Silicon University

SLATE

Silicon Language for Arts Technology & Education

Our Vision: To become a center of excellence in the fields of technical education & research and create responsible citizens

From the Editor's Desk...

The year 2024 marked its beginning with a remarkable achievement. While a sense of jubilation wrapped us all with the university status, it also brought us new responsibilities. We are happy to announce that we successfully organized our first convocation in December. We are about to complete a year and this compels us to review our academic engagements.

As a centre for generation of learning, our academic freedom now calls for an engagement with research and scholarly activities. Getting research grants from various funding agencies such as UGC, ICSSR, DST etc. have become a necessity and our faculty members are making use of every opportunity. Other than this we are also proud that the number of PhD scholars registered under our university has gone up to 69.

While proposals for research funds took our attention, myriad other activities kept the university campus abuzz. Celebration of IEEE Day, ATAL FDP, TEDXSITB, among several workshops, project exhibitions, industrial visits and much more kept us busy all trough the year. Special mention may be made here of the Best University Award at Odisha EduMeet 2024 and Odisha State Energy Conservation Award from the Department of Energy, Govt. of Odisha, which we won lately.

2024 was not only exhilarating but a year that brings new promises for growth for the New Year.

Happy reading and a Happy New Year!

Dr. Priyambada Pal
Dept. of BSH

EDUCATING US
The Psychological Impact of Colors on Human Behavior

We often judge or misunderstand each other's behaviors due to a lack of knowledge in human psychology. In today's world, it is essential to disseminate psychological insights across various fields, from emotional to business contexts. One crucial aspect of psychology is understanding how colors influence human behavior. As Carl Jung once said, "colors are the mother tongue of the subconscious." Colors are not just visual elements but powerful stimuli that communicate directly with our subconscious, shaping our internal experiences and influencing our emotions and actions.

Each color evokes specific psychological responses. For example, red symbolizes energy, passion, and urgency, often used in marketing to capture attention and stimulate excitement. Blue, on the other hand, promotes calmness, stability, and trust, which is why it's commonly used in corporate and healthcare branding. Yellow represents optimism and clarity but can also signal caution, while green is soothing, representing growth and balance, commonly used for eco-friendly or health-related purposes. Purple is associated with creativity and luxury, making it popular for beauty and high-end products. Black conveys power and sophistication, while white represents purity and simplicity, often used in technology and healthcare to evoke trust and cleanliness.

The psychological impact of colors is shaped by both biology and culture. Evolutionary psychology suggests that certain colors like red signal danger, while green symbolizes safety. These associations have been reinforced over time. However, cultural differences can alter the meaning of colors; for example, white symbolizes peace in Western cultures but mourning in some Eastern traditions.

Understanding color psychology is crucial for marketing and branding. Colors can influence consumer behavior by triggering emotional responses. By selecting colors that align with psychological associations, businesses can create brands that resonate with target audiences, fostering trust and influencing decisions.

Krishnamayee Pathy
3rd Sem, ECE

HEALTH WATCH
The Weight-Loss Wonder Drug Sparks Concerns

A type 2 diabetes medication has unexpectedly become a popular weight-loss solution lately. The drug's active ingredient, semaglutide, mimics a hormone that regulates insulin and decreases hunger, allowing people to feel fuller for extended periods and consume fewer calories. These effects have led to widespread off-label use of this drug for weight loss, creating high demand and global interest.

The Craze: Social Media and Celebrity Influence

The drug's popularity surged as social media users and celebrities openly endorsed it for weight loss. Platforms like TikTok and Instagram are full of testimonials from users sharing their weight-loss journeys, amplifying the drug's appeal for those seeking quick, easy weight-loss options. Celebrity endorsements have further fuelled its demand, as it is marketed as an effective, low-effort solution.

