academics, think tank experts, scholars, researchers, and students. There was an expert consensus during the session that pragmatic cooperation and mutual respect are key to unlocking long-term opportunities for bilateral ties.

The participants highlighted the enduring and dynamic relationship between the two states and pointed out its strong future potential.



OUR INTELLECTUAL CAPITAL

Global Standing
#371 in the World, **#67** in Asia
#6 in South Asia
QS Rankings 2025/ 26

Engineering & Technology
#127 in the World
QS Subject Rankings 2025

Our Programmes
168 Academic Programmes, **7** Disciplines,
Engineering programmes (Washington Accord ratified)
4% UG acceptance rate

Research Facilities
400+ labs
34 key laboratories

National Footprint
23 Institutions
7 Campuses
5 cities

International Partnerships
256 institutions
52 countries

Innovation Hub
Pakistan's **1st** S&T Park - National Science & Technology Park (NSTP), (SEZ & STZ)

Alumni Network
58,000+ graduates
70+ countries



Reflections on Operation *Bunyan-um-Marsoos:* Future Role of Youth and Academia

Dr Muhammad Zahid Latif, Rector NUST, delivered a deeply reflective and forward-looking address to students, faculty, and staff on **"Reflections on Operation Bunyan-um-Marsoos and the Future Role of Youth and Academia" on June 2, 2025**. Set against the backdrop of the intense Indo-Pakistan conflict of May 2025, the talk provided strategic insights, moral reflections, and a roadmap for the future. The Rector's vision to the students was not just a message, it was a call. A call to remember that patriotism does not always wear a uniform; it is also about classrooms buzzing, labs experimenting, and ideas igniting. The interaction lit a shared understanding that every Pakistani constitutes the wall of steel in their own right.

In just 3 decades, NUST has acquired a significant status amongst the world's elite Higher Education Institutions (HEIs). Over the years, NUST has emerged as an ultimate force of innovation and research in Pakistan and beyond. The university stands tall as Pakistan's intellectual fortress, quietly yet powerfully reinforcing the nation's strength from within.





ASEAN and Pakistan forge tech partnerships at Landmark Expo NUST

Marking a significant step towards enhanced technological collaboration between the Association of Southeast Asian Nations (ASEAN) and Pakistan. ASEAN-Pakistan Technology Expo 2025 commenced at the National University of Sciences & Technology (NUST), Islamabad on April 22, 2025, The inaugural ceremony, jointly organised by the National Centre of Robotics & Automation (NCRA at NUST) and the ASEAN Committee on Science, Technology and Innovation (COSTI), welcomed 18 international delegates from ASEAN member states and over 600 local participants, including policymakers, researchers, entrepreneurs, and industry leaders.

The Expo featured keynote presentations, panel discussions, innovation showcases, and networking opportunities. Day two included technical breakout sessions and visits to NUST's constituent schools and the National Science and Technology Park (NSTP), facilitating direct interaction between delegates and local innovators and entrepreneurs. The final day was dedicated to identifying concrete avenues for future collaboration, followed by visits to local industries and cultural landmarks. A key highlight of the opening day is the technology exhibition at NUST, where National Centres of Excellence, alongside over 35 dynamic tech companies and startups, showcased their cutting-edge solutions in emerging technologies.

The chief guest, Federal Minister for Planning, Development & Special Initiatives, Prof Ahsan Iqbal Chaudhry, underscored the pivotal role of regional technological cooperation in his opening address. He said that the Expo speaks of Pakistan's commitment to shared progress, collaborative research, and technological advancement with our esteemed ASEAN partners. Leading the ASEAN delegation, Dr Lim Tiong Ho, Chair of the Sub-Committee on Micro-electronics and Information Technology (SCMIT) ASEAN, highlighted the critical importance of international forums in tackling shared technological challenges and driving innovation-led growth.





Rector NUST, CM Balochistan discuss NBC development

Rector NUST Dr Muhammad Zahid Latif called on Chief Minister Balochistan Mir Sarfraz Bugti on Tuesday, April 29, 2025. He expressed gratitude for the government's continued support towards the development of NUST Balochistan Campus. He underscored the importance of enhanced student enrollment through scholarships, inclusive campus life via provision of requisite facilities such as hostels, and sports infrastructure, and boosting sustainability with solar energy solutions. The Rector also proposed strengthened collaboration between NBC and relevant government departments.





NUST hosts Balochistan college principals

NUST Professional Development Centre organised the Certificate in Educational Leadership & Management programme, specifically designed for Balochistan College Principals. The closing ceremony was graced by Minister for Education, Ms Raheela Hameed Khan Durrani, as the chief guest. Prominent amongst others were Secretary Higher Education, Balochistan, and Dr Saeed Ur Rehman, Director General Projects, NUST.

The programme, a collaborative effort between PDC and the Balochistan Academy of Continuing Training (BACT), aimed to equip college principals with essential leadership and management skills for effective academic and institutional development. Principals both from male and female colleges shared their valuable insights and expressed their commitment to implementing the acquired knowledge in their respective institutions.

In her remarks, the chief guest expressed her commitment to investing in human development and creating world-class colleges and universities in Balochistan through collaborative initiatives. She appreciated the cooperation extended to principals for learning opportunities and applauded the NUST Professional Development Centre team for their excellent work. Dr Saeed Ur Rehman highlighted the importance of collaborative approach, and offered NUST's support to BACT in creating better educational and research facilities and HR in Balochistan.



NATIONAL SCIENCE & TECHNOLOGY PARK

British High Commissioner to Pakistan visits NUST

H.E. Ms Jane Marriott, the British High Commissioner to Pakistan, paid a visit to the National University of Sciences & Technology (NUST) on January 16, 2025. Rector NUST Dr Muhammad Zahid Latif greeted the honourable dignitary upon arrival at the NUST main office. During the meeting, the two sides expressed their commitment to strengthening collaboration between NUST and the leading higher education and research institutions across UK. They particularly examined potential partnerships to enhance knowledge-sharing and drive impactful advancements in various fields.

Earlier, the High Commissioner, along with other members of the delegation, visited the National Science & Technology Park (NSTP) at NUST, and interacted with several startups, including LearnObots, Orbit-Ed and Vyro. She expressed her admiration for the innovation-driven startups making meaningful contributions to sectors such as edu tech, smart tech, energy tech, etc. Later, the delegates visited NUST School of Interdisciplinary Engineering & Sciences (SINES), which houses 7 international laboratories. They also visited the Centre for Emerging Technologies (CEMTECH) at NUST, wherein the briefing highlighted the center's leading work in AI, Chip Design etc.





NUST PLACEMENT OFFICE

Career Connect brings industry to campus

With a view to connecting its final-year students with leading employers from diverse sectors, and helping businesses meet their workforce requirements, NUST Placement Office (NPO) held the highly anticipated "NUST Career Connect '25 at the university's main campus on February 25, 2025. The chief guest, Rector NUST Dr Muhammad Zahid Latif, commended the industry for their overwhelming participation in the career fair to meet their human resource needs from a dynamic pool of NUST graduates. The event sponsors included PTCL/UFONE, Nestle, Jazz, Bestway Cement, Careem, Telenor Microfinance Bank, NADRA, Gaditek, Foodpanda, Reon Energy, Carbonteq, Wateen Telecom, and KIA Lucky Motors.



NUST COLLEGE OF ELECTRICAL AND MECHANICAL ENGINEERING

National Engineering Robotics Contest 2025

As many as 200 teams from across Pakistan took part in the 21st edition of National Engineering Robotics Contest (NERC), held by NUST College of Electrical and Mechanical Engineering from June 19 to 21, 2025. The three-day event had nine categories, including Indigenous Robots, Modular Robots for schools and universities, Robowars and Aero. The event was jointly organized with STEM Careers Program, HEC and sponsored by PSF, Headstart School, NCRA, Rapidev Pvt Ltd, SOME (Society of Mechatronics Engineers), RMT and Colgroad.com.

Engr Asheer Mahmood Khan, Commandant College of E&ME, in his address, welcomed everyone to the pioneering and biggest Robotics contest of the country. Lt Gen Inayat Hussain, HI(M), Chief of Logistics Staff (CLS), Pakistan Army graced the occasion as chief guest. In his address, he complimented the efforts of NUST and College of E&ME for the promotion of Robotics among the youth of Pakistan. He termed NERC a platform that provides engineering students with an opportunity to hone their skills, think innovatively, embrace the spirit of collaboration and teamwork, and enhance their problem-solving abilities.





PAKISTAN NAVY ENGINEERING COLLEGE

PNEC team stands out at Shell Eco-Marathon 2025

Team Envision from NUST PNEC made Pakistan proud at Shell Eco-Marathon 2025, winning 1st place in the Communications Award! Their hard work, teamwork and determination helped them overcome every challenge and clear all technical and safety inspections. A special thanks to faculty advisors for their support.



NUST BUSINESS SCHOOL

NUST triumphs at International Edventure & Manara Competition

Under the guidance of Dr Sana Imran, a dynamic team of BBA students from NUST Business School (NBS) showcased exceptional talent and teamwork at the prestigious International Edventure & Manara Competition. The team, comprising Zujajah Arshad, Fatima Rizwan Siddiqui, Sahar Arshad, and Lal Nisa Dilawar, competed on the global stage with an innovative campaign titled "Building Allies of Coexistence."

This campaign emphasized the importance of fostering strong, inclusive partnerships in today's interconnected world. Their visionary approach and compelling presentation impressed the international jury, earning them the first-place award among numerous competing teams.

As a result of their victory, the team won a fully sponsored trip to Abu Dhabi, where they had the unique opportunity to present their campaign at NYU Abu Dhabi, engaging with global thought leaders and fellow innovators.

In addition to this remarkable recognition, the team received a cash award of USD 5,000, a testament to their creativity, dedication, and impact.

This achievement not only highlights the academic excellence nurtured at NUST Business School but also reflects the school's commitment to empowering students to become global leaders and change makers.





ATTA-UR-RAHMAN SCHOOL OF APPLIED BIOSCIENCES & NUST SCHOOL OF HEALTH SCIENCES

Healthy Aging and Longevity (HeAL) initiative

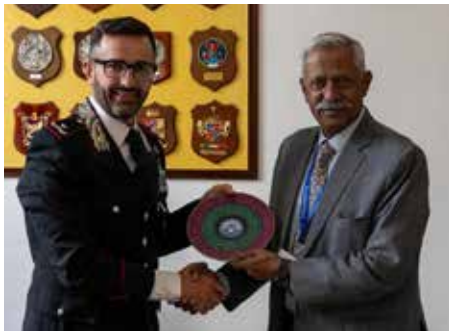
NUST, under its HeAL (Healthy Aging and Longevity) initiative, organised a free cardiac camp and launched pioneering aging research in the Hunza and Nagar Valleys. The camp was led by volunteers from NUST Atta-ur-Rahman School of Applied Biosciences (ASAB), NUST School of Health Sciences (NSHS), and national healthcare partners (FGPC and KIH). Activities included cardiovascular screenings, blood sampling, lifestyle surveys, and genetic screening to explore aging markers. The overwhelming response from local communities and leaders has further reinforced the need to continue this impactful outreach annually.



CENTRE FOR INTERNATIONAL PEACE AND STABILITY

Executive Committee Meeting at IAPTC 2025, Italy

The Executive Committee of the International Association of Peacekeeping Training Centres (IAPTC) convened at the Centre of Excellence for Stability Police Units (CoESPU) in Vicenza, Italy, from May 6 to 9, 2025. It served as a preparatory event for the forthcoming 29th IAPTC Conference. The primary objective of the meeting was to identify the conference theme, sub-themes, and settle administrative arrangements. Principal NIPCONS Maj Gen Raja Aftab Khan, HI (M), (Retd), serving as President of IAPTC, and Associate Dean CIPS Dr Muhammad Makki represented Pakistan on this forum.





SCHOOL OF CIVIL AND ENVIRONMENTAL ENGINEERING

NUST wastewater management system draws interest of UNESCO and GIZ

UNESCO and GIZ delegations visited NUST to explore the university's innovative wastewater management solutions and sustainable water practices at the Integrated Constructed Wetland (ICW). Prof Dr Muhammad Irfan, Principal & Dean SCEE, welcomed the delegation, led by Syed Muhammad Raza Shah (UNESCO) and Ms Naing Yee Mar (GIZ). The visit featured presentations by SCEE faculty, followed by a site tour conducted by Prof Dr Hamza Farooq Gabriel. They examined the potential integration of NUST's ICW initiatives into TVET qualification frameworks, capacity-building programs, and skills development efforts





SCHOOL OF INTERDISCIPLINARY ENGINEERING & SCIENCES

Anadolu Creator Lab inaugurated at NUST

In a significant milestone for fostering innovation and technical excellence, Federal Minister for Communications Mr Abdul Aleem Khan and H.E. Dr Irfan Neziroglu, Ambassador of Türkiye to Pakistan formally inaugurated the Anadolu Creator Lab at NUST School of Interdisciplinary Engineering & Sciences (SINES). A state-of-the-art makerspace established with the support of the Turkish Cooperation and Coordination Agency (TIKA), the lab has been operational for the past two years.

Extending his felicitations to NUST and TIKA for the landmark initiative, the minister emphasised that it aligns with the national vision of advancing innovation through practical, experiential learning. Ambassador Dr Irfan Neziroglu highlighted the lab's strategic role in cultivating critical thinking, adaptability, and cross-cultural communication. Prof Dr Irtiza Ali Shah, Principal SINES, highlighted some of the lab's key contributions to interdisciplinary innovations. Earlier, Dr Zartasha Mustansar, Head of Department at NUST-SINES, outlined the lab's unique capabilities, describing it as the first of its kind in Pakistan, established in the spirit of "learning by doing."





NUST ADMISSIONS DIRECTORATE

CDA partners with NUST to boost HR standards

In a major step towards addressing human resource shortages across CDA's different wings through a transparent, merit-based recruitment process, the Capital Development Authority (CDA) has joined hands with NUST to implement a fully computerised, merit-based recruitment system. The MoU was signed on April 29 at CDA Headquarters during a meeting chaired by CDA Chairman Muhammad Ali Randhawa and attended by senior CDA officials and a delegation from NUST's Admissions Dte. Under the agreement, NUST will oversee the entire recruitment lifecycle—from application screening to conducting computer-based written exams—using scientific, automated protocols.





MAIN OFFICE

IGT&E pays visit to NUST

Lt Gen Muhammad Aamer Najam, Inspector General Training & Evaluation (IGT&E) paid a visit to the main campus of the National University of Sciences & Technology (NUST), where he was warmly greeted by the Rector NUST Dr Muhammad Zahid Latif. During a one-on-one meeting, the two discussed the university's new initiatives, high-impact R&D projects, and future plans. The visit also featured a detailed briefing on NUST's operations and its accelerated transdisciplinary growth over the years. IGT&E lauded the university for its monumental progress over the years, commending its role as a leading centre of academic excellence and innovation in the country.





US-PAKISTAN CENTER FOR ADVANCED STUDIES IN ENERGY

Innovation in Energy event highlights the transformative potential of renewable energy

The National University of Sciences & Technology (NUST), under the auspices of Office of Sustainability and USPCAS-E, hosted the "Innovation in Energy" event, hihlighting the transformative potential of renewable energy in shaping Pakistan's climate-resilient future. Dr Shezra Mansab Ali Khan Kharal, Minister of State for Climate Change and Environmental Coordination, graced the occasion as Chief Guest.





Rector undertakes NUST-wide orientation visits

As part of his orientation engagements, Rector NUST Dr Muhammad Zahid Latif visited various academic and administrative units across the university to gain deeper insight into their operations, strengths, and challenges. During his interactions, the Rector emphasized the importance of strategic alignment, service quality, and collaborative culture in driving NUST's mission forward. He highlighted the need to develop integrated systems, enhance capacity, and adopt forward-looking practices that cater to the evolving needs of students, faculty, and society at large. Underscoring the significance of planning with purpose, leveraging technology, and nurturing leadership potential, Dr Zahid Latif reiterated his resolve to strengthen NUST's foundation as a globally competitive institution rooted in national relevance. His visits mark a renewed momentum toward coherence, impact, and a future-ready university ecosystem.














