

SPARK



A Newsletter for Don Bosco University family, alumni and friends

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SPRINGER INTERNATIONAL CONFERENCE ON NEUTRINO AND ASTROPARTICLE



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Message from the Vice Chancellor

Intelligence, Neuroplasticity, and AI-ML: A Dynamic Trio

Intelligence has long captivated humans, traditionally linked to IQ scores measuring cognitive abilities. However, modern views recognize intelligence as multifaceted, encompassing more than a single numerical score. In 1983, Howard Gardner proposed the Multiple Intelligences Theory, challenging the notion of intelligence as a singular entity. Gardner identified various dimensions of intelligence, such as linguistic, logical-mathematical, spatial, musical, bodily-kinaesthetic, interpersonal, intrapersonal, and naturalistic.

Each individual possesses a unique combination of these intelligences, shaping their skills and talents. This theory highlights the importance of recognizing and nurturing diverse forms of intelligence in education and personal development.

Neuroplasticity, the brain's ability to adapt and modify itself, was recognized in the mid-20th century. Abraham Maslow's concept of "Emotional Strength" in the 1950s and Michael Beldoch's term "emotional intelligence" in 1964 contributed to understanding adaptive brain changes. The term "Emotional Quotient" (EQ) was introduced in 1987, drawing parallels with Intelligence Quotient (IQ). Emotional intelligence (EI) was further explored through various models, such as the trait model and the ability model.

Psychologists Peter Salovey and John D. Mayer introduced EI in the 1990s, while Daniel Goleman's bestselling book "Emotional Intelligence" popularized it in 1995. Goleman defined EI as a collection of skills and characteristics impacting leadership performance, including perceiving, utilizing, comprehending, managing, and handling emotions. Neuroplasticity, the brain's ability to modify and reorganize itself, is closely related to the development of emotional intelligence. Recent studies indicate that neural connections can be strengthened or weakened based on usage, highlighting the brain's adaptive abilities.

Artificial Intelligence (AI) involves developing smart machines capable of executing tasks that typically demand human intelligence. AI systems use techniques like machine learning and deep learning to tackle complex problems. The concept of AI has been around since 1955 and continues to evolve rapidly. Machine Learning (ML), a subset of AI, allows computers to learn from data without explicit programming, powering applications like recommendation systems, speech recognition, and image classification.

Deep Learning, a branch of ML, uses neural networks to model and solve complex problems, particularly effective in natural language processing and computer vision. Emotion AI, also known as affective computing, measures, understands, simulates, and responds to human emotions, enabling machines to interpret and react to emotions like humans.

Current AI, termed Weak/Narrow AI, specializes in specific tasks and



excels within those limits. It is poised to progress beyond text-based chat applications towards becoming Strong AI or Artificial General Intelligence, resembling human intelligence by learning new tasks and adapting to diverse contexts autonomously. The next level of AI advancement would be Super AI or Artificial Superintelligence, where Super AI surpasses human cognitive abilities, possessing the capacity to think, reason, learn, and make judgments.

Artificial Intelligence (AI) is advancing across sectors, with immense potential to transform education. AI-powered platforms can personalize learning, adapting to students' needs by offering tailored resources and exercises. AI chatbots act as tutors, identifying gaps, providing feedback, and aiding content creation to enhance student learning.

Recognizing AI's impact, our university launched a CSE-AIML program in the School of Technology. This program equips students with AI skills to contribute to its development. Integrating AI in education creates an inclusive, effective learning environment, empowering students to excel.

The intersection of intelligence, neuroplasticity, and artificial intelligence (AI) has significantly influenced our understanding of cognition, learning, and mental well-being. AI algorithms and human brains share adaptability, with both continuously expanding their capabilities. The symbiotic relationship between human cognition and AI is driven by curiosity, innovation, and shared responsibility.

Neuroplasticity, the brain's ability to adapt and reorganize, ensures humans remain adaptively creative and innovative. This dynamic quality allows us to stay ahead in the ever-evolving AI landscape. As AI's potential unfolds, it is crucial to deploy it ethically and transparently, fostering collaboration between human expertise and machine intelligence.

By prioritizing ethical deployment, transparency, and collaboration, we can unlock AI's full potential while ensuring it benefits society. The convergence of intelligence, neuroplasticity, and AI has the power to transform our understanding of cognition, learning, and mental well-being, leading to a more equitable and innovative world.

- Fr (Dr) Jose Palely
Vice Chancellor

Springer International Conference on Neutrino and Astroparticle

The Department of Physics in collaboration with Physics Academy of North East organised “Springer International Conference on Future Prospects in Neutrino and Astroparticle Physics 2024” on 23–24 January, 2024. An official entity under the Department of Science and Technology, the Government of India’s Science and Engineering Research Board sponsored the conference.

At the inaugural session, Fr. (Dr.) Jose Palely, Vice Chancellor, gave a welcome speech followed by short speeches from Prof. N. Nimai Singh, President of PANE, and Prof. Kushal Kalita, General Secretary of PANE. Prof. Amarendra Rajput, a retired professor from Dibrugarh University, was the guest of honour at the first session and spoke on the value of fundamental research.