The effects of the drug on the body include:

1. Appetite Suppression: By promoting insulin release and slowing digestion, it prolongs feelings of fullness, leading to a reduced calorie intake.
2. Weight Loss: Clinical studies indicate that the drug users can lose 10–20% of their body weight over several months. While this demonstrates its effectiveness, rapid weight loss can strain the body.
3. Digestive Side Effects: Many users experience side effects like nausea, constipation, and bloating. For some, these issues persist, causing discomfort or even discontinuation.
4. Weight Regain: After stopping the drug, many users regain weight, sometimes exceeding their initial loss, which highlights the importance of lifestyle changes for sustainable weight management.
5. Long-Term Health Risks: Long-term use of semaglutide for weight loss remains under study. Potential risks include pancreatitis and an increased risk of thyroid tumors, especially in individuals with a family history of thyroid issues. Dependency is also a concern, as some may rely solely on the medication without considering sustainable health strategies.

Broader Implications and Risks

The appeal of such drugs underscores a cultural preference for "quick fixes" in body image and wellness, though this trend brings risks beyond physical health. High demand has caused shortages, affecting diabetic patients who depend on the drug for blood sugar control. Additionally, without medical guidance, some users may face health risks like nutrient deficiencies or metabolic issues.

In summary, such drugs can be an effective option for short-term weight loss, but health experts emphasize the need for lifestyle changes-balanced diet, exercise, and mental wellness-for long-term health. The popularity of these drugs should encourage discussion on societal pressures and the sustainability of quick-fix solutions. Ultimately, balanced health habits remain key to lasting wellness, a truth that should accompany any medication's promise.

Sayeda Mahenoor
7th Sem, CSE

FOOD FOR THOUGHT
Isn't This Plate Indian? Peeping into India's Culinary Identity

India's culinary diversity is often celebrated in grand state banquets and media spectacles. Yet beneath this display lies an unsettling divide that mirrors the nation's social hierarchies. Indian food, for decades, has been relegated to cookbooks and television, often portrayed in an exoticized lens that appeals to the elite while sidelining the lived realities of marginalized communities and the political power embedded within food itself.

The recent G20 Summit in New Delhi showcased this divide. A carefully curated, all-vegetarian menu—featuring dishes like "foxtail millet crisps" and "jackfruit galettes"—presented India's agricultural bounty and plant-based traditions to the world but excluded the non-vegetarian traditions of many Indian communities. This choice, while perhaps designed to showcase sustainability, underlines a subtle but powerful narrative—the celebration of an "Indian cuisine" that reflects a sanitized and exclusionary vision, sidelining both the meat-rich diets of many communities and the dietary choices that are politically policed in contemporary India.

This culinary elitism sharply contrasts with the struggles faced by Dalit and marginalized communities, who often scavenge to survive. While Indian food history is gaining academic attention, books on Dalit foodways are almost non-existent. Works like ShahuPatole's Dalit Kitchens of Marathwada reveal how, for Dalits, food can never be "purna brahma" (the complete divine sustenance) as caste hierarchies keep their plates half-empty. Artist Rajyashri Goody's project,

Writing Recipes, poignantly captures survival recipes from Dalit autobiographies, such as the field rats captured for grains, later roasted and consumed along with "stolen" grains. These narratives expose a reality far from the privileged obsession with "othering" exotic foods—a fascination reminiscent of colonial anthropologies that once labelled indigenous societies as "primitive."

International chefs like Andrew Zimmern and Gordon Ramsay bring a similar fascination to the global stage. Zimmern's Bizarre Foods series and Ramsay's forays into blood pudding and wild mushrooms transform previously "othered" foods into haute cuisine for Western audiences, highlighting a cultural gap. The West's engagement with these foods highlights how culinary tradition is revived, rebranded, and capitalized on while India continues to neglect its marginalized communities' struggles to secure basic sustenance.

The question isn't simply whether this plate is Indian, but whose India it represents. If discourse continues to valorize selective traditions while marginalizing others, a caste-like structure in India's culinary landscape persists. It's time India confronts the boundaries around its food and recognizes that a truly Indian cuisine includes not only rich flavors but also the silent struggles that fill-and-empty its plates.