COLLEGE OF ELECTRICA
HANICAL ENGINEERING








NUST







THE ACADEMIC PULSE: IN CONVERSATION WITH PRO-RECTOR

Prof Osman Hasan, PhD

Prof. Osman, thank you for joining us. To begin, could you share a bit about your educational and professional journey, and how your personal values have influenced your commitment to higher education?

I was raised in Islamabad, as my father was a public servant posted here. I must say that my upbringing had a strong emphasis on ethics, responsibility and public service. Those values stayed with me. I pursued my Bachelor's in Electrical Engineering from UET Peshawar and graduated in 1997. After that, I worked in the local industry for a couple of years before heading to Canada in 1999 to pursue my Master's degree from Concordia University in Montreal. After completing my MEngg. in 2001, I again chose the industry path, working as a chip design engineer in Canada. It was during those years that I realized how deeply interconnected academia and industry should be.

The real turning point came when I decided to pursue a PhD in 2004. I chose a very niche and intellectually demanding area, i.e., formal verification, which is a system analysis technique that lies at the intersection of computer science, mathematics and logic. It was a natural fit for someone like me, who has always enjoyed rigorous thinking but also wanted the work on real-world applications.

After completing my PhD in 2008 and spending another 18 months as a postdoctoral fellow, I returned to Pakistan in 2009 after about a decade and I was drawn back with a deep sense of purpose. I joined NUST-School of Electrical Engineering and Computer Science (SEECS) as an Assistant Professor.

Since then, NUST has been an incredible learning ground for me; not just in teaching and research, but also in academic leadership. I've had the privilege of learning from outstanding seniors, inspiring colleagues and even my students. Over the years, I've led national-level mega research projects, secured international research grants and engaged in several academic mobility programs abroad. I even tried my hand at entrepreneurship that allowed me to lead a couple of startups that didn't quite take off, but the lessons from those failures were invaluable.

In parallel, my journey in academic leadership evolved organically. I started by contributing to various academic committees, then served as Head of Department (Research), later as Associate Dean of Electrical Engineering and eventually became the Principal of SEECS. Today, as Pro-Rector (Academics), I carry those accumulated experiences with me, always with a focus on how our academic systems can become more responsive, inclusive and forward-looking.

How have these experiences shaped your work at NUST?

In more ways than I could list. My exposure to both academia and industry in different cultural and economic settings helped me understand how a fourth-generation university should function, i.e., anchored in research, but responsive to society, government and the market.

I've always believed that universities shouldn't operate in isolation. My time in industry taught me the kinds of skills and mindsets that are valued in the professional world. So, I made it a personal mission to help students bridge that gap by developing not only technical knowledge, but also adaptability, resilience, problem-solving and critical thinking.

Moreover, thanks to my father's public service legacy, I've always seen higher education not just as a profession, but as a form of service to society. That's why I've consistently advocated for stronger academia-industry-government linkages. These connections don't just benefit students and faculty members but they lead to sustainable, real-world solutions for the challenges we face as a nation.

You have had a longstanding and continuing association with NUST. We would like to hear your thoughts on the university's journey so far, and how its academic ecosystem reflects and advances NUST's overall vision?

NUST is still a very young university, i.e., just about to be 35 years old. In academic terms, that's infancy. And yet, NUST today stands tall among the region's top universities.

This growth and recognition haven't come by chance. I attribute it to a blend of visionary leadership, a merit-based and resilient system and most importantly, our people.

Our faculty come from some of the



We develop systems and policies and we follow them with consistency and integrity. This has allowed a strong culture of meritocracy.

world's best universities and bring a lot of diversity and know-how about the world best practices to our knowledge ecosystem. I always make this comment to our visitors that you name a developed country
and I can probably introduce you to a colleague with a PhD from there.
Add to that a deeply committed support staff and the brightest students in the country, who are inducted after a rigorous selection process with an acceptance rate of under 4%. Moreover, I truly admire our institutional discipline. We develop systems and policies and we follow them with consistency and integrity. This has allowed a strong culture of meritocracy to flourish, which is, frankly, quite rare in our society.
At the same time, NUST isn't a siloed ivory tower. We've worked hard to position ourselves as a fourth-generation university anchored in thought leadership, societal impact and sustainability. Whether it's through our research, our curriculum, or our entrepreneurial ecosystem, there's always a strong orientation toward national relevance and global responsibility.
Our continued progress is deeply tied to our collaborations with industry, with the government and with international institutions. These relationships facilitate the co-creation of knowledge, the exchange of ideas and the real-world application of research and education.

NUST has maintained a strong presence in global and regional university rankings. What do you attribute this success to, and what steps are being taken to further elevate this standing?

My honest view is that rankings, while important, should never be the primary goal. They should be seen as a natural outcome of doing the right things, such as delivering quality education, conducting meaningful research and building strong engagement with our stakeholders. That said, Alhamdulillah, our performance in global rankings has been quite encouraging. We're currently ranked 371st in the world in the QS World University Rankings, 64th in Asia and 6th in South Asia according to QS regional rankings.

Moreover, our Engineering discipline is ranked at 127th in the world as per the QS Subject rankings. For a university that's just over three decades old, these are significant milestones.

I would attribute this success first and foremost to our team including our committed faculty, talented students, accomplished alumni and dedicated partners. Our faculty members deliver rigorous, forward-looking education and lead impactful research, while our students consistently rise to global standards. Our alumni, now spread across more than 70 countries, continue to enhance NUST's reputation through their contributions in academia and industry. And our partnerships both at the national and international level strengthen our global relevance through joint research, student exchanges and collaborative initiatives.

Furthermore, we're developing targeted marketing and communication strategies to better project our achievements nationally and internationally. Expanding academic and industrial linkages, increasing international faculty and student engagement and deepening our integration with society to ensure greater societal impact of our research are all key priorities as we move forward.

What are some of the key mechanisms in place to ensure quality of NUST academic programs across its 7 campuses in 5 cities?

Ensuring quality across a multi-campus, multidisciplinary university like NUST is certainly a complex task, but one we've approached with a clear strategy. NUST today offers over 165 academic programs to more than 20,000 students, supported by over 1500 faculty members. While we inherited a strong culture of academic discipline from our early military-run institutions, we've built on that through robust institutional mechanisms designed for scale and consistency.

At the heart of this is our Quality Assurance Directorate, which works closely with the Higher Education Commission (HEC) and various accrediting bodies to ensure our programs meet national and international standards. All our academic offerings are aligned with the National Qualifications Framework and we strictly implement HEC's policies on teaching, assessment and faculty appointments.

We also maintain close ties with accrediting bodies, like PEC, PMDC, NCEAC and NBEAC, depending on the discipline. These accreditations not only validate our programs but also provide external benchmarks for quality. For our business program, we're currently pursuing international accreditations like AACSB and SAQS.

Quality assurance at NUST isn't just about meeting standards but it's about creating a learning environment that's accountable, forward-looking and committed to excellence across all campuses.

How is NUST integrating interdisciplinary learning and research into its academic framework to address contemporary challenges?

Most contemporary challenges no longer fit within the boundaries of a single discipline. Whether it's climate change, public health, or AI ethics, tackling them requires a fusion of knowledge and skills across domains. At NUST, we're very intentional about cultivating this mindset in both our teaching and research ecosystem at the undergraduate level, we offer students the option to pursue minors outside their core discipline, encouraging them to broaden their academic exposure. For our postgraduate students, we've made it possible to take up to half of their coursework outside their home departments, which naturally opens up opportunities for cross-disciplinary learning.

One of our most strategic initiatives in this space is the establishment of the School of Interdisciplinary Engineering and Sciences (SINES). We've physically brought together some of the top-performing research labs from different schools of NUST at SINES to create an environment where scientists and engineers from different fields can work in close proximity and, more importantly, in collaboration. SINES currently houses around 40 active labs and we're already seeing meaningful outcomes in terms of joint projects and publications.

To support this further, we also provide dedicated seed grants to our faculty members to support interdisciplinary research. And because research thrives on real-world connections, we've deliberately positioned SINES very close to the National Science and Technology Park (NSTP). This setup enables researchers and startups to co-create, share ideas and tackle complex problems together.

SINES is also offering interdisciplinary academic programs, such as Bioinformatics and Climate Change and Sustainable Development, to prepare graduates



who are not only academically sound but also equipped to navigate the interconnected nature of today's global challenges.

How is NUST strengthening its international collaborations, and what impact have these partnerships had on academic excellence, research, and global visibility?

We see internationalization not as a standalone objective, but as something deeply interwoven into our core missions of teaching, research and knowledge transfer. Exposure to diverse academic cultures brings in new standards, ideas and pedagogies that enrich our classrooms and sharpen our institutional practices.

To operationalize this, we focus on three key strategies: international partnerships, a dedicated International Recruitment and Facilitation section for international guests and what we call "internationalization at home."

Through fostering international partnerships, we are able to provide rich mobility and joint research opportunities for our students and faculty. We have exchange agreements with over 250 universities in more than 50 countries. These enable everything from semester exchanges and short-term internships to research stays, collaborative teaching and international placements. Our International Recruitment and Facilitation section focuses on attracting high-quality international students and faculty while ensuring a smooth onboarding experience. From academic placements to visa facilitation and campus integration, this center supports all our incoming international visitors.

And then there's our third dimension, i.e., internationalization at home. Not every student gets the opportunity to travel abroad, but that shouldn't limit their exposure to global perspectives. We address this by embedding international elements into our academic and campus life through foreign language course offerings, the presence of international cultural and study centers, etc. These experiences enrich classroom learning, foster cultural awareness, empathy and an appreciation for global diversity.

Student-led clubs and societies are a vibrant part of campus life. In what ways do they complement academic learning and foster leadership among students?

The employers of our graduates often mention that our graduates are usually well-prepared in technical skills but it is the soft skills that really set the candidates apart. The ability to work in teams, communicate effectively, show initiative and lead responsibly are all qualities we endeavour to inculcate in our students. It is achieved through the platform of our clubs and societies that complement the university experience. Our Student Affairs Directorate supports around 40 active clubs and societies, each catering to different interests, ranging from the NUST Community Service Club and Environment Club to the Debating Society, Adventure Club, Fine Arts Club and Literary Circle. Similarly, many prestigious postgraduate scholarships prioritize candidates with demonstrated leadership and community involvement, which again underlines the importance of such student experiences.

> "The ability to work in teams, communicate effectively, show initiative and lead responsibly are all qualities we endeavour to inculcate in our students. It is achieved through the platform of our clubs and societies that complement the university experience"

Looking ahead, what are some of the key academic initiatives NUST is planning to undertake in the next five years?

Over the next five years, we plan to focus on three key academic directions that align with this broader vision.

The first is a renewed focus on developing good human beings and responsible citizens. As part of this, we're undertaking a comprehensive review of HEC UG Education Policy's General Education (GE) curriculum, aligning it with global best practices, ethical frameworks, civic responsibility and core moral foundations.

Secondly, we are moving purposefully into the hybrid and online learning space, but with quality and relevance at the center of our approach. We have established a dedicated office, i.e, NUST ConnectED, equipped with expertise in video production, instructional design and graphic development. Our faculty have been trained in collaboration with international partners, including the University of Utah, to produce rigorous and pedagogically sound content. We've already launched micro-credentials and are now developing hybrid credit-bearing courses, with full online programs planned as a next step. But, it is very important to note that this is very different than what we did during the COVID era as we're emphasizing interactivity, contextual learning and peer engagement to ensure inclusivity and academic excellence.

And thirdly, we're continuing to build on what has always been a core NUST strength, i.e., experiential, hands-on learning. We offer a wide range of out-of-classroom programs that give our students real-world exposure through industry and government collaborations. Whether it's final year projects, internships, or innovation challenges, these initiatives equip our students with the skills and mindset required to solve real problems and add immediate value in their careers.

Any message you would like to share from the platform of NUSTIAN ?

NUST is more than just a university and I consider it as a national asset and, in many ways, a silver lining for Pakistan's future. It's our shared responsibility in our respective roles to help make it even better and more impactful.

NUST Cycling Rally inspires

The spirit of sustainability and community came alive at the National University of Sciences & Technology (NUST) with an electrifying turnout at Green Wheels – NUST Cycling Rally 2025. Rector NUST Dr Muhammad Zahid Latif and an overwhelming number of students, faculty, and staff joined the rally that stretched across the scenic Islamabad campus.

Echoing "Pedal your way to a better lifestyle," the rally was aimed at promoting cycling as a sustainable mode of mobility, foster camaraderie among the university community, and appreciate the campus' mesmerising landscape. The rally also marked the official launch of the NUST's first-ever Cycling Club, a significant milestone in the institution's ongoing commitment to reducing its carbon footprint and encouraging wellness-focused activities.

Another exciting feature of the rally was award of as many as 20 bicycles through balloting across 4 different categories. Speaking at the event, the Rector praised the enthusiasm of the NUST community and expressed his commitment to promoting similar activities on campus. He maintained that the formation of NUST Cycling Club would further reinforce our efforts to build a healthier, greener and more connected campus.







eco-friendly, healthy lifestyle











RESEARCH & INNOVATION



*Unveiling NUST's first-ever **Wall of Rankings**, designed and installed by Marketing & Communications (MARCOMS) Dte*

Research Rewind
Our Eureka Moments!

Breaking Down Smog: Innovative Filtration for Cleaner Cities

Dr Sana Yaqub of USPCAS-E, NUST has developed an innovative Smog-Free Tower (SFT) to address urban air pollution. This large-scale filtration system efficiently captures airborne pollutants, including particulate matter (PM2.5 and PM10), using a combination of activated carbon, polyester fiber, and polypropylene fiber filters. The SFT operates by generating artificial smog through controlled combustion of coal and cooking oil, which is then passed through the filtration system. A bottom suction fan ensures efficient airflow, maximizing pollutant removal. Under optimal conditions, the SFT achieves a 97.8% removal efficiency for PM2.5 and 98.4% for PM10, covering an area of 113 m². The system operates on 48.3 kWh/month, making it an energy-efficient solution for urban environments. The SFT has been tested under various conditions to optimise its efficiency, including filter position and diameter. The filters remain effective for 3-4 cycles before requiring replacement or regeneration. This initiative aims to improve air quality in urban areas, contributing to healthier and more sustainable cities.



Hazy SDVN: A Strategy to Keep Motorways Open During Foggy Seasons in Pakistan

Dr Huma Ghafoor from SEECS, NUST has developed an innovative solution to address the challenges posed by dense fog on Pakistan's motorways during the winter months. This initiative, termed "Hazy SDVN," integrates Software-Defined Networking (SDN) with vehicular communication systems to enhance road safety and maintain traffic flow under low-visibility conditions. The system employs a hierarchical architecture comprising a Main Controller (MC), Optimal Controller (OC), and Local Controllers (LCs) installed at strategic roadside units such as toll booths, cameras, and streetlights. These controllers monitor real-time vehicle data, including speed, position, and road visibility, and disseminate critical information to drivers, enabling them to adjust speed or change lanes proactively. Utilizing Dedicated Short-Range Communication (DSRC) and machine learning algorithms, the system ensures efficient communication and optimal routing, achieving high delivery ratios and minimal delays. Simulations indicate that the Hazy SDVN can significantly improve safety and traffic management on fog-affected motorways, offering a scalable and cost-effective solution to a recurring problem. Future enhancements may incorporate driver behaviour analysis and 6G technology to further refine the system's capabilities.