The keynote address was given by Professor S. Uma Shankar of IIT Bombay, while the first discussion of the conference’s plenary session on the status of sterile neutrinos was given by Professor Raj Gandhi of the Harish-Chandra Research Institute in Allahabad. In the remaining plenary sessions, invited talks on BSM physics and neutrino oscillations were given by Prof. Mrinal K. Das of Tezpur University, Prof. J. W. F. Valle of IFIC, Valencia, Spain, and Prof. Sandhya Choubey of KTH, Stockholm, Sweden. While Dr. Subhaditya Bhattacharya and Dr. Debasish Borah from IIT Guwahati discussed dark matter and leptogenesis in relation to neutrinos, Dr. Santosh Kumar Rai of HRI, Allahabad, spoke on neutrinos at the colliders. Neutrino astroparticles were discussed by Dr. Tarak Nath Maity of HRI, Allahabad, and neutrinoless double beta decay was covered by Dr. Rahul Srivastava of IISER Bhopal.

For her poster presentation, researcher Ankita Kakoti of Tezpur University took home the first prize, and researcher Juhi Vardani of IIT Jodhpur took home the second prize. For the benefit of the Northeastern region’s researchers, the HoD, Dr. Bikash Borah, said that the University would be happy to host more of such conferences in the near future. Springer Nature will be publishing the conference proceedings and articles.

The conference successfully concluded under the able leadership of the Convener Dr. Debajyoti Dutta, Co-conveners Dr. Aibanjop Pyngrope and Satyananda Chabungbam. A total of sixty participants from various regions of India gave oral and poster presentations of their research.



National Seminar on Recent Trends in Biodiversity

The Department of Zoology, Assam Don Bosco University in collaboration with St. Edmund's College, Shillong and Pragjyotish College, Guwahati organized a Two-day National Seminar on Recent Trends in Biodiversity Status and Conservation on the 27th and 28th March, 2024.



The aim of the Seminar was to bring together researchers, environmentalists, and conservationists from different parts of the country to discuss and delve into several key trends in the field of biodiversity conservation which include biodiversity evaluation, climate change and biodiversity loss, technology and conservation, involvement of community in conservation, policy and governance, and citizen science. The Seminar was inaugurated by Rev. Fr. (Dr.) Jose Paley, Hon'ble Vice Chancellor, Assam Don Bosco University in the presence of Rev. Fr. (Dr.) Zacharias George, Deputy Registrar and Director, School of Humanities and Social Sciences; Dr. Shampa Choudhury, Vice Principal, Pragjyotish College; Dr. Ronald KL Tron, Head, Department of Zoology, St. Edmund's College, Shillong; and Dr. Prasanta Kr Choudhury, Director, School of Life Sci-

ences, Assam Don Bosco University; Dr. Jane Wanry Shangpliang, Head, Department of Zoology, Assam Don Bosco University and Convener of the Seminar; and participants from different Colleges, Universities, and Industries.

The Seminar witnessed a total of seven Keynote Speakers - Dr. Narayan Sharma (Cotton University, Guwahati), Mr. Neelam Dutta (Pabhoi Green), Dr. Dhruba Jyoti Sharma (Dimoria College, Khetri), Professor S.R. Hajong (North Eastern Hill University, Shillong), Mr. Debojit Das (Guwahati High Court), Professor Jogen Ch. Kalita (Gauhati University, Guwahati) and Professor HT Lalremsanga (Mizoram University, Aizawl) - who deliberated on pressing issues on the central theme of Biodiversity Conservation.

There was a total of five Technical Sessions which included 26 Oral Presentations and 53 Poster Presentations. The Chairpersons and Co-Chairpersons of the Technical Sessions were Dr. Narayan Sharma, Dr. Probin Phanjom, Dr. Ronald KL Tron, Dr. Dhruba Jyoti Sharma, Dr. Duwaki Rangad, Dr. Jayanta Deka, Professor HT Lalremsanga, Dr. Sangeeta Das, Dr. Lima Hazarika, and Dr. Manasee Choudhury. The Best Oral Presentation was awarded to Mr. Liston Marbañiang, Research Scholar, Assam Don Bosco University for his presentation on A Preliminary Report On The Diversity Of Grasshopper (Orthoptera: Acrididae And Pyrgomorphidae) From Meghalaya, North East India and the Best Poster Presentation was awarded to Ms. Puja Baishaya, Assistant Professor, S.B. Deorah College, Guwahati for her presentation on Impact Of Urbanisation on Functional Traits Of Birds In Guwahati City, Assam.