Sneha Sruti Sahu
7th Sem, CSE

MENTAL HEALTH:
Self-Compassion

How difficult is it to make our own self feel better in difficult times! Self-compassion is the capability to be kind, loving, and compassionate towards oneself, substantially when facing failure. It simply involves giving yourself the same concern you'd naturally show a friend when you are struggling or feeling poorly about yourself. It means being probative when you are facing a life challenge, feeling shy, or making a mistake rather than ignoring your pain or getting carried away by your negative thoughts and feelings. Self-compassion motivates one to make changes and move towards a goal to make ourselves feel cared and happy. It can help with mental health concerns like anxiety and insecurity. Research suggests that advanced cases of self-compassion are linked to increased passions of happiness, sanguinity, curiosity, and connectedness.

Some ways to exercise self-compassion are:

Awareness

Be apprehensive of yourself in the present moment without judgment. This involves admitting and labeling your own thoughts rather than replaying them.

Positive self-talk

Have an inner dialogue that's primarily favorable and positive.

Physical gestures

Comfort yourself with physical gestures like hugging yourself or putting your hand over your heart.

Consider how you'd treat a loved one

Consider what you would say to a loved one who was going through the same situation you are in.

Practice affirmations

Positive affirmations like "I am going to treat myself the way I'd treat others" can help a great deal.

Ritu Chowhan
Counselling Psychologist

MY CYBERSPACE
Digital Arrest

Of late many individuals have fallen prey to a new kind of scam called Digital Arrest and have lost significant amount of money, amounting to crores of rupees. Although as per law there is nothing called digital arrest, were scammers/cyber criminals impersonating as top government or law enforcement officials intimidate individuals and coerce them into paying huge amounts of money.

The basic modus operandi these criminals follow is:

Making calls to unsuspecting people, posing as cops, and informing them that they are involved in various fraudulent cases.

After a few audio calls, the criminals switch to a video call set up (WhatsApp, Skype) having a Police station or Court room in the back drop.

They use fake identities to prove their credibility and threaten them with a digital arrest warrant. The display pictures they use are gathered from the social media accounts of eminent police officers, lawyers and judges.

The imposters offer to clear the victim's name in exchange of huge amounts of money.

In a state of fear, the victims often comply with the scammers' demands. The scammers create a sense of urgency, not allowing the victims, time to verify the claims.

In case something like this happens the victim shouldn't panic and stay calm and not reveal any personal information such as PAN/AADHAAR/VOTER ID details. Report the incident to the Cybercrime Cell or Local Police Station. If you already have been scammed the first thing to do is to report and freeze the concerned bank account and immediately file a complaint with *complaint@cybercrime.gov.in.*

Dr. Sushree Samita Rout
Associate Professor, CSE Dept.

IN CONVERSATION WITH ...
Dr. Debangana Das

Dr. Debangana Das, Assistant Professor in the Department of Electronics and Communication Engineering at Silicon University, is an inspiring figure whose professional journey embodies a seamless blend of passion, research, and innovation. Since joining the institute in 2022, she has made significant progress in the field of sensor technology and nanomaterials while nurturing the next generation of engineers. In this interview with PriyankaRath, 5th semester, CST, she highlights the key learnings from her experiences, aiming to motivate the future engineers of the University.

Reflecting on her journey, Dr. Das shares that her dream of contributing to India through academic research began in her childhood. Her five years of rigorous doctoral research laid a strong foundation, but it was during her third year of PhD that she realized the need for a platform to sustain her passion. "Research is indeed an addiction," she said, acknowledging Silicon University for providing the environment to flourish. Her enthusiasm has grown since joining the institute, as she works alongside colleagues to transform it into a prominent research center.

One of Dr.Das's notable research interests lies in the detection of specific compounds in tea, inspired by her personal affinity for the beverage. Her focus sharpened after an enlightening interaction with scientists at the Tea Research Association in Jorhat during her master's program. Recognizing tea's global significance and its myriad health benefits, Dr. Das has worked to ensure high-quality tea production by developing methods to accurately measure key compounds. Her dedication to this niche area not only aids tea exporters, who shipped approximately 204,187 metric tons of black tea worth $597 million but also supports the promotion of healthier consumption habits.

Dr. Das also shared regarding her research that focuses on the development of electrochemical and capacitive sensors, exploration of piezoelectric properties of nanomaterials, and the integration of machine learning. These fields intersect to create groundbreaking solutions, such as predicting caffeine content in tea or detecting formalin in fish.