From Signs to Text: Bridging Silence with Intelligent Recognition

Dr Neelma Naz from NUST School of Electrical Engineering & Computer Science (SEECS) is bridging the communication gaps for individuals with hearing and speech impairments. Their research introduces the Multi-Scale Efficient Graph Convolution Network (MSE-GCN), a cutting-edge AI model designed to translate sign language into text in real-time. Unlike traditional methods, MSE-GCN employs multi-scale separable convolutions and a multi-branch network with early fusion to capture both fine-grained and broader motion patterns. Additionally, the Spatial-Temporal Joint-Part Attention (ST-JPA) module focuses on the most relevant body parts and critical joints in the sign sequence, frame by frame, enhancing the model's ability to distinguish subtle variations in complex signs. This approach addresses the inherent challenges in Sign Language Recognition (SLR), such as visually similar signs and the need for real-time processing. The MSE-GCN model offers a lightweight and efficient solution, making it suitable for deployment on edge devices.



Development of Biodegradable Sutures for Surgical Incisions and Wounds

Dr Muhammad Shoaib Butt from SCME, developed biodegradable, antibacterial-coated sutures aimed at reducing surgical site infections (SSIs), a prevalent and costly issue in healthcare. By employing natural herbal extracts and a dip-coating technique, the team created sutures that not only inhibit bacterial growth but also promote faster wound healing and minimize the need for additional antibiotics. In vitro and in vivo evaluations demonstrated the sutures' effectiveness against common bacterial strains, showcasing their potential to enhance patient recovery and reduce postoperative complications. This innovation offers a sustainable and biocompatible alternative to traditional sutures, aligning with global efforts to improve surgical outcomes and combat hospital-acquired infections.



Turning Superfoods into Sweets: The Rise of Spirulina and Chlorella Hard Candies

Dr Hussnain Janjua from NUST Atta-ur-Rahman School of Applied Biosciences (ASAB), has developed innovative hard candies infused with spirulina and chlorella, aiming to make these nutrient-rich microalgae more palatable and accessible. Traditionally known for their high protein, vitamin B12, iron, and antioxidant content, spirulina and chlorella often face consumption barriers due to their strong flavors and textures. By incorporating these superfoods into hard candies, the study achieved a product that retains significant antioxidant activity and nutrient stability even after high-temperature processing. The candies, containing 5–10% protein per serving, received positive feedback in sensory evaluations, with consumers favoring them over traditional sugar candies. This approach not only masks the earthy taste of the algae but also aligns with clean-label trends by utilising organic flavors and natural pigments, presenting a promising avenue for functional food in innovation.



Milliseconds to Make a Difference: Predicting Falls Before They Happen

Dr Qaiser Riaz, from SEECS, NUST has developed an AI-powered wearable system capable of predicting falls before they occur, offering a significant advancement in elderly care. Unlike traditional post-impact detection methods, this system utilizes inertial sensors and a deep learning model combining CNNs and BiGRUs to detect falls within 46–52 milliseconds, allowing for timely activation of protective measures. Validated on a dataset encompassing 36 activities, the system achieved up to 98% accuracy and demonstrated scalability across various devices, from high-end equipment to everyday wearables like smartwatches. This innovation holds promise for enhancing safety and independence among older adults by proactively preventing fall-related injuries.



British Council awards prestigious research grant

NUST, in collaboration with King's College London, UK, and the University of Warwick, UK, has been awarded a prestigious research grant under the TNE Exploratory Grants 2024 by the British Council. The project, "GAIN - Generative AI in Engineering Education through Project-based Learning," is led by Professor Dr Rafia Mumtaz at NUST, with Dr Tabbi Wilberforce from King's College and Dr Freeha Azmat from Warwick contributing to this transformative initiative. The partnership highlights NUST's pivotal role in advancing innovative educational practices through global collaboration.







Project funding awarded under NATO SPS programme

Prof Dr Syed Ali Hassan has been awarded project funding under the prestigious and highly competitive NATO Science for Peace and Security (SPS) Program. The project titled "Shielding HAPS against Intelligent Link Level Attacks," has been allocated EUR 381, 285 for a period of three years.

The project deals with finding innovative solutions for upcoming 6G satellite communications systems where high altitude platforms, serving as base stations, may suffer from security vulnerabilities. Prof. Ali will lead the initiative as the NATO Partner Country Project Director, working alongside Dr. Sohaib J Solaija from Gebze Technical University, Türkiye, who will serve as the NATO Country Project Director. We are proud to mention that Dr. Sohaib is an alumnus of NUST and remained a student of Prof. Ali at both UG and MS levels at SEECS-NUST.

NATO's support and financial backing serve as a testament to the project's scientific merit while also emphasizing Pakistan's strategic and technological relevance in the international arena. We extend our profound congratulations to Prof. Ali and the entire project team on this outstanding achievement!



SEECS researchers secure coveted global grant

Dr Muhammad Moazam Fraz, Dr Muhammad Imran Malik, and Dr Junaid Younus have successfully secured a research grant of €200,000 for their project titled "Ba-Ikhtiyar Jawan: Upscaling & Digitisation of Vocational Education Curriculum in Pakistan." The project is funded by the German Academic Exchange Service (DAAD) under its esteemed "Higher Education Dialogue with the Muslim World" programme. This initiative aims to modernise and expand vocational education in Pakistan through the integration of digital tools and practices, empowering the youth for a more skilled and sustainable future. Congratulations to the team on this significant achievement that strengthens international academic collaboration and contributes to educational reforms in Pakistan.



Dr Sher Jamal secures major environmental project with the Punjab Government

Dr Sher Jamal Khan, a tenured Professor at the Institute of Environmental Sciences and Engineering (IESE), SCEE-NUST, has secured a prestigious consultancy project in a joint venture with SKAFS Consultants (Pvt.) Ltd. The project, titled "Establishment of Environmental Reference Lab under Environmental Monitoring Center (EMC)", was awarded by the Environment Protection & Climate Change Department, Punjab. The contract, valued at PKR 40.88 million, aims to develop a state-of-the-art laboratory infrastructure, including procurement, design, SOP development, and ISO certifications. Dr. Khan is leading the initiative as the Project Director (Technical) on behalf of NUST, with completion targeted within 14 months.





Grant for Sustainable Agricultural Residue Management and SMOG Reduction

Dr Musharib Khan, Assistant Professor at SCEE), has been awarded a competitive research grant of PKR 1.74 million by the Pakistan Institute of Development Economics (PIDE) under the Research for Social Transformation and Advancement (RASTA) Competitive Grants Program for Policy-Oriented Research (Round 7.0). The funded project titled "Sustainable Agricultural Residue Management Options for Smog Reduction," aims to holistically assess the environmental, economic, social, and policy dimensions of existing and alternative agricultural residue management and valorisation strategies, with the ultimate goal of contributing to smog reduction in Pakistan. Dr Musharib Khan is the Principal Investigator, while Dr. Muhammad Shoaib Ahmed Khan from NUST College of Electrical and Mechanical Engineering (CEME) is the project Co-PI.



SCEE (IESE) awarded European Union grant

SCEE (IESE) awarded European Union grant Institute of Environmental Sciences and Engineering (IESE-NUST) has been awarded a prestigious grant of €349,375 (PKR 105 million) under the European Union-funded project titled "Industrial Water Efficiency: Reuse, Resource Recovery and Energy Efficiency for Greener Digitised EU Processes (RESURGENCE)." The project aims to transform EU process industries into Wastewater Resource Recovery Facilities (WWRRFs) supporting the EU's 2050 strategic goals of climate neutrality, circularity, and competitiveness (3KC). RESURGENCE will implement a portfolio of modular, flexible treatment systems and advanced digital technologies to improve water and energy recovery, enhance efficiency, and promote industrial wastewater valorisation. The total approved budget for the 20-member consortium is €9,222,570.50, with NUST serving as a key contributor through research, innovation, and sustainability focused strategies. Dr Sher Jamal Khan and Dr. Muhammad Arshad, both tenured Professors at SCEE-IESE, are representing NUST in the project.



An-FOMBR

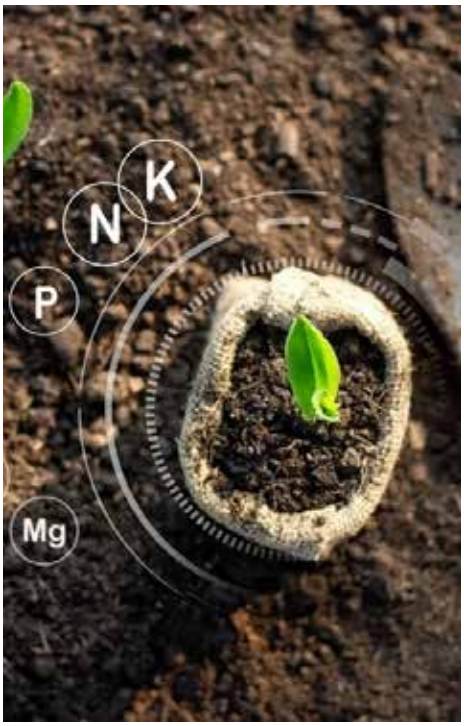


Hybrid biological systems

IESE faculty wins competitive HEC research grant

Dr Muhammad Arshad, Professor at SCEE (IESE), NUST, along with his Co-Principal Investigators Dr. Muhammad Ansar Farooq and Dr. Iram Gul, has secured a competitive research grant under the Higher Education Commission's Technology Development Fund (TDF). The awarded project, titled "Nano-coated Phosphorus Fertilizer for Crop Yield Improvement," has received a funding for a duration of 24 months. This groundbreaking initiative aims to enhance agricultural productivity through the development and application of nano-coated phosphorus fertilizers, contributing to sustainable and efficient farming practices.





PNEC students win big at EPIC

Pakistan Navy Engineering College (PNEC-NUST) students, Abdul Hadi and Syed Abdul Haseeb Ali, secured 1st place in the EPIC by K-Electric Innovation Challenge for their Tamper-Proof PMT-based Loadshedding Solution. Chosen from over 250 entries nationwide, their project offers a scalable, real-world solution to enhance grid reliability and combat energy theft. EPIC by K-Electric is a national platform that empowers academia and innovators to address critical energy challenges. This win highlights NUST PNEC's commitment to impactful innovation.





Scholars Avenue

A one-on-one with the brains behind

SCHOLARS AVENUE
Podcast x NUST

What fuels a scholar's journey? What drives a researcher to keep asking questions the world hasn't thought to ask yet?

Scholars Avenue invites you into compelling conversations with NUST's distinguished faculty and researchers—not just about what they do, but why they do it. Each episode unravels the personal convictions, quiet struggles, and defining moments that shape their professional pursuits and their commitment to creating societal impact. Walk the avenue.

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Dr Ashfaque Hasan Khan
DG
NUST Institute of Policy Studies



Dr Rafia Mumtaz
Associate Dean, Dept of Computing
SEECS



Dr Hammad M. Cheema
Project Director
NCDC



Dr Yasar Ayaz
Professor, Director NCAI
SMME



Dr Sher Jamal Khan
Professor
IESE-SCEE



Dr Badee Alshameri
HoD Geotechnical Engineering
NICE-SCEE



Dr Asfia Obaid
HoD Management & Human Resouces
NBS



Dr Irtiza Ali Shah
Principal & Dean
SINES



Dr Zartasha Mustansar
HoD Dept of of Engineering
SINES



Dr Seemab Latif
HoD AI and Data Science
SEECS



Dr Umar Shahbaz
Professor, Director NCRA
CoEME



Dr Shah Rukh Abbas
PI Biosensors & Therapeutics Lab
ASAB

Our Crew



Amanullah Mir
Host



Syed Haider Ali
Host



Syed Raza Ali
Host



Zohair Kaleem
Producer



Afaq Ahmed
Asst Producer

InnoNest: cultivating the next generation of innovators

NUST Business School, through its flagship initiative NUST Business Park, proudly launched InnoNest—a pioneering programme designed by Dr Fizza Khalid. The inaugural four-month cohort, launched in October 2024, welcomed 12 high-potential student teams. Held weekly at the Kashar Asghar Innovation and Entrepreneurship Lab (KAIEL-NBS) delivered 12 hands-on workshops. The programme concluded with a high-energy Demo Day, hosted as part of the TeamUp event by the NBS Business and Entrepreneurship Club. The impact was immediate: four teams from the inaugural cohort have already been shortlisted for Stage 3 of the prestigious Finding Innovative & Creative Solutions (FICS) competition, with their innovations gaining traction within NUST and beyond.







Ivey Publishing features NUST's ground-breaking study

A ground-breaking case study developed at NUST Business School has been officially published by Ivey Publishing, one of the world's leading providers of business case studies. Titled "JazzWorld to SIMOSA: A Blueprint for Digital Transformation from App to Ecosystem," the case captures one of the most ambitious product evolutions in Pakistan's digital economy and is now part of Ivey's global distribution network, reaching over 25,000 educators and professionals across 168 countries.

Intellectual Property training for NUTECH

NUST recently conducted an Intellectual Property Training Session for National University of Technology (NUTECH) faculty and staff, emphasising the importance of IP in fostering innovation and protecting creative ideas. Led by Mr Shahbaz Ahmad, the session provided insights into IP identification, novelty assessment, and filing processes, reinforcing NUST's commitment to strengthening the IP ecosystem within academia.



URAAN Innovation Hub – Season 2

On World Creativity & Innovation Day, NUST participated in the launch of URAAN Innovation Hub – Season 2, hosted by the Ministry of Planning, Development & Special Initiatives, Government of Pakistan. Representing NUST, Mr. Shahbaz Ahmed, General Manager (IP & Legal Affairs), highlighted the university's unmatched leadership in Intellectual Property Rights (IPR) and Technology Transfer.



FICS 2025 spurs youth innovation beyond borders

Held on May 27, 2025 at Azerbaijan Technical University (AzTU), Baku, the 2nd International Chapter of Finding Innovative & Creative Solutions (FICS 2025) showcased youth-led innovation and cross-border collaboration. NUST in partnership with AzTU Azerbaijan organised the event featuring as many as 62 student teams from 21 universities across Azerbaijan and two teams from Kazakhstan, pitching their startup ideas to a panel of leading academics and industry experts.

Distinguished guests included Rectors from AzTU, BHOS, and Karabakh University, as well as Dr Rizwan Riaz, Pro-Rector (RIC) from NUST, who emphasised the role of FICS in driving youth innovation across borders. CleanX – Baku Higher Oil School secured the first prize in the competition. All winning teams will advance to the FICS 2025 Grand Finale at NUST Islamabad this August, joining a network of innovators tackling real-world problems.









Insights

OPINIONS



"Game-based peer assessment as learning"

Strategy to Promote Critical Thinking

By: **NSHS**

In an effort to inculcate critical thinking and higher-order learning among undergraduate medical students, an innovative game-based peer assessment as learning (GPAL) strategy was successfully implemented during the Neurosciences-1 module of the second-year MBBS program at the Anatomy department of NUST School of Health Sciences.

Grounded in constructivist educational theory and informed by Kolb's experiential learning cycle, this intervention invited students to actively engage with a digital game-based guide that encouraged deeper interaction with the course content. The aim was to transition students from passive receivers of information to active co-creators of knowledge.

As part of the activity, students were tasked with authoring multiple-choice questions (MCQs) related to the neuroanatomy component of the module. These MCQs were designed to reflect varying levels of Bloom's Taxonomy, progressing from basic recall to critical analysis and creation. By requiring students to construct questions rather than merely answer them, the strategy promoted System 2 thinking deliberate, reflective, and analytical processing essential for sound clinical reasoning.

Each student-authored MCQ was subsequently peer-reviewed using a structured feedback mechanism. Peers were encouraged to provide constructive critique focused on the clarity, relevance, and cognitive level of the questions. This phase of the exercise provided students with opportunities for both reflective observation and abstract conceptualization, consistent with the stages of Kolb's model.

From this pool of submissions, the top 10 high-quality MCQs selected based on cognitive rigor and design were compiled to form the foundation of a custom-designed Neuroanatomy Board Game. This board game served as a capstone learning tool, consolidating complex concepts through peer-led gameplay and collaborative reasoning. Students engaged in the game during the final week of the module, using it as a revision and reinforcement exercise in a stimulating and interactive environment.

The strategy was developed with the core objective of enhancing the critical thinking skills of medical students a competency increasingly recognized as vital for safe and effective clinical decision-making. Preliminary feedback has been overwhelmingly positive, with students reporting improved conceptual understanding, increased motivation, and appreciation for peerbased learning models.

This pilot initiative highlights the potential of gamification and peer-assessment as valuable pedagogical tools in undergraduate medical education. Plans are underway to expand the strategy to other modules and evaluate its impact on learning outcomes more systematically in future cycles.



Media Minds in Motion

By: **Tehreem Arjman** (Student S³H)

The 6th semester Mass Communication students turned ideas into impact through their Media Entrepreneurship course taught by Dr Tehreem Azeem. They launched 12 original digital media ventures as part of their final project for the course. The initiative provided an opportunity to apply theoretical knowledge to real-world challenges, allowing students to explore diverse domains such as marketing, journalism and public relations through a practical, hands-on approach.

One standout project, Et Cetera, introduced a digital magazine tailored to the youth of Pakistan, offering curated content on fashion, music, film, and food - free from the clutter of typical social media noise. Another venture, Parwaaz, focused on telling the stories of small entrepreneurs through YouTube documentaries and Instagram content, with their debut featuring a home-based baker from Islamabad.

In the realm of public relations, Rabt PR stood out with its purpose-driven storytelling. Their flagship campaign with Afsanah, a women-led crochet brand employing differently-abled artisans, generated significant impact through influencer collaborations. Meanwhile, Business Outsider made business knowledge accessible by simplifying jargon through memes and trendy short-form content, resonating especially with Gen Z.

Together, these ventures reflect not just innovation and creativity but a forward-thinking mindset. The projects exemplify how NUST students are already shaping the future of Pakistan's digital media industry - one bold idea at a time.



Parwaaz *presents: homegrown dreams, baked to perfection.*



Parwaaz *in action: capturing stories, one frame at a time.*



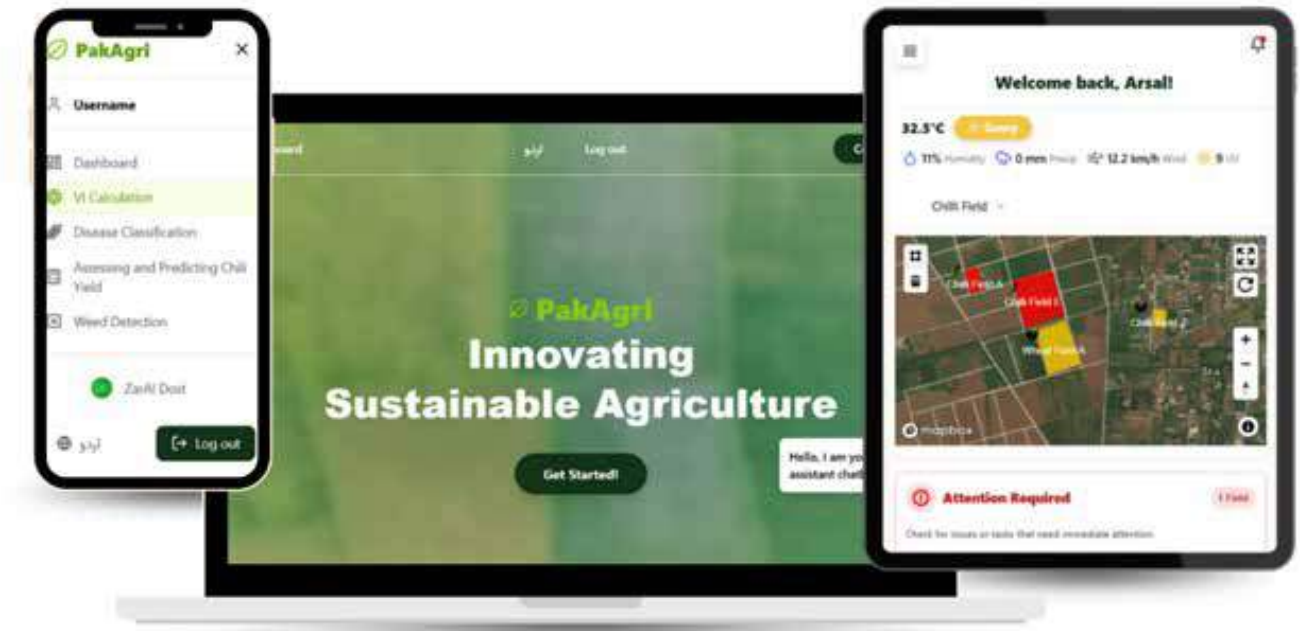
Rabt PR: *weaving stories of strength, dignity, and purpose.*



Business Outsider: *breaking down the economy, one scroll at a time.*

PakAgri: An Integrated Digital Platform for Smart and Sustainable Agriculture

By: **Dr Rafia Mumtaz** (SEECS)



Amidst the rise of Industry 4.0, small-scale farmers are under growing pressure to keep pace with large-scale agribusinesses. To remain competitive, they are increasingly expected to adopt advanced tools such as precision agriculture, data analytics, and automation, technologies that improve yields, optimize resource use, and increase efficiency. But adopting these innovations isn't straightforward. Each stage of the farming cycle, from pre-season soil analysis using satellite data and GPS mapping to variable-rate planting, automated seeding, crop surveillance, and AI-driven insights, demands specialized technologies from multiple providers. This fragmented ecosystem forces farmers to coordinate with multiple vendors, often needing several to cover basic operations. Such a fragmented approach is not only costly and inefficient but also a major barrier to adoption. To overcome this, farmers need integrated solutions, robust support systems, and accessible training to navigate these platforms. Building trust and streamlining access to these innovations is essential for small farmers to thrive in a rapidly evolving agricultural landscape.



Figure 1: PakAgri: one-stop solution for agricultural problems

PakAgri

Introducing PakAgri (Figure 1), a comprehensive platform designed to meet all agricultural needs, supporting farmers from pre-seeding to post-harvest with cutting-edge technologies and evidence-based solutions. By consolidating essential services into a single, user-friendly system, PakAgri eliminates the hassle of dealing with multiple vendors. It also supports collaboration with agricultural researchers to deliver scalable, multilingual solutions made for global impact and progressive farming practices. Data for our models is locally sourced from the National Agriculture Research Center, ensuring its relevance to local conditions. PakAgri system provides a farmer with complete end-to-end capabilities. Our multi-lingual landing page, equipped with a chatbot that responds to questions both in Urdu and English, guides users through our features and is responsive on a laptop, tablet, and mobile screens. Through the interactive and easy-to-use dashboard (Figure 2), farmers are able to manage their farms by creating individual fields on the map available through our dashboard. They can perform various activities.

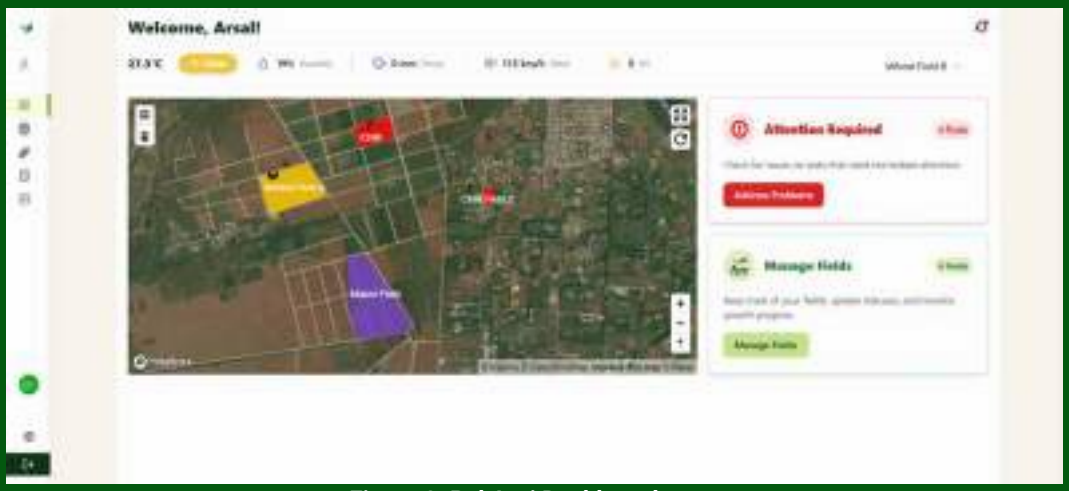


Figure 2: PakAgri Dashboard

Wheat Disease Detection

Wheat plays a vital role in meeting the rising global demand for food as the world's population continues to grow. As one of the most extensively grown crops worldwide, it contributes approximately 20% of the daily caloric intake for people around the globe. Wheat stripe rust is a highly destructive fungal disease that can severely damage wheat crops. If uncontrolled, it has the potential to kill up to 75% of infected plants, leading to significant yield losses. PakAgri platform offers individuals with ability to upload pictures of wheat plants, after which it localizes and classifies leaves into three categories with descriptions.

Chilli Yield Estimation

Accurate estimation of chilli yield is crucial to ensure efficient use and prevent wastage. However, conventional methods are slow and labor-intensive, relying on weighing the chillies to determine yield. This process is also destructive, as it often involves uprooting the plants. The chilli yield estimation tool detects chillies in complex, natural backgrounds. Specifically tailored to identify unripe (green) chillies and distinguish them from similarly colored surroundings, the model accurately determines the total number of chillies in an image. This enables farmers to get an accurate count without the need to uproot plants to weigh them. Figure 3 showcases the results displayed by our website.

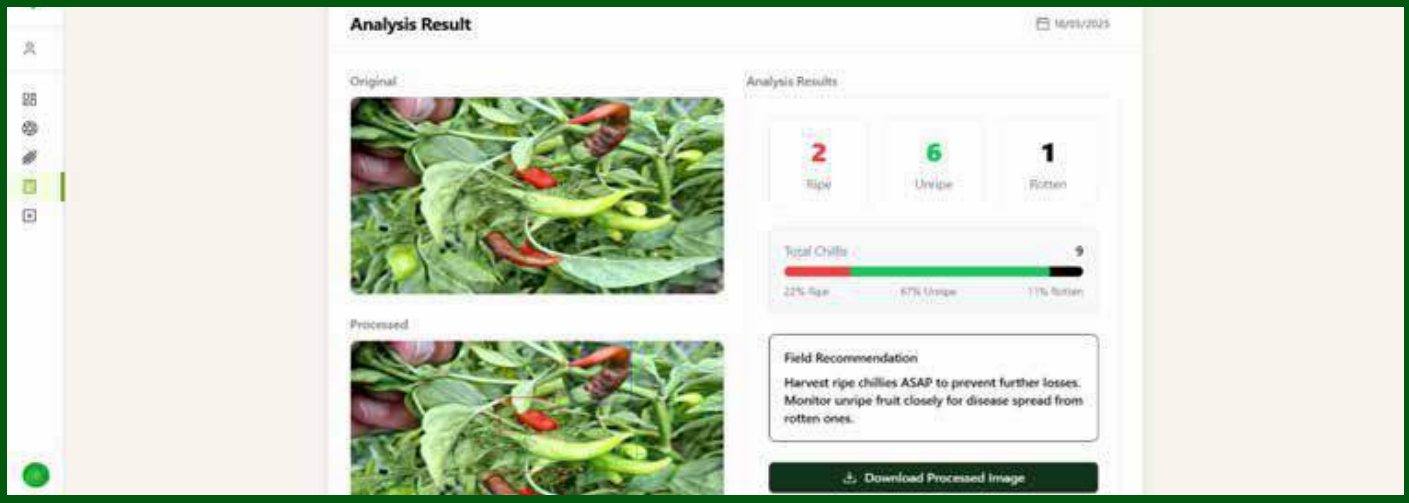


Figure 3: Chilli Yield Estimation Page

Weed Detection

Weeds pose a significant threat to crop health by competing for key resources like sunlight and water. Ensuring high crop yields depends heavily on effective weed control. A critical step in this process is accurately identifying and separating weeds from the actual crops to avoid unintentional harm. While manual identification is feasible, it is often unreliable due to the dense weed population and their typically small size. PakAgri platform provides a generalized weed identification tool to distinguish crops and weeds of any species from crop row images and provides reliable estimates of weeds in the fields. Figure 4 shows the weed detection results obtained by PakAgri.

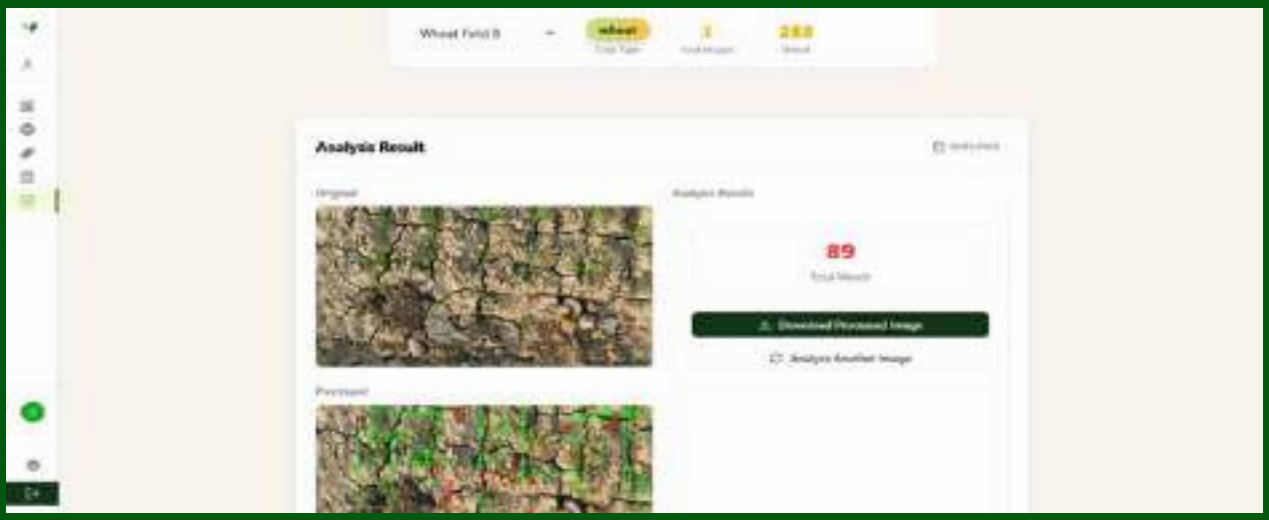


Figure 4: Weed Detection Interface

Super Resolution

Super resolution helps enhance low-resolution images by upscaling them to higher quality. This is especially valuable for satellite imagery, where freely available data is often too low in resolution to be effective for small-scale analysis. PakAgri platform offers access to super-resolution capabilities via a dedicated endpoint, with full details available on the website.

Vegetation Indices Vegetation indices serve as key indicators for assessing the health of crops and soil. Among them, the Normalized Difference Vegetation Index (NDVI), introduced in 1973, has become a foundational tool in satellite image analysis. Today, NDVI remains widely used, especially in regions with extensive vegetation coverage, due to its effectiveness in monitoring plant health and growth patterns. PakAgri allows users to extract NDVI data across various periods and visualize it directly on their fields. This enables them to track and compare historical NDVI trends for each field individually, providing valuable insights into vegetation health over time. Figure 5 shows the page to overlay vegetation onto field maps.



Figure 5: Vegetation Indices Page

Soil Moisture Mapping

Soil moisture maps serve as important decision makers for irrigation and moisture control. They prevent crops from drying up, as well as ensuring that no water is wasted. PakAgri platform provides users the ability to generate historical soil moisture data and compare it by overlaying it onto their fields. Figure 6 shows the soil moisture map overlaid onto the field.