Among her many achievements is her contribution to the development of an eco-friendly conducting paint for flexible electronics. Using natural materials like coconut oil and dust, she and her team created a substitute for conventional conducting wires. This innovative paint, now patented in March 2024, has been adopted by a Kolkata-based start-up to create musical instruments, PCB circuits, and even house wiring.

As an academic and researcher, Dr.Das's inquisitive nature fuels her journey of discovery and impact. Her vision for Silicon University's evolution into a leading research institute underscores her commitment to pushing boundaries and fostering innovation.

IN CONVERSATION WITH ...
Tejaswi Mahapatra

Tejaswi Mahapatra, a final year student from Electronics and Communication branch who has a background in NexgAI and Machine Learning, has secured a practice school experience at Aays Advisory, with a monthly stipend of INR 50K. In this interview with Akankshya Parida, 5th semester, CST, she shares her experiences.

Tejaswi Mahapatra's journey from Electronics and Communication Engineering to Machine Learning is a testament to perseverance, curiosity and self-belief. Tejaswi's story illustrates how passion and adaptability can lead to groundbreaking discoveries. Originally captivated by signal processing and computer vision, Tejaswi discovered her true calling through a pivotal internship, which was further solidified by an enlightening hackathon experience. "Hackathons are not just about coding, they're about problem solving and creation," she reflects. Tejaswi embraced the challenges, leading her to the world of Large Language Models (LLMs). This experience ignited her passion for generative AI, a field she would dive into headfirst. One of her first projects involving LLMs was a financial jargon breakdown system, which highlighted the power of these models to simplify complex tasks. Tejaswi recalls the awe of turning hours of labor-intensive work into just a few lines of code, deepening her interest in machine learning.

Tejaswi's journey was not devoid of its challenges and tribulations. She joined a start-up in AI, working unpaid while balancing demanding academic responsibilities. Eventually, her dedication paid off when the start-up CEO offered her a full-time position. "We create art through science," the CEO's words resonated with her, reminding her to push the boundaries of innovation. These events not only enhanced her technical skills but also taught her the importance of teamwork and how innovation can often trump expertise.

Transitioning from Electronics to Machine Learning, involved bridging knowledge gaps between fields. "Computer science, Electrical and Electronics are intertwined," Tejaswi notes. She integrated her ECE expertise into her Machine Learning projects, showing how interdisciplinary thinking fosters innovation.

Through her journey, Tejaswi learned that continuous learning and self-belief are essential for success. "The hunger for learning is one of the most powerful drives for success," she shares.

Tejaswi's story isn't just about achievements, it's about the relentless pursuit of growth. Her advice to aspiring innovators is simple yet profound: embrace hackathons, stay curious, pursue innovation and balance your goals with your well-being. Her journey serves as a compelling testament that with unwavering determination and a readiness to adapt, one can truly craft their own destiny.
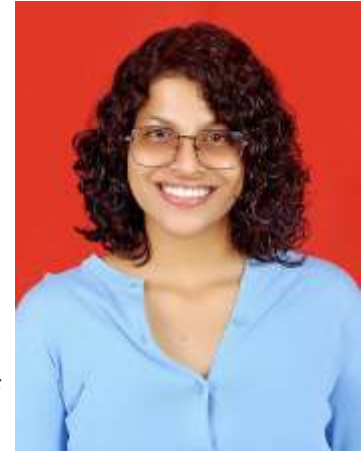
STUDENTS' CORNER

Gratitude Over Guilt:
Recognizing Our Hidden Privileges

Not long ago, as I was heading home, feeling a bit unwell, I looked out of the car window, letting the scenes of the passing city wash over me. I'd taken this route countless times, often too preoccupied with my thoughts to notice the world outside. But that day, one moment held my attention: a young boy, perhaps no older than ten or eleven, was selling popcorn on the roadside. It made me wonder, at such a tender age, how did he come to be here, working to support his family? Was he in school, or had he already been forced to set aside his childhood for survival?