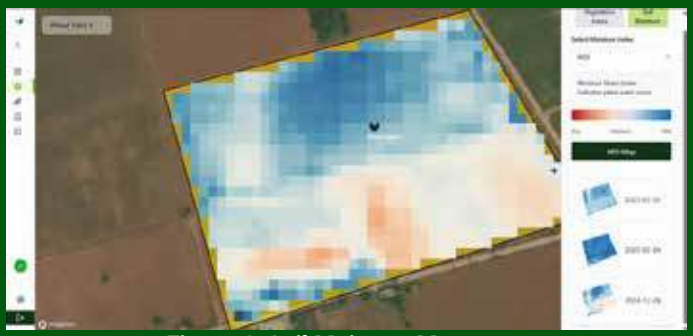


Figure 6: Soil Moisture Map

Overall, PakAgri currently offers five different services for farmers. In the future, the services will be further expanded and additional modules will be integrated to enhance the platform's capabilities, improve decision-making, and support sustainable and efficient farming practices across diverse agricultural landscapes.

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China-Pakistan Iron Alliance: Forging Strategic Security through Mutual Dependence

By: **Nasir Ali Shah Bukhari** (President of KASB Group, Pakistan)

Introduction

Nasir Ali Shah Bukhari, with over 40 years of leadership experience in business, education, and social services, believes in Confucian wisdom and maintains long-standing friendships with Chinese think tanks and scholars. He studied at Peking University. Recently, he has been at the forefront of Pakistan's Green Movement, pledging to plant one billion trees. This vision is realized through strategic initiatives that combine environmental protection with social enrichment.

I. HISTORICAL AND CHINESE PERSPECTIVES: THE FOUNDATIONS OF CHINA-PAKISTAN STRATEGIC INTEGRATION

Modern China-Pakistan partnership is not accidental but the result of centuries of pragmatic geopolitical development. Historically, China's interactions with South Asia are rooted in two enduring principles:

1. "Western Regions Strategy"

Since the Han Dynasty (206 BC–220 AD), Chinese rulers recognized the importance of consolidating the western frontier to prevent external threats from disrupting the mainland. During the Tang Dynasty (618–907), alliances with Central Asian states to resist Tufan and Turkic expansion institutionalized this strategy. Today, Pakistan plays a similar role—serving as the "anchor point" of China's "Western Strategy," countering Indian and American influence in the region.

2. "Buffer Zone" Strategy

During the Ming (1368–1644) and Qing (1644–1912) dynasties, China used buffer states to absorb external pressures, much like Pakistan today, which acts as a buffer against Indian and Western interference.

In the 1963 China-Pakistan border treaty, Pakistan ceded parts of Kashmir to China. This treaty was not only an act of goodwill but a strategic move—an example of "divide and rule."

3. Chinese Strategic Thought: From Sun Tzu to Han Feizi

Chinese governance philosophy has long been rooted in realism, influenced by two major schools of thought:

Sun Tzu's Art of War:

"The best victory is to win without fighting."

Chinese military support for Pakistan—such as J-10 fighters, Type 054 frigates, and HQ-9 missile systems—is a strategic move: distracting India and reducing pressure on the Himalayan border.

Han Feizi's Legalist Thought:

"The ruler's art depends not on external chaos but on its own unchangeability."

The China-Pakistan "Iron Alliance" embodies this principle:

- Joint defense R&D (e.g., transfer of J-31 stealth fighter technology)
- Forward deployment (e.g., PLA presence at Gwadar Port and Gilgit-Baltistan)
- Economic leverage (e.g., China-Pakistan Economic Corridor)

All are used to ensure strategic interdependence and deterrence.

4. Taiwan Factor: The Pivot of Chinese Strategy

China's core strategy for "bloodless" reunification with Taiwan hinges on deterring U.S. intervention. Pakistan plays a crucial role in this strategy.

In the second front against India: a strong Pakistan forces India to divert forces from the Himalayas, preventing it from opening new fronts during a Taiwan crisis.

Indian Ocean access: Gwadar Port enables China to project naval power into the Arabian Sea, disrupting U.S. carrier operations near Taiwan.

Diplomatic influence:Pakistan's influence in the Islamic world (e.g., Shanghai Cooperation Organization, Arab League) helps China counter Western narratives on Xinjiang and Taiwan.

5. Strategic Significance of India-Pakistan Water Resource Agreements

China's support for Pakistan's water security is not merely benevolent but strategic. The 1960 "Indus Waters Treaty" (IWT) is a colonial legacy favoring India.

China's upstream dam projects on the Brahmaputra River give it leverage—India's attempts to restrict Pakistan's water could provoke Chinese retaliation.

The "Iron Alliance" plans to establish formal water resource cooperation mechanisms, turning river control into a geopolitical asset.

6. Economic Interdependence: From "Belt and Road" to Security Framework

China's economic strategy resembles a "tribute system": offering economic privileges in exchange for loyalty.

The China-Pakistan Economic Corridor (CPEC), with nearly $62 billion in investments, has become Pakistan's economic lifeline, aligning Islamabad's international strategic orientation with China.

Unlike traditional debt diplomacy, Chinese investments have strategic military and political returns—strategic "entanglement," not just economic dependence.

7. The "Iron Alliance" as a Pillar of Survival for Both Countries

ForChina:

- Pakistan is a tool against India
- A shield for Taiwan unification
- A conduit for energy and influence reaching the Indian Ocean

For Pakistan:

- The only guarantee against Indian hegemony
- A vital economic partner
- A safeguard against Western abandonment

II. THE IRON ALLIANCE — A STEEL-STRONG STRATEGIC PACT

Proposed components of the Steel Alliance Agreement:

1. Political and Diplomatic Commitments

Mutual recognition of core strategic interests—China's Taiwan unification, regional influence; Pakistan's counter to India.

Coordination of stances in international forums (UN, SCO, BRICS).

Signing crisis response protocols to ensure unified responses during regional conflicts and external pressures.

2. Military and Security Cooperation

Regular joint military exercises, intelligence sharing, and defense R&D (e.g., missile technology, cyber security).

Deepening cooperation on advanced weapons (stealth tech, drones, naval assets).

Enhancing China's military presence in strategic Pakistani locations (Gwadar, Gilgit-Baltistan).

3. Economic and Infrastructure Integration

Expanding CPEC beyond energy and transportation to include communications, pipelines, and digital infrastructure.

Strengthening financial interdependence through currency swaps, joint investment funds, and trade priorities.

Sharing strategic resources—ensuring access to energy and minerals.

4. Water and Environmental Security

Formal cooperation on basin management, dam operations, and water sharing to prevent conflicts.

Joint environmental projects to address climate change impacts on water and energy security.

5. Technology and Industrial Cooperation

Establishing joint R&D centers focusing on defense tech, AI, cyber security, agriculture, and renewable energy.

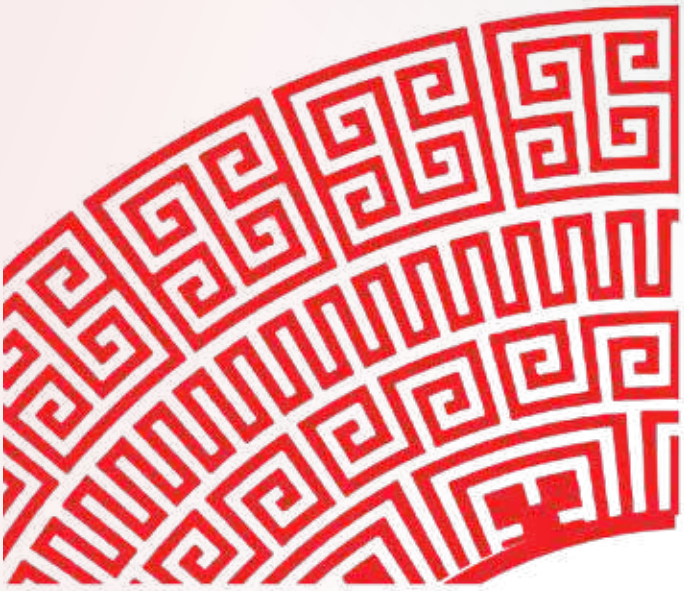
Developing industrial parks to enhance self-sufficiency and reduce reliance on external supply chains.

6. Cultural and People-to-People Exchanges

- Increasing scholarships, academic exchanges, and media collaboration to foster mutual understanding.
- Grassroots projects to cultivate shared strategic identity and support for the alliance.

7. How Pakistan Supports China's Long-term Goals

- Enhancing military deployments in Gilgit-Baltistan, Karakoram Highway, and Gwadar as strategic frontlines.
- Supporting deterrence related to Taiwan: promoting diplomatic and intelligence cooperation in South Asia and the Islamic world.
- Securing Indian Ocean influence: ensuring Gwadar port's stability, developing maritime security, and supporting Chinese naval operations.





CONFERENCES & WORKSHOPS



NUST holds seminar on "Tackling Disinformation in a Global Age: A Conversation with BBC Leadership"

Building resilience against disinformation is vital as Journalism is at war with fake news in the digital age, said Jonathan Munro, Global Director and Deputy Chief Executive of BBC News. He was speaking at a seminar titled "Tackling Disinformation in a Global Age: A Conversation with BBC Leadership" held at NUST School of Social Sciences and Humanities (S3H). Organised in collaboration with not-for-profit Global Neighbourhood for Media Innovation (GNMI). The seminar was attended by students and academics in large numbers.

Munro emphasised that credibility comes first. Media organisations should not compromise on their credibility and ethical practices while breaking news. "To be right is better than to be first. It is very essential that we verify information going in the public domain. The key is to cross-check information before we publish. If we take one thing away today, it should be this: get it right rather than be first. And if a human mistake occurs, correct it and own it," Munro said.

Commenting on the growing use of Artificial Intelligence in newsrooms. Munro said that AI is a tool not a substitute for editorial responsibility. He stressed the importance of clear editorial guidelines and transparency to ensure that technology strengthens, rather than weakens, public trust in news organisations. "Media organisations should focus on verifying facts and assessing which narratives genuinely require correction. Responsible journalism means making editorial decisions about what merits correction and what risks giving undue visibility to misinformation (disinformation), "Munro said.

Advising Journalism students, Munro encouraged curiosity and public-interest storytelling, and to ask critical questions, seek out facts, and be open to diverse perspectives. "Journalism is not a commercial or financial product - it is vital human communication," he concluded, underlining the role of media in ensuring the public has access to a diversity of views.

Earlier in his remarks, Dr Zafar Mahmood, Principal and Dean, NUST School of Social Sciences & Humanities (S3H) said that disinformation and fake news is one of the most critical challenges facing journalism, democracy and society. Najia Ashar, founder and President of GNMI said in her keynote, "We are not just dealing with fake news anymore; we are confronting a global disinformation ecosystem. We need to train journalists, media educators, influencers, and content creators to use AI, verify information, and report ethically.



NUST hosts 4th ASEAN-Pakistan Conference on Materials Science

The National University of Sciences and Technology (NUST) is currently hosting the 4th ASEAN-Pakistan Conference on Materials Science (APCoMS) from May 5 to 8, 2025. The conference is aimed to foster knowledge sharing, innovative research, and collaborative endeavors in materials science, paving the way for groundbreaking discoveries and advancements. It has brought together field experts, researchers, and students from ASEAN member states, including Canada, Europe, and China. Dr Mukhtar Ahmed, Chairman Higher Education Commission (HEC) of Pakistan, graced the opening ceremony as the chief guest. Ambassadors and senior diplomats from various countries also attended the inaugural ceremony.



International Conference on Microwave, Antennas & Circuits

NUST School of Electrical Engineering & Computer Science (SEECS) organised the 2nd International Conference on Microwave, Antennas & Circuits (ICMAC 2025) from April 17 to 18, 2025. The conference featured a vibrant technical programme with 52 high-quality research papers, eight distinguished keynote speakers, and a rich lineup of technical, industrial, and poster sessions, including dedicated sessions on Women in Engineering and Young Professionals. Five pre-conference workshops were also conducted on cutting-edge topics including AI in IC Design, Radar System Design using MATLAB, Integrated Communication and Sensing, Reconfigurable Intelligent Surfaces, and a Quantum Bootcamp focused on RF-based Quantum Computing. Events like ICMAC serve as powerful platforms for advancing innovation and collaboration in RF, microwave and semiconductor technologies.



Assistive Technology and Inclusion Summit

Themed on "Transformative Solutions for Inclusive Development: The Role of Innovation in Fueling an Accessible and Equitable World," the Assistive Technology and Inclusion Summit (ATIS-2025) at NUST brought together over 200 changemakers, experts, and stakeholders. Organised collaboratively by NUST and Pak Everbright Development Organization (PEDO), ATIS-2025 served as a vital platform to address the critical need for assistive products, especially digital devices, for differently-abled persons and senior citizens in Pakistan.

Key highlights included a panel discussion on "Innovation for Accessibility: The Role of Academia, Industry, and Organizations of Persons with Disabilities (OPDs) in advancing Inclusion." Mr Shahab Ud Din, CEO of PEDO, stated, "ATIS-2025 marks a significant step towards a truly inclusive society in Pakistan." Mr Ahmad Al-Mosa Al-Malkawi, Head of the Physical Rehabilitation Programme (PRP) at the International Committee of the Red Cross (ICRC), said that ATIS-2025 provided an incredible platform to share knowledge, foster collaboration, and accelerate solutions that promote independence and inclusion, he maintained.

The summit is expected to yield tangible outcomes, including pilot projects for researchers in assistive technologies, a robust referral mechanism between beneficiaries and service providers, and vital data collection on assistive device needs in Pakistan. This initiative aligns with the goals of the SDGs and UNCRPD, reinforcing Pakistan's commitment to global inclusion mandates.





International Conference on Nanoscience & Nanotechnology

The third International Conference on Nanoscience & Nanotechnology (ICONN-2025) was held from April 14 to 15, 2025 at NUST School of Chemical & Materials Engineering (SCME). Jointly organised by SCME and LUMS as a result of active collaboration between Dr. N.M. Butt and Prof. Dr. M. Mujahid, the conference featured 22 keynotes, 60 poster presentations, and 23 oral sessions. Topics included nanomaterials for biosensors, energy storage and conversion, and environmental remediation technologies. The conference was supported by NUST, HEC, COMSTECH, PSF, and several industry partners.



NUST-SIEF Green & Low Carbon Summit

NUST, in collaboration with COMSTECH and the Sino-International Entrepreneurs Federation (SIEF), China, hosted the "NUST-SIEF Green and Low Carbon Summit" at H-12 campus. The event brought together Chinese and Pakistani experts, researchers, and entrepreneurs to promote sustainable and low-carbon innovation. Dr. Rizwan Riaz, Pro-Rector RIC-NUST, highlighted NUST's research ecosystem and underscored the importance of bilateral partnerships in green technologies. Keynote speakers included Professor Dr Huanzheng Du, who stressed the economic potential of green innovation, and Academician Xiong Jian, who presented on "Net-Zero" carbon building technologies. Dr Chen Yang emphasized the role of research in developing a circular economy, while Dr Jin Jianhai focused on scalable green transformation models for SMEs. A panel discussion explored collaborative opportunities in sustainable industrial processes.



International Conference on Climate Change & Sustainable Development

NUST hosted the 1st International Conference on Climate Change & Sustainable Development (ICCCSD), bringing together global experts, policymakers and researchers to address pressing climate challenges. The two-day event featured keynote addresses, plenary sessions on climate resilience, disaster management and sustainable technologies, as well as panel discussions on climate finance and solar geoengineering. With over 100 research presentations, the conference fostered collaboration, knowledge exchange and policy innovation to drive impactful climate action.



Prime Minister's Youth Programme and Green Youth Movement Outreach Session

In continuation of its efforts to promote environmental protection and climate action, NUST organised the Prime Minister's Youth Programme (PMYP) and Green Youth Movement (GYM) Outreach Session at NUST School of Civil & Environmental Engineering (SCEE) on April 30, 2025.

Dr Muhammad Arshad, Associate Dean SCEE, opened the session by highlighting the critical role of youth in shaping a sustainable future and acknowledged the impact of student-led clubs in promoting environmental awareness. In his remarks, Dr Muhammad Irfan, Principal & Dean SCEE, highlighted NUST's lead role in advancing the UN SDGs through environmental research, outreach and sustainability-focused education.

Dr Iram Gul, Focal Person of the National Environment Club (NEC) and GYM at NUST, presented the achievements of the clubs, emphasising their commitment to environmental literacy through numerous sustainability drives and green campus initiatives. The chief guest, Ms Amnah Batool, MNA and Focal Person for PMYP, commended the NUST efforts for the cause and urged students to take ownership of climate action. The session concluded with a renewed call for collective action, collaboration and innovation among youth to address pressing global environmental challenges.



NUST leads discourse on COP 29 outcomes

NUST, in partnership with the Ministry of Climate Change and Environmental Coordination, hosted an insightful event titled "From COP 29 Commitments to COP 30 Action: A Critical Analysis." The event focused on reflecting on COP 29 outcomes and shaping a roadmap for meaningful climate action ahead of COP 30. The event featured engaging discussions, including a panel of experts from MoCC, IGIS and USPCASE, and marked the launch of the Green Tech Hub (GTH) website, a platform dedicated to fostering innovation in green technologies.



Stronger academia-industry ties urged for sustainable growth

NUST in collaboration with Engineering Development Board (EDB) recently held a seminar on Industry 4.0 & Automation, under the aegis of its flagship 'NUST Business Park' project. Federal Minister for Industries & Production, Mr Rana Tanveer Hussain, and Federal Minister for Planning, Development & Special Initiatives, Mr Ahsan Iqbal, graced the event with their presence and shared their insights.

The event was an excellent opportunity to showcase NUST's interdisciplinary strength and readiness to support the various local Industry needs. All speakers and panelists dilated upon building a closer linkage between the industry and academia. Dr Naukhez Sarwar, Principal NUST Business School (NBS), in his address called upon all stakeholders to play their vital role in enabling better coordination and collaboration amongst all stakeholders.





Roundtable series begins with session on energy

The inaugural session of a roundtable series focused on Energy, Power & Infrastructure was held on February 25, 2025, at USPCAS-E, NUST, bringing together industry leaders and academic experts for insightful discussions on key challenges and opportunities in the sector. The series is a NUST initiative to enhance industry engagement, and contribute to policy recommendations for national development. Building on this momentum, upcoming sessions will drive meaningful industry-academia collaborations across various sectors.



COMPPEC 2025 showcases innovation across all ages

The Department of Computer & Software Engineering (DC&SE) at NUST CEME hosted the 22nd All Pakistan Computer Project Exhibition & Competition (COMPPEC) from May 3 to 4, 2025. The event featured a wide range of competitions designed to engage audiences of all ages and expertise levels. The Project Competition allowed undergraduate students to present innovative projects in areas such as AR/VR, Software Development, IoT, and MechInnovate. Postgraduate students participated in the Three-Minute Thesis (3MT) competition, where they presented their research in a concise and engaging manner. Young learners from schools showcased their coding skills in the Early Age Programming (EAP) competition, while the Speed Programming event tested participants' ability to solve programming challenges under tight time constraints. Meanwhile, the industrial panel discussion on "Bringing Big Ideas to Life" offered valuable insights and practical takeaways for both faculty and students.









IESE workshop focuses on sustainable urban water management

NUST hosted an international workshop on Promoting Research on Water-Sensitive Urban Design in Pakistan on February 28, 2025, at Institute of Environmental Science & Engineering (IESE-SCEE). Experts from Monash University, DFAT Australia, WWF Pakistan and Alluvium Australia joined NUST faculty and researchers to discuss innovative solutions for sustainable urban water management.



AI in focus at conference on water resources planning

NUST actively participated in a day-long conference on the application of Artificial Intelligence (AI) for water resources planning and management. The conference, organized by WAPDA at WAPDA House, Lahore, aimed at fostering innovation and exploring AI's potential in improving the water resources sector. Prof Dr Muhammad Irfan, Principal & Dean SCEE-NUST delivered a keynote address on "Leveraging AI in Water Resources Planning, Engineering & Management." A group of 10 students from SCEE-NICE also attended the conference, engaging in insightful discussions on how AI technologies can revolutionise water resource management in Pakistan.



Double gold win secures trophy for NUST

NUST-PNEC proudly showcased its final-year projects at the 39th IEEEP Multitopic International Symposium. With over 60 abstracts submitted, only 20 teams made it to the second round. In a remarkable display of ingenuity, two PNEC teams not only secured gold medals, but also earned the university the prestigious event trophy.



Maxwell's equations with a twist of empathy at SEECS

In a refreshing finale to Electromagnetic Field Theory (EMFT), Dr Wasif together with his colleagues from SEECS truly transformed a conceptually dense subject into a celebration of science and creativity at SEECS-NUST. The classroom lit up with colorful balloons, vibrant chart papers, and "Maxwell's Thinking Caps" – party caps marked with the legendary equations. Students took their final quiz and final exam surrounded by Maxwell's equations while enjoying tea, walnuts, peanuts, and bananas to stay sharp and supported.



Workshop on Machine Learning for Energy Systems

NUST Center for Advanced Studies in Energy held a two-day CPD workshop on "Machine Learning for Energy Systems" from January 30 to 31, 2025. The two-day program provided participants with a foundational understanding of machine learning concepts and their application to energy-related challenges. Participants attended both theoretical sessions and practical exercises, which covered essential topics such as data preprocessing, feature engineering etc.



STICKS goes global

As part of NUST's concerted efforts to enhance collaboration, fuel innovation, and facilitate knowledge-sharing at the world stage, Strategic Talks on Innovation and Commercialisation for Knowledge Sharing (STICKS) has officially gone global with its first-ever international edition taking place at Azerbaijan Technical University (AzTU), Baku. Jointly organised by NUST Innovation & Commercialisation Office (ICON) and AzTU, the ground-breaking event brought together students, researchers, and industry leaders from across borders, including representatives from Central Asian states.



Bespoke trainings inspire professional excellence

NUST continues to deliver high-impact customised training programmes tailored for both the corporate and public sectors. A flagship session on Generative AI and LLMs for C-Suite Executives was conducted for Engro, while AI for Leadership was delivered to Transworld.

A series of management trainings were developed for Securities & Exchange Commission of Pakistan (SECP). These trainings covered areas such as graduate onboarding, company valuation, blockchain, and project management for executives. Leadership and management development programmes were also conducted for FESCO and Khushhali Bank, enhancing institutional performance through empowered leadership.

In the education sector, five batches of the Certificate in Educational Leadership and Management were held for Balochistan Academy for College Teachers (BACT), training over 180 college professors and principals from across the province. The programme has significantly contributed to innovation in teaching and institutional governance.



Seminar on QA and PMS for Highway Construction and Maintenance

Dr Muhammad Irfan, Principal & Dean of SCEE-NUST, participated as a guest speaker in the International Seminar on Quality Assurance (QA) and Pavement Management System for Highway Construction and Maintenance. The seminar brought together experts and professionals to discuss critical aspects of highway infrastructure, including the importance of QA in construction, quality assurance in Hot Mix Asphalt (HMA) production, and effective sampling and data analysis techniques, and M-2 Rehabilitation Design and Construction. Dr Irfan shared valuable insights, highlighting key challenges and sustainable solutions. The session emphasised the necessity of an effective Pavement Management System to ensure long-term durability and performance of road infrastructure.



Workshop on Population and Demographic Research in Pakistan

The Centre of Excellence on Population and Wellbeing (CePwS) at NUST, in collaboration with United Nations Population Fund (UNFPA), organised a workshop on "Population and Demographic Research in Pakistan: Data Scarcity or Lack of Priority". Representatives from Population Research Centres across Pakistan discussed key achievements, challenges, and future strategies to enhance collaboration, visibility, and sustainability in population research.



Lecture on Revolution in Strategic Affairs

NUST Centre for International Peace & Stability (CIPS) hosted a thought-provoking guest lecture on April 29 2025, by Brigadier (Retd) Feroz Hassan Khan, a distinguished expert in strategic affairs. The lecture, titled "Revolution in Strategic Affairs: The Changed Nature of War," delved into the shifting landscape of modern warfare, addressing the strategic, technological, and geopolitical transformations redefining contemporary conflict. The guest speaker presented a compelling narrative on how conventional doctrines are evolving in response to emerging threats, hybrid warfare, and technological advancements.





NBC seminar highlights student role in curbing corruption

NUST Balochistan Campus (NBC), in collaboration with the National Accountability Bureau (NAB) Balochistan, organised a thought-provoking seminar and awareness walk under the theme: "The Role of Students in the Eradication of Corruption" on May 7, 2025.

The event witnessed enthusiastic participation from students across the Departments of Civil Engineering, Computer Science, and Artificial Intelligence, alongside faculty members, lecturers, and laboratory engineers. This collective engagement demonstrated a shared commitment to integrity, justice, and national development.

NUST represented at international conference in Doha

Ms Sobia Khursheed from NUST Institute of Policy Studies (NIPS) participated in the international conference in Doha, Qatar from April 14 to 15, 2024. She also presented her paper titled, and shared NUST's initiatives in fostering academic resilience and supporting students from diverse regions. Her presentation was widely appreciated, showcasing NUST's commitment to global academic collaboration and its role in driving positive change in higher education.



Training on Psychological Well-being of Teachers & Learners

NUST Centre for Counseling and Career Advisory (C3A) recently conducted a one-day training on Psychological Well-being of Teachers and Learners, attended by 40+ principals and instructors from Balochistan's Government Degree Colleges.

The session focused on equipping educators with essential counselling skills, stress management techniques and strategies to support students' mental health, empowering educators from Balochistan to drive positive change in their classrooms and communities.



Training on Stress Management

Specialised training sessions on stress management were conducted for faculty members of the constituents other than H-12 campus. The sessions aimed to help participants identify and understand the various types and causes of stress. Additionally, practical and effective strategies for managing both work-related and personal pressures were shared. Conducted between January and February, the sessions were attended by a total of 184 faculty members who were introduced to various stress management techniques.



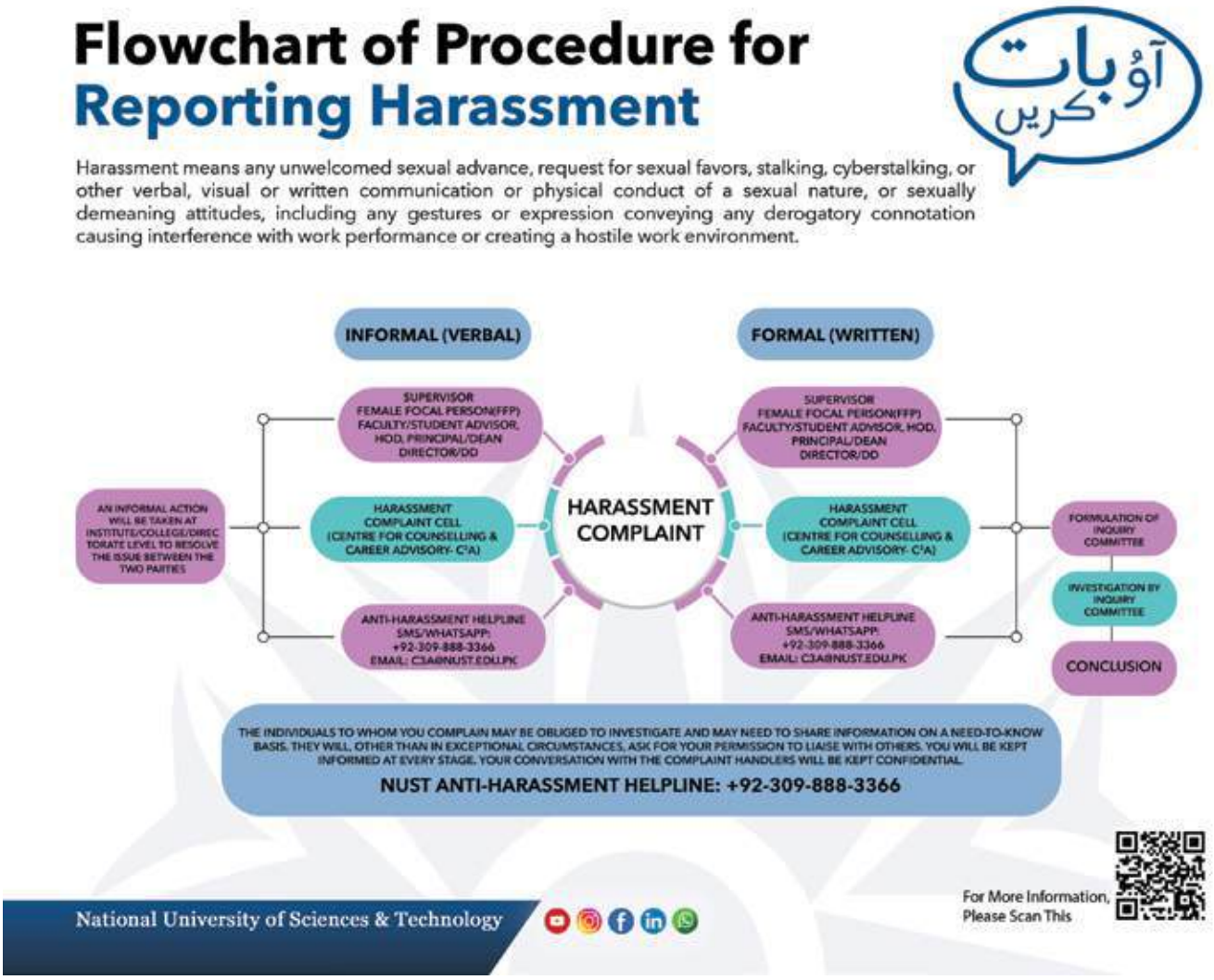
Prioritising well-being: C³A's holistic awareness initiative

In alignment with the global call for free and accessible mental health care under SDG targets 3.3.5 and 3.3.7, C3A is in the process of launching a comprehensive awareness series aimed at promoting mental well-being, providing career guidance, and enhancing awareness of NUST's Policy on Protection against Harassment. The initiative will include a variety of engaging resources, such as posters, slogans, YouTube videos, and social media reels.



Lectures on NUST Policy on Harassment

In alignment with one of the SDGs, which emphasises the importance of institutions having and implementing a harassment policy, NUST enforces a strict zero-tolerance policy against all forms of harassment, designating them as punishable offenses under the "NUST Policy on Protection against Harassment". C3A acts as the Harassment Complaint Cell (HCC) at NUST, serving as a resource for addressing harassment-related issues. To promote awareness and understanding of this policy, C3A conducted a series of informative sessions for the NUST community, including students, and employees.



Wellbeing seminars on managing academic strain

Two seminars on "Mental Health Challenges due to Academic Stress & Coping Strategies" were held at the College of Electrical and Mechanical Engineering (CEME) in March and April, 2025. These sessions focused on helping students recognize and effectively manage the emotional pressures associated with academic life.

Meanwhile, C³A in collaboration with NBS organised an event focused on raising awareness, inculcating etiquette and generating courtesy when interacting with people with disabilities on April, 2025. Designed to educate and inspire, the session introduced participants to various types of disabilities and the systemic barriers thereof.



Lectures on Career Planning & Management

In line with the four-year career roadmap developed for UG students, C³A held Career Planning & Management (CPM) sessions for second-year students across all NUST constituents outside H-12 campus. A total of 296 students took part in the sessions conducted between January and February. The sessions primarily focused on self-assessment, using SWOT analysis to help students recognise their strengths, weaknesses, opportunities, and threats. Additionally, the lectures offered an in-depth exploration of various career opportunities and highlighted the departmental support available to NUST students.