This simple moment brought into focus something that's often hidden behind our everyday routines: how privileged we are. It's easy to forget that our basic expectations—the food we eat, the clothes we wear, even the chance to go to school—are not available to everyone.

When we turn away food we don't like, choosing to order something else, we rarely stop to think of the children in regions like Jharkhand, toiling away in mines under dangerous conditions, hoping to earn enough for just one meal.

And it goes beyond that. Many of us say we have "nothing to wear" when our closets are full, not thinking of the countless people who survive harsh winters with almost no shelter or warmth. Likewise, school and college can feel like a burden, yet for children in conflict-ridden areas like parts of Israel, simply attending a class can feel like an unattainable dream. We sometimes argue with our parents or feel misunderstood, without recognizing that there are children in orphanages who would give anything for a family, a place to belong.

The reality Is, we live lives that others might only dream of. Health, education, family— these aren't universal experiences but privileges that many go without. And while it's natural to focus on the challenges in our own lives, it's worth taking a step back to appreciate just how fortunate we are. Our comfort, our routine, our security—these are things that others strive towards, often against the most difficult odds.

Recognizing privilege isn't about feeling guilty; rather, it's about fostering empathy and gratitude. We must be happy and grateful for what we have, not weighed down with guilt, but filled with appreciation. When we're aware of the disparity in the world, we gain a new appreciation for the lives we lead and the opportunities we have. This understanding encourages us to think beyond ourselves, to live with a sense of compassion, and to remember that the life we sometimes take for granted could be the dream of someone else.

Pratishya Priyadarshni
5th Sem. EEE

Echoes of Bhojpuri:
The Struggle for Identity

This story began in the 1880s when Bhojpuri questioned Hindi, asking, "Why are you considered the official language of Bihar when most people here don't even speak you?" Bhojpuri soon learned that it was merely a mother tongue, classified as one of Hindi's dialects, as were other Bihari languages, which led to Hindi being adopted as the official language. Over time, Bhojpuri was joined by 55 more distinct languages, each also labeled a dialect of Hindi. Confusion ensued, as these languages—so different from one another—were all grouped under the same linguistic category. As time passed, people began to lose recognition of the unique features of these languages, and they slowly merged into a single identity: Devanagari Hindi. The original languages began to fade from memory, subsumed into a standardized, common form.

These forgotten tongues, now nearly erased, looked around at their neglected surroundings, wondering, "Had the people who once valued us forgotten about us?" They longed to cry out for attention but saw Hindi, surrounded by protectors, its status unquestioned. The question lingered: "Will we be ignored again, or will we finally be remembered?" Hindi, already so deeply ingrained and cherished by the people, seemed beyond any threat. Initially, these languages had sought to challenge Hindi, but over time, their stance changed. Now, all they longed for was to survive, to be recognized, and to be understood—to witness the growth of the country into which they had been born.

Esha Aggarwal
3rd Sem, CST

Anger that Flutters

Anger That Flutters
Breaks a soul into clusters
A symposium of pain,
Bone filled with blisters of Bane,
An arcade of arson,
Its facade is paramountcy,
Berserk by horizon,
In fumes of poignant deficiency,
It averts yet reverts meaninglessly,
So cower to wail,
Long breaths haul helplessly,
Eyes darkened to auburn but frail,
For it has witnessed every knee scrape,
Chest thuds when palms convulse,
It has vehemently screamed to ears,
Shred its voice, skin and soul for years,
Endurance isn't everything to feign,
And that's when, a rage reigns,
Petrified from emotional dagger,
Incensed laughter, eyes stagger,
Loss of humanity breaches a corner,
A diabolic determination greets the former,
They take turns for the worse and burn for the betters,
Unbelievable isn't it, the anger that flutters?
Believable is it, the anger that flutters?

Aradhana Dash
5th Sem, CEN

PROFILE OF AN ORGANISATION
Nalanda University

Nalanda University was re-established in the year 2010, by an act of the Indian parliament. It constitutes the reconstruction of ancient Nalanda Mahavihara. The oldest residential university which existed between 5th to 12 century was situated in the ancient kingdom of Magadh which is modern day Bihar. Nalanda was once the epitome of India's flourishing civilizational and spiritual history. Presently it is a premier learning center.