Seminar on Maintaining Healthy Peer Relationships

A session highlighting the essential role of healthy relationships in both academic success and emotional well-being was held for students across all NUST institutions outside NUST H-12 campus. The C³A team presented key principles for cultivating healthy relationships.



PARTNERSHIPS FOR IMPACT



Meeting envisions NUST-PLUS W cooperation

A Japanese delegation from PLUS W, headed by CEO Ms Wakako Sakurai & Mr Kuninori Matsuda ex Ambassador of Japan to Pakistan, called on Rector NUST Dr Muhammad Zahid Latif on January 09, 2025. Delegation discussed aspects of mutual cooperation between NUST & PLUS W.



NUST to deepen academic ties with Zimbabwe

H.E. Mr Murad Baseer, Ambassador of Pakistan to Zimbabwe, Namibia, and Zambia, visited NUST to explore collaborative opportunities and strengthen educational ties with the African region. Discussions with Pro-Rector Academics, Dr Osman Hasan and senior university officials highlighted mutual growth prospects and the potential for scholarships and academic exchanges.







Chargé d'Affaires, Ms Natalie Baker along with a high-level delegation from the US Embassy calls on Rector NUST on May 20, 2025

Türkiye delegation explores technological and entrepreneurial collaboration

A high-level delegation from Türkiye visited NUST to explore potential areas of academic, technological, and entrepreneurial collaboration. The delegation included Prof. M. Akif Kireçci, President of the Economic Cooperation Organization Educational Institute, and Mr Mustafa EFE, Head of International Relations Department at the Council of Higher Education (Yükseköğretim Kurulu) of Republic of Türkiye. The delegates met with Dr. Rizwan Riaz, Pro Rector RIC, to entail a detailed discussion on a range of collaborative opportunities.



Dr Alexander Evans calls on Rector

NUST had the privilege of welcoming Prof Dr Alexander Evans, Associate Dean Strategic Development at the London School of Economics & Political Science (LSE), for a session on Geopolitics & Technology. His thought-provoking lecture offered valuable insights into global policy challenges and the role of technology in shaping international discourse. Dr Evans also called on Rector Dr Muhammad Zahid Latif and explored avenues for academic collaboration and strengthening linkages between NUST and LSE.



Joint ventures with University of Suffolk

A delegation from University of Suffolk, UK paid a visit to RIC NUST on Feb 18, 2025. The visit focused on potential collaborations, in terms of joint research publications, projects, conferences, seminars and student exchange.



Understanding to collab with Kazakhstan varsities

NUST in collaboration with the Higher Education Commission (HEC) had the honour of hosting a high-level delegation from Kazakhstan, led by Mr. Tekkali Erkegali from the Ministry of Science and Higher Education of Kazakhstan. The delegation comprised senior officials from eleven leading Kazakhstani universities. The purpose of the visit was to explore comprehensive academic cooperation.



Partnership with POWERCHINA for greater impact

The Intelligence Digital Twin Lab at SCME has partnered with POWERCHINA SEPCO1 (Pakistan Branch) to advance research in digital twin technology, high-voltage systems, and clean coal utilization. The collaboration aims to boost innovation and technical capacity in the energy and manufacturing sectors by offering research fundings, thus fostering a strong academia-industry linkage.



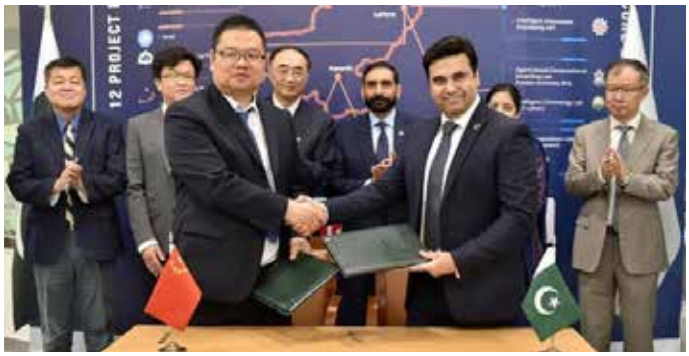
Remote Sensing and Information Security Lab

School of Electronics & Information Engineering, Beihang University China and SEECS partnered on Remote Sensing and Information Security Lab named "NUST-Beihang Research Center (NBRC) Remote Sensing Lab (RSB)". This initiative will revolutionize various domains such smart digital systems, commercial & economic areas ,urban planning and humanitarian sectors.



Delve into AI-powered smart mining solutions

China University of Mining and Technology Beijing signed an MoU with the National Centre of Artificial Intelligence (NCAI), NUST, to collaborate on AI-driven smart mining solutions. This landmark agreement aims to promote joint research and technological innovation in the field of intelligent mining. The ceremony was attended by Mr. Yin Shengxin, Science and Technology Commissioner from the Chinese Embassy in Islamabad, further reinforcing the importance of diplomatic and scientific collaboration.



NUST launches IT Skill Development Programme

NUST's Pakistan Japan Centre, in collaboration with Overseas Employment Corporation (OEC) and Plus W, inaugurated the Advanced IT Skills Development and Japanese Language Education Programme on January 10, 2025. The initiative, attended by dignitaries from Pakistan and Japan, aims to equip graduates with advanced IT skills and Japanese language proficiency for global career opportunities.





SNS faculty undertake research visits to China, Germany

Dr Muhammad Ali Paracha, Associate Professor at SNS, recently completed a successful research visit to Yantai University, Shandong Province, China. His work primarily focused on Flavour Physics anomalies, a critical area in High Energy Physics that offers potential insights into Physics beyond the standard model. Similarly, Dr Syed Rizwan Hussain, HoD Physics & Astronomy, was hosted by Prof Hu Li at Shandong University, where he explored promising joint research opportunities for the students. Meanwhile, Dr Faheem Amin, Associate Professor, conducted his research visit to the Center for Hybrid Nanostructures (CHyN), Department of Physics, University of Hamburg, Germany. During his fellowship, he focused on developing natural compound-based nanocomposites as anticancer drugs.

Ushering in a new era of inclusive growth

NUST and the Civil Services Academy (CSA) entered into a partnership on January 31, 2025.The partnership is pivoted on shared commitment to nationwide capacity building, digital inclusion, and strengthening of knowledge infrastructure. Rector NUST Dr Muhammad Zahid Latif welcomed the distinguished CSA delegation led by Director General, Mr Farhan Aziz Khawaja.



NUST, FWO vow to drive capacity building

NUST Professional Development Centre (PDC) has signed a Document of Understanding (DoU) with Frontier Works Organization (FWO) to drive capacity building, professional training and human resource development. The collaboration will equip professionals with industry-relevant skills in engineering, construction, project management and leadership.



NUST and Nayab Labs ink MoA

NUST and Nayab Labs signed an MoA on February 24, 2025 to strengthen research collaborations and enhance capacity building. Both institutions will collaborate on sharing clinical samples for research, offering student internships, and conducting joint research projects and workshops. In addition, Nayyab Labs will offer a 30-35% discount on all diagnostic tests to NUST employees and students.





SCME signs MoU to undertake consultancy project

The School of Chemical and Materials Engineering (SCME), NUST signed its first-ever consultancy project Memorandum of Understanding (MoU) with Wah Nobel Chemicals Limited and Pakistan Ordnance Factories (POF) on 25th April 2025. The collaboration aims to channelize SCME's technical expertise to support innovation and problem-solving within the industrial landscape. The historic signing ceremony was held under the facilitation of the Industrial Directorate and Project Secretariat, NUST.



Session on contemporary peacekeeping challenges and global security trends

A delegation from the National Security and War Course (NSWC-25) at the National Defense University (NDU) visited the Centre for International Peace and Stability (CIPS) on June 3, 2025. The delegation included senior officials from Pakistan as well as from friendly countries. The visit featured detailed briefings on CIPS' mission and research focus, followed a session on contemporary peacekeeping challenges and global security trends. The session concluded with a guided tour of the CIPS facility and a ceremonial exchange of souvenirs.



Global experts gather for "Chemistry for a Green Future"

NUST hosted the "International Conference on Research Advancements in Chemistry (ICRAC)" under the theme "Chemistry for a Green Future." Jointly organised by NUST's School of Natural Sciences (SNS) and ICESCO, with support from HEC and PSF, the event welcomed over 500 participants from 14 countries. Keynote speakers emphasised the importance of green entrepreneurship and innovative solutions for global climate challenges.



NUST and Read Pakistan unite to foster literacy

NUST signed a Memorandum of Agreement (MoA) with Read Pakistan, taking a significant step toward promoting literacy, knowledge-sharing, and a strong reading culture within the NUST community. The MoA was signed by Dr Adnan Maqsood, Director Academics NUST, and Ms Adv Syeda Fatima Hasan Gilani, Founder & CEO of Read Pakistan.



Efforts on to enhance vocational training in Balochistan

Mr. Tariq Javed Mengal, Managing Director of the Balochistan Technical Education and Vocational Training Authority (BTEVTA) visited the NUST Balochistan Campus (NBC) on March 13, 2025. A central highlight of the visit was a productive meeting with the Dean and Campus Director, engaging in discussions centered on potential joint initiatives between BTEVTA and NUST. Key areas included the enhancement of vocational training programs, modernization of technical education curricula, and strengthening of industry-academia linkages.

PDC diploma in partnership with PPRA

PDC in partnership with the Public Procurement Regulatory Authority (PPRA), introduced Pakistan's first-ever accredited Diploma in Public Procurement and Contract Management. The first batch concluded with more than 70 public sector officials graduating, and the second cohort is already underway.

NUST and PEF host fundraiser

Professional Education Foundation (PEF) recently partnered with NUST to host a fundraising event at the NUST Main Campus, Islamabad. Themed Rahbar-e-Taraqqi-o-Kamal highlighting a shared commitment to nation-building, the event brought together esteemed philanthropists, donor organizations, and corporate leaders, all united in support of students' advancement through scholarships.



Recruitment drive at PNEC

NUST PNEC hosted National Foods Limited (NFL) to conduct its Campus Recruitment Drive, engaging students from various disciplines. The event featured interactive sessions with the NFL team, followed by job interviews conducted by the HR team. The event witnessed enthusiastic participation, as students visited the stalls and received gift hampers.



PNEC faculty visits EPCL

The faculty at PNEC, NUST visited Engro Polymer & Chemicals Ltd (EPCL) with the goal of strengthening the bond between academia and industry. They not only gained insights into the shared vision and contributions of both NUST and EPCL to the industry ,but also, they explored professional growth opportunities at both institutions.



CO-CURRICULARS



Empowering Futures: Annual Fundraiser in Karachi

In its continued commitment to educational equity, NUST partnered with the Saturday Welfare Group (SWG) to host its Annual Fundraising Event 2025, titled "Rahbar-e-Taraki o Kamal," in Karachi. Attended by prominent industrialists, philanthropists, and corporate leaders, the event concluded with a pledge to support 100 financially challenged students enrolled at NUST.



NUST Cultural Fest 3.0 celebrates diversity

Held in February, NUST Bazm-e-Pakistan's Cultural Fest 3.0 brought vibrant traditions to life through cultural stalls, a dynamic Global Village, and spirited competitions culminating into a win by the team from Gilgit-Baltistan'. A standout feature was the "Agahi" stall by the Government Special Education Centre Pindi Gheb, spotlighting inclusivity and the creative talents of children with disabilities. In partnership with NUST Fine Arts Club, a painting competition under the theme "Yadon Ka Cinema Ghar" added a nostalgic artistic touch. The festivities concluded with a soulful Qawwali by the renowned Bakhshi Brothers.





NIMUN 2025 concludes on a high note

As many as 450 delegates from around the world converged on Islamabad to attend the 11th edition of the NUST International Model United Nations (NIMUN'25), a flagship event of NUST Business School, held from January 16 to 19, 2025. The highly anticipated event comprised a series of thought-provoking debate sessions, cultural exchanges, and diplomatic engagements, reinforcing the spirit of global collaboration and leadership. The chief guest at the opening ceremony, Mr Mohamed Yahya, UN Resident Coordinator in Pakistan, dilated upon the importance of youth participation in achieving global peace and sustainable development. Dr Osman Hasan, Pro-Rector Academics, and Dr. Naukhez Sarwar, Principal & Dean NUST Business School, applauded the organising team for their efforts in fostering meaningful dialogue and providing an enriching experience for participants.











Science Fun ignites curiosity in young minds

NUST School of Chemical & Materials Engineering (SCME) organised Science Fun 2025 at the H-12 Campus from June 16–27. The two-week summer programme engaged children aged 8–13 in hands-on science learning across five domains: Nanoscience (Big in Small), Materials Science (Materials Monsters), Biomedical Engineering (Bio Wonders), Energy & Sustainability (Energy Mania), and Chemistry (Little Chemist).



Science Bee inspires creativity

NUST Science Society held the 11th National Science Bee from February 7 to 9, 2025. Featuring 11 technical and non-technical modules, alongside signature segments like TechConnect and Bees Got Talent, the event inspired the spirit of competition and creativity. The three-day gathering culminated in a vibrant Buzznight and an award ceremony.





MCE hosts Bridge Competition 2025

NUST Military College of Engineering (MCE) organised Bridge Competition from February 11 to 12, 2025. Teams from various student categories demonstrated creativity and engineering skill, with the most efficient and durable bridges emerging as winners.

Bike Show & Qawali Night enchants NBC

NUST Balochistan Campus (NBC) organized a spectacular evening with its Super Bike Show & Qawali Night on May 23, 2025. From high-octane bike demonstrations to mesmerizing Qawali performances, the event celebrated both mechanical mastery and cultural depth.

IMechE UAS Challenge

NUST School of Mechanical & Manufacturing Engineering (SMME), in collaboration with IMechE, arranged the Unmanned Aerial Systems (UAS) Challenge Pakistan 2025 from April 26 to 28, 2025. University teams competed in technical inspections, real-world flight missions, and problem-solving rounds with custom-designed UAVs. Dr Rashid Ali, Founder of UAS Challenge UK, commended the ingenuity and commitment of participants. Awards were distributed across six categories, with total prize money of PKR 800,000 ,including PKR 400,000 for the overall winner and PKR 200,000 for runner-up.









Rector NUST interacts with students over a cup of coffee at the Southedge Cafe

Getaway to Neelum Valley

The NUST Adventure Club led a rejuvenating getaway to the breathtaking Neelum Valley from April 11 through 13, 2025. Amidst serene rivers, lush mountains, bonfires, and scenic hikes, students embraced nature, bonded over shared experiences, and found a refreshing escape from academic life, creating memories to cherish for a lifetime.





SAVE WATER

NUST FOR A WATER-SECURE FUTURE

Pakistan's escalating water crisis has reached a critical juncture, placing our nation among the most water-stressed globally. The NUST Water Conservation Walk 2025, themed "Save Water | Walk-to-Action" successfully mobilized the NUST community and the wider public to address the critical issue of water scarcity. Held on February 27, 2025, at the NUST H-12 Campus, the event aimed to raise awareness about declining water tables, showcase NUST's sustainable water management initiatives, and promote responsible water consumption. Leveraging a comprehensive pre-event hype campaign across social media and on-campus platforms, the walk achieved a remarkable turnout of over 500 participants, including students, faculty, staff, and families.







Campaign Theme

Emphasize the physical action of the walk "**Many a Mile**".

Highlight the proactive nature of the initiative **"Walk-to-Action"**.

Directly connect the event to the goal of water conservation **"Blue"**.

Balanced factual information

30% with inspirational content

70% to maximize engagement.

WATER CONSERVATION

WALK-FOR-ACTION

MANY A **MILE FOR BLUE**





75,000

GALLONS RECYCLED DAILY

FOR OUR GREEN SPACES

GREEN CAMPUS BLUE FUTURE

Annual Lapel Pin Award Ceremony

The annual Lapel Pin Award Ceremony was held at Jinnah Auditorium on April 28, 2025 to celebrate the contributions of student leaders, faculty sponsors and the principals hosting NUST Clubs & Societies. Pro-Rector Academics Dr Osman Hasan conferred the Lapel Pins, commending the efforts that drove 153 impactful events throughout the year.