Ancient Nalanda was a lot more than just a university. Students and scholars reached this place from regions like Korea, China, Tibet, Mongolia, Turkey, Ukraine, Sri Lanka, and South East Asia. With about 9 million books, a diversified curriculum, and distinguished scholars, the institution stood for many centuries to foster the advancement of mathematics, astronomy, medicine, and Buddhist studies among other disciplines. In the late 12th century, Nalanda was attacked by invaders and was completely destroyed and devastated.

As a modern form of Nalanda University, its vision is to become a world centre for sustainable development, peace, and understanding between cultures. Therefore, it aligns with the commitment of the Indian commitment to Asian solidarity and knowledge exchange, especially focusing on South and Southeast Asia.

The university's Rajgir campus In Bihar is a model of sustainable architecture and green design. This can be said to closely emulate the ancient Nalanda, where several self-sustaining practices have taken place. There is conceptually an energy-efficient and rainwater harvesting-friendly campus designed to offer the least contributing factor in its own capacity to degrade the environment. That is how one would truly say that it does indeed match the university's culture towards ecology and resource conservation.

Nalanda University has developed partnerships with the best institutions and research houses worldwide, thereby facilitating joint research, exchange of students, and initiatives. Its focus on partnership being cut across the globe has truly reflected its stand towards international understanding and cooperation. Several countries and organizations have lent themselves to its mission, making it a symbol of cultural and educational diplomacy.

Nalanda University, as an institution of learning, stands as a shining testament to long-standing values of education and cultural exchange. Drawing inspiration from a rich, historical past, Nalanda endeavors to address global challenges with the spirit of cooperation and knowledge. It is indeed a very interesting model for tradition to exist with the modernity of universities, a journey towards a more peaceful and sustainable world.

Omkarnath Mohapatra
3rd Sem. CSE

ALUMNI SPEAK...

Subendhu Subudhi, an alumnus of the 2011-2015 batch, completed his Bachelor's in Computer Science Engineering from Silicon University. Currently, he is a Senior Mainframe Consultant at Union Bank of Switzerland (UBS) Business Solutions in Pune. In this interview with Krishnamayee Pathy, a 3rd Semester ECE student, Subendhu shares his insights to inspire readers.

Subendhu began his career with Infosys, where he spent six years as a mainframe consultant and trainer. Reflecting on his pivotal contributions, he highlighted a key moment during the historic January 2023 merger between Credit Suisse and UBS. This merger, orchestrated by the Swiss government to stabilize the financial landscape, required integrating Credit Suisse's technology with UBS's systems. The task was monumental, ensuring seamless alignment to safeguard core operations and client interests.

Running since 2022, the project demanded precision and collaboration. UBS's challenge was to reassure new clients, once loyal to Credit Suisse, of their commitment to stability and trust. This merger was a testament to resilience, as UBS personnel worked tirelessly to regain client trust and emerge stronger on the global financial stage.

Effective communication with clients is crucial in Subendhu's role. He emphasizes simplifying complex concepts through relatable examples, fostering an environment where open communication is encouraged. This approach not only keeps stakeholders informed but also strengthens trust and collaboration.

Subendhu's transition from Infosys to UBS marked a significant career move. Adapting to the banking sector's unique principles, he leveraged his skills and innovations, quickly gaining recognition at UBS. Over his 9.5-year corporate journey, his accomplishments are notable. He is particularly grateful to Infosys for providing the opportunity to become an educator, boosting his confidence. Moving from a service-based to a product-based sector, his potential was quickly recognized by stakeholders.

In conclusion, Subendhu advises students to excel in communication, as it is the key to career advancement. "Be confident, be innovative, and do things differently," he suggests. This mindset, he believes, will help individuals and their companies achieve tasks effectively and efficiently.

SPECIAL INTERVIEW
Dr. Ashok Kumar Sahu

With over 36 years of exemplary experience in Human Resource Management, Dr. Ashok Kumar Sahu, Advisor, Centre for Human Development & Neuro Linguistic Research Private Limited (CHDNLR), has made a lasting impact in the corporate world. Renowned for fostering leadership and championing ethical practices, his career reflects a blend of serendipity, determination, and humanity. This article captures key insights from his interview with Aradhana Dash, 5th semester, CEN.

Dr. Sahu's foray into the field of Human Resources was both unplanned and serendipitous. "I always aspired to be a doctor," he recalls, reflecting on his early aspirations. However, circumstances steering him to opt for Labour and Social Welfare (LSW) proved transformative. "Once I entered the field, I discovered it to be both intellectually engaging and deeply rewarding," he affirms.

Dr. Sahu's leadership philosophy is firmly grounded in values and credibility. "Leadership is not merely about exercising authority; it is about upholding integrity, demonstrating problem-solving acumen, and making timely, well-informed decisions," he emphasizes. For him, authenticity is a non-negotiable principle. "Never promise what you cannot deliver. The ability to say 'no' when necessary, fosters respect and builds trust."

With extensive experience in industrial relations, Dr. Sahu underscores the critical role of situational leadership—the capacity to adapt swiftly to evolving challenges while maintaining transparency and fairness. This approach, he believes, enables leaders to navigate complexities effectively while preserving stakeholder confidence.

For Dr. Sahu, ethics and humanity are intrinsically linked. He advocates a balanced approach where every decision aligns with organizational objectives while considering its impact on individuals. "Even in situations requiring strict disciplinary action, my focus has always been on correction rather than punishment," he explains. "Leadership is about fostering growth and guiding people toward improvement, not diminishing their potential."

Dr. Sahu's journey exemplifies the essence of principled leadership—grounded in honesty, empathy, and strategic foresight. His enduring message to future leaders is both profound and inspiring: "Embrace humanity. Uphold your values. Make decisions that cultivate trust and safeguard dignity."

REVOLUTIONIZING HEALTHCARE:
The JBS Haldane Centre for Molecular Medicine

Imagine you have malaria, and your doctor prescribes hydroxychloroquine to treat it. But what if the parasite causing malaria has developed resistance to the drug? During an infection, your body becomes a battleground where antibiotics are the weapons, and pathogens are the enemy. But what happens if the enemy learns to evade these weapons? What if your defence mechanisms fail, leaving you vulnerable?

According to a Lancet study, antimicrobial resistance (AMR) is a global health crisis, causing over 1.27 million deaths in 2019 due to drug-resistant infections. Molecular medicine and genetic science offer promising solutions to combat this. Transforming personalized healthcare, molecular medicine tailors treatments to individual genetic profiles. In cancer care, targeted therapies like immunotherapy selectively attack cancer cells without harming healthy tissue. The field revolutionizes rare disease diagnosis by identifying genetic causes and improving treatments. For infectious diseases, mRNA vaccines, like those for COVID-19, enable faster, more precise responses.

The JBS Haldane Centre for Molecular Medicine (HCM) at Silicon University, established in 2022 with inDNA Life Sciences Pvt. Ltd., is a hub for molecular health sciences. It offers a two-year M.Sc. in Molecular Medicine, focusing on biochemical genetics, epigenetics, molecular oncology, stem cell biology, and bioinformatics. With advanced labs for Tissue Culture, PCR, Cytogenetics, Next-Generation Sequencing, Fluorescent Imaging, and Histopathology, HCM conducts groundbreaking research. The ongoing projects include breast cancer recurrence prediction and addressing pregnancy loss. Under the leadership of Dr. Birendranath Banerjee, HCM's globally trained faculty bring expertise in genetics, oncology, and neurobiology. They have experience from renowned institutions like Johns Hopkins, Cambridge, NUS Singapore, and Rockefeller University. The Centre conducts research on Alzheimer's therapies, molecular fertility, and plant resilience, strengthening its impact on global medical science.

Molecular medicine unlocks solutions to today's pressing health challenges while preparing us for future uncertainties. As research advances, it reveals both the depth of our understanding and the vastness of what remains unknown, making the journey of acquiring knowledge both humbling and endless. This is the paradox of knowledge: the more we understand, the more we uncover what remains unknown.

Sweta Mohanty
Assistant Professor, (BSH)

PHOTO NEWS

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