NUST recognises high-achieving students

The NUST Student Affairs Directorate hosted the annual High Achievers Ceremony at Jinnah Auditorium on May 6, 2025, honouring students from all NUST s' constituents who excelled in co-curricular and extracurricular domains at international & national platforms. Rector NUST Dr Muhammad Zahid Latif, being the chief guest ,awarded a total of 617 achievers across categories, 307 for international events, 237 for national, and 73 for inter-varsity accomplishments.



Conservation of Archaeological Sites

The NUST Environment Club (NEC), in collaboration with the Green Youth Movement (GYM), organized an awareness walk and cleanup drive at the Shah Allah Ditta Caves. The event promoted the environmental responsibility and the preservation of Pakistan's rich archaeological heritage. Students actively participated in site cleanup and attended an informative session on the historical significance of the caves.





NUST observes World Health Day

NUST School of Health Sciences (NSHS) observed World Health Day and Autism Awareness Day on April 29, 2024. Dr Saeed Zaman shared insights on autism awareness, while Dr Sarah Ali highlighted NUST's strides in using AI for autism care. The chief guest, Dr Shahzad Ali commended NSHS for driving vital healthcare conversations. One of the event highlights was a walk, reaffirming unity and commitment to inclusive healthcare.



Eid-ul-Adha at NUST

NUST celebrated Eid-ul-Adha with reverence and a strong sense of community. The day began with Eid prayers on campus, followed by greetings from Rector NUST, Dr Muhammad Zahid Latif, who lauded the dedication of university staff. Pro-Rectors later joined students to share Eid festivities, fostering a warm and inclusive environment.



NBC takes outreach to institutions across Quetta

NUST Balochistan Campus (NBC) conducted a series of impactful outreach sessions across leading educational institutions in Quetta and surrounding areas in February 2025. Reaching over 850 students from Cadet College Jaffarabad to Beaconhouse, the initiative aimed to raise awareness about NUST's academic offerings, scholarships, and career opportunities.

Orientation of PhD scholars

NUST organized an orientation program for its newly enrolled PhD scholars of Spring 2025, offering essential guidance on navigating the doctoral journey. The session provided insights into academic expectations, research challenges, and institutional support mechanisms. Emphasis was placed on fostering a proactive approach towards timely degree completion.



Bringing quality healthcare to D-12 Community

NUST organized a Free Medical Camp on May 17, 2025, at Khalida Iqbal Free Education School, D-12, Islamabad, to provide accessible quality healthcare to the residents. Over 400 individuals, including women, children, and senior citizens, benefitted from consultations and free medicines. The event was a success due to the efforts of doctors from NUST School of Health Sciences and volunteers from the NUST Community Services Club (NCSC) & TABA Team.



NUST inspires young aspirants

NUST welcomed students and faculty members from The Trust School for an engaging orientation and campus tour on May 26, 2025. The visit featured a detailed introduction to NUST's academic programs, admissions guidance, and a hands-on lab experience at RIMMS (SEECS), sparking curiosity and ambition among the young visitors.



Spreading Khair & Akhuwa during the holy month

In the true spirit of Khair, Rahma, and Akhuwa, the NUST Community Service Club (NCSC) conducted two heartfelt Iftar Drives on March 14th and 15th, 2025. Forty volunteers visited Mera Ghar, an all-girls orphanage, on the 13th of Ramadan ,sharing Iftar and conducting women empowerment activities with 150 young residents. The next day, NCSC set up a dastarkhwan at G-9 Markaz, Islamabad, where 200 individuals, including daily wagers, broke fast together in a powerful display of humility and unity.



Students visit AFIRM rehabilitative care facility

Students from the Department of Biomedical Sciences, SMME and NCSC visited the Armed Forces Institute of Rehabilitation Medicine (AFIRM) ,on April 22, 2025. The visit offered individuals a firsthand look into rehabilitative healthcare. Students toured key departments including Occupational Therapy, Pain Management, and ALAC, and explored recovery facilities such as the Hydrotherapy Pool and Halotherapy Cave.



ASME holds Engineering Festival

The American Society of Mechanical Engineers (ASME) NUST Chapter held the Engineering Festival (EFx NUST 2025) at the H-12 campus from April 18 to 20. With thrilling RC races, compelling design competitions, 3D printing workshops, and engaging sessions on women empowerment, the event offered a dynamic platform for aspiring engineers. The festival culminated in a grand closing ceremony led by Principal SMME, Dr Javaid Iqbal, awarding top teams with the prizes for their innovation and teamwork.



First place in HEC debates

NUST clinched first position in the English category of HEC's Pakistan Universities Debating Championship 2024–25 (Regional Round), held on February 26, 2025. Competing against 30 universities from ICT, Rawalpindi, Wah, Taxila, AJK, and G-B, the NUST English team, comprising Rija Fatima (NBS), Shahmir Muhammad (SMME), and Tayyaba Naveed (SEECS), emerged victorious.



NUST wins declamation contest

Muhammad Abdullah Khan from Institute of Geographical Information Systems (IGIS) SCEE and Shahmir Muhammad from SMME secured first place at the Inter Universities Bilingual Declamation Competition organized by Capital University of Sciences and Technology (CUST). The team's compelling eloquence in both English and Urdu earned them top recognition.



Voices of Change: TEDxNUST 2025

TEDxNUST 2025, held on April 12, brought together a dynamic group of changemakers from across Pakistan, each offering fresh perspectives on the challenges and possibilities of our time. The event explored themes spanning technology, entrepreneurship, public service, sports, and social change. Among the guest speakers were Parvez Abbasi , Aizan Sameer , Dr. Hina Sikandar ,Musarrat Misbah, Huzair Awan and Saad Munawwar. Each speaker brought a unique lens, but all were united in their drive to inspire meaningful progress. TEDxNUST 2025 wasn't just a platform for ideas, it was a celebration of purpose, possibility, and the people shaping tomorrow.





A BETTER TOMORROW IS UP TO US

Plantation Drive. Marathon. Recreational Rendezvous

Led by Rector Dr Muhammad Zahid Latif, NUST faculty, staff, and students turned out in large numbers for a plantation drive at the Islamabad campus on Tuesday. They planted over 350 saplings across the earmarked area during the environment-friendly activity.

Ensuing was a series of recreational activities, including tug of war, and arm wrestling between faculty and students, with Rector also joining the competition. Later, an overwhelming number of participants competed in a marathon at the campus. Rector awarded prizes to top finishers of the competition categorised into various age groups.

SPRING PLANTATION

FOR A GREENER H-12 CAMPUS





سرسبز نسٹ


NUST OPEN MARATHON
NUST SPORTS BRANCH




NUST OPEN MARATHON
NUST SPORTS BRANCH



Nustians experience paragliding flights

In a remarkable display of adventure and skill-building, students from the NUST Paragliding Club (SMME) participated in a paragliding excursion to Mung, Haripur. Following organised ground training at Khanpur, 31 students successfully completed tandem flights under expert supervision.





Inter-CED Sports Gala 2025

The Inter-CED Sports Gala 2025 was held at the Military College of Engineering (MCE), NUST, from 12 through 27 February. The event witnessed enthusiastic participation across a wide range of sports. The competitions fostered camaraderie, resilience, and a spirit of healthy competition among cadets. Winners and runners-up were awarded individual and team prizes in recognition of their outstanding performances.





ALUMNI AFFAIRS



NUST hosts Annual Graduating Dinner for hostelites

NUST organized its Annual Graduating Dinner to honour final year hostelite students, celebrating the end to their residential journey on campus. The evening brought together students, hostel faculty, and staff for a memorable gathering featuring a formal dinner, heartfelt speeches, and warm conversations.





NUSTIAN USA new Executive Committee elected

NUST US alumni chapter has been named NUST United States Technology, Industry & Academic Network (NUSTIAN), and registered as a Non-Profit organisation , while acquiring Tax Exempt Status 501(c)(3) from IRS USA in Arizona, USA. NUSTIAN unites over 1,300 NUST alumni across the United States, creating a vibrant community of support and collaboration. Thus, fostering meaningful connections, unlock career opportunities, and empower our alumni to engage, grow, and give back to NUST and beyond. Recently, the NUSTIAN USA Executive Committee for the 2025-2027 term , has taken on the role of making invaluable contributions.



Alumni return home



Usman Afaq (SCME 2017), VP – West Region, NUST Alumni KSA Chapter, visited NUST on 25 June 2025 to discuss expanded alumni engagement and mentorship initiatives for Nustians in Saudi Arabia.



Adeel Ahmed (CEME 1999), COO at Engro Enfrashare, visited NUST and NSTP on 13 February 2024 to explore collaboration opportunities.

NUST Alumni Iftar Meetups 2025

In the holy month of Ramadan, the NUST alumni community celebrated the enduring bond with their alma mater through the annual Global Iftar Meetups. Under the theme of "30 Days, 30 Cities, 30 Meetups," events were hosted both nationally and internationally, bringing together alumni from every corner of the world to reconnect, reflect, and celebrate the spirit of unity and giving.

National Iftar Meetups

Held in Islamabad, Multan, Bahawalpur, Karachi, Faisalabad, and Lahore, these gatherings reflected NUST's ongoing commitment to local alumni engagement. The highlight event in Islamabad on 7th March 2025 at The South Edge Café (NUST H-12 Campus) welcomed over 120 alumni, with Rector NUST Dr. Muhammad Zahid Latif and Pro-Rector RIC Dr. Rizwan Riaz in attendance. The evening evoked deep nostalgia and pride in the university's remarkable journey.

International Iftar Meetups

Spanning 24 cities across 12 countries, international alumni celebrated their connection with NUST and each other. From Europe and the Middle East to North America and Asia, each meetup reinforced that NUST alumni remain united, no matter the distance.














NUST Alumni Eid Milan Parties 2025

The post-Ramadan Eid Milan celebrations brought together NUST alumni in Edmonton (Canada), Lahore (Pakistan), and Edinburgh (Scotland). These joyous gatherings celebrated the spirit of NUST, rekindling old friendships and forging new connections far from home.







NUST Alumni Lifeline Campaign 2025

Lifeline Campaign 2025 mobilized alumni generosity to support 50 financially challenged hostel residents by covering hostel and meal expenses. A total of PKR 12 million was raised, along with 11 full scholarships pledged till graduation—a meaningful Eid gift from senior alumni to the next generation. A virtual appreciation ceremony was held to honor the global alumni volunteers who made this success possible.



إِنَّا لِلَّهِ وَإِنَّا إِلَيْهِ رَاجِعُونَ

NUST DEEPLY MOURNS THE LOSS OF ITS PROUD ALUMNI



Sqn Ldr Usman Yousaf Shaheed

(CAE 2011)
Martyred on 10 May 2025



Faisal Ismail Shaheed

(IGIS-SCEE 2014)
Martyred on 2 July 2025



Fatima Mahmud

(SEECS 2017)
Remembered for her kind and vibrant spirit



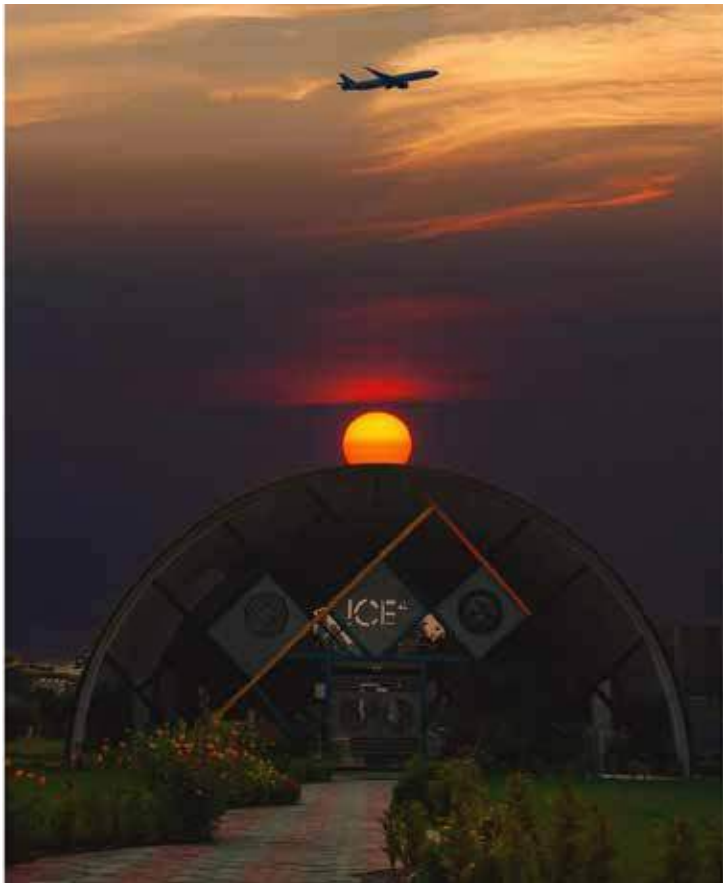
Asadullah Satti

(MCE 2013)
Remembered with deep respect and fondness

THEIR LEGACY CONTINUES TO LIVE ON IN THE HEARTS OF THE NUST COMMUNITY

NUST Through *My Lens*

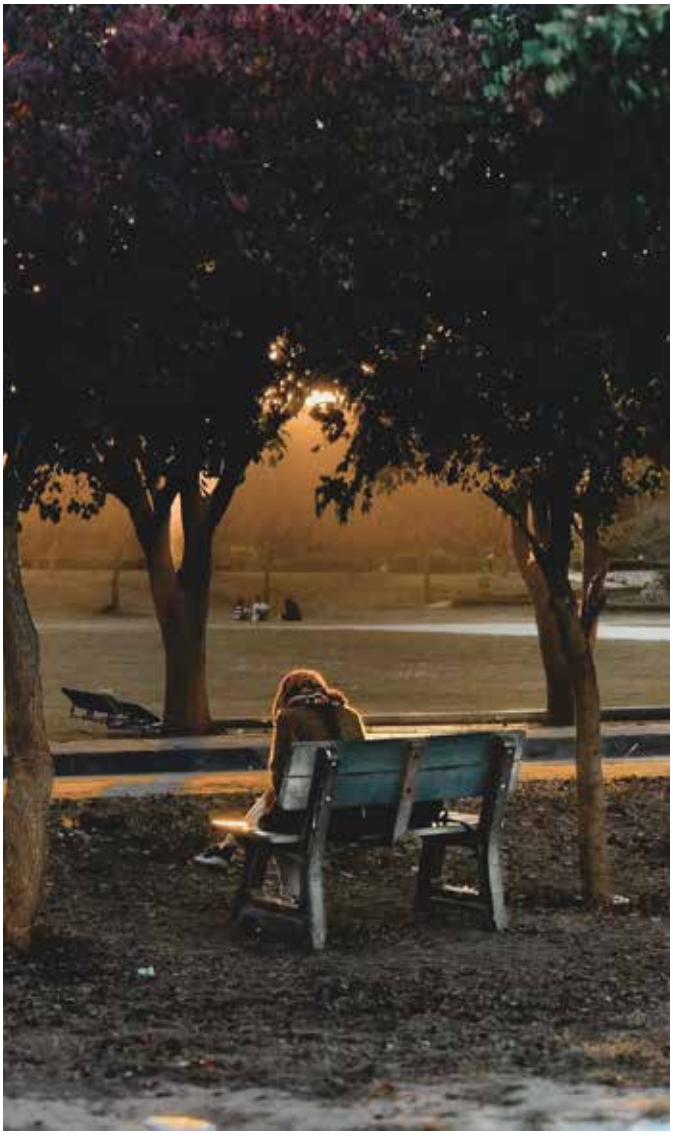
These creative clicks offer a glimpse into the vibrant life and striking beauty of the campus. From scenic views to serene green spaces, each frame tells a unique story. Through the lens of talented photographers, NUST comes alive in every shot.








NUST





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