The Seminar concluded with a Valedictory Session during which a Summary of the Seminar was delivered by Dr. Bakhtiar Hussain, Co-Convener of the Seminar. Dr. Hussain highlighted the key takeaways from the Seminar: 1. To frame policies to conserve biodiversity in urban areas. 2. To take steps in developing and promoting biodiversity based entrepreneurship. 3. To train young conservationists in the field of Taxonomy. 4. To promote awareness on endocrine disruptors and biodiversity deterioration. 5. To strengthen the network and function as a powerful think-tank for exchange of ideas to conserve biodiversity. Mr. Langtuk Terang (Pragjyotish College), Ms. Maria K Lalhriatpuii (St. Edmund's College), and Mr. Ht. Decemson (Mizoram University) commented on the positive impact of the Seminar in enhancing their learning and research endeavours. The Seminar was attended by a total of 143 participants out of which 79 presented their research work.

The Organizers express gratitude to the sponsors - Indian Council of Social Science Research North Eastern Regional Centre (ICSSR-NERC), Assam Science Technology & Environment Council (ASTEC), DS Enterprise, B&B Associates and Zoological Society of Assam (ZSA) - for their partnership and lending their support by providing financial assistance.

BCA Students Won State Level Innovative Competition

Mr. Lianmuansang Samte, Aditya Kumar Rabha and Bhargav Kalpa Hazarika from BCA 6th semester, School of Technology, ADBU won the best innovative project work at the State Level Innovative Project Work competition organized by Assam Engineering College, AEC Class 88 Foundation on 10th February 2024. A cash award of Rs. 30,000/- was given to the winners as one time scholarship. They were guided by Dr. Gypsy Nandi, Associate Professor and Head, Department of Computer Applications, School of Technology, Assam Don Bosco University.

This project, titled 'NEOTracker: Near-Earth Object Detection and Analysis,' utilised machine learning algorithms combined with scientific concepts from astronomy in order to classify potentially hazardous Near-Earth Objects (asteroids and comets) and determine which features were important for this classification. The algorithms used were Logistic Regression, Random Forest, Support Vector Machine, and XGBoost. This project utilised two datasets, one taken from Kaggle and the second custom made by inputting specific parameters from NASA's JPL Dataset. This project analysed each model's accuracy, precision, recall, F1-Score, and ROC-AUC Score. The project concluded with over 90% for almost every performance metric for each model.



Symposium on Data Analytics

The Department of Computer Applications conducted a Symposium cum Expert Talk on Data Analytics & its Different Applications in Research on 16th February, 2024.

The objective of the symposium was to highlight the significance of data analytics and how it can help in research as well as developing startup units thus help achieve the agenda of Vikshit Bharat @2047.

The session started with a welcome address by Dr. Gypsy Nandi, Associate Professor, Head of Department of Computer Applications, School of Technology, Assam Don Bosco University. She emphasized the key importance of data analysis and its role in development of startup businesses.

Special guest, Dr. Chikhla Jun Gogoi, Assistant Professor, Pandu College, also graced the programme and delivered a talk on different key points pertaining to statistical analysis and data analytics techniques from the perspective of industrial applications. She also shared the way how a student can think about developing data analytics tools for their academic as well as startup projects. She suggested that a student's innovative project work activity and their novel applicability can create a roadmap towards the success of Vikshit Bharat @2047.



As an outcome, the participants were able to learn the global market of data analytics in the IT sector as well as the methodologies required for developing their data analytics skill.

The open discussion as well as the questionnaire session was coordinated by Dr. Abhijit Bora and Dr. Jonti Deuri, Assistant Professors, Department of Computer Applications, Assam Don Bosco University. The symposium cum expert talk was attended by the faculty members and students of School of Technology, ADBU.

VC Among Peer Team of HEIs Constituted by Raj Bhavan

The Governor of Assam, Shri Gulab Chand Kataria constituted Peer Groups of Heads of Higher Education Institutions in Assam for visiting various Higher Education Institutions in the state of Assam as a peer mutual learning and sharing exercise. Fr. (Dr) Jose Paley, the Vice Chancellor is among the Peer Team I and the team visited Assam Agricultural University, Jorhat on 17th January 2024.

According to Raj Bhavan, the Peer Group will have a comprehensive understanding of the academic and operational aspects of the institutions visited and take stock of implementation of various aspects of NEP 2020 in the Institutions and issues arising therefrom. In addition, it is envisaged that these visits will result in mutual sharing of the best practices and possibilities of improvement in the universities as the intention of this exercise is improvement and exchange of Best Practices where applicable rather than fault finding.



Popular Talk on A Journey Through the Universe

Eminent astrophysicist, radio-astronomer, and educationist Prof. Dhruba Jyoti Saikia visited Tapesia Campus of ADBU on 8th March 2024 and delivered a popular science lecture titled 'A Journey Through the Universe.' The event was hosted at the auditorium in Academic Block I.

Prof. Saikia, a Fellow of the National Academy of Sciences, is currently associated with the Astronomy Centre for Educators at IUCAA. He is renowned in the community for his contributions to extragalactic astronomy, radio astronomy, and the study of active galactic nuclei. His publications over the years have amassed over 6400 citations. Prof. Saikia was the founding Vice Chancellor of Cotton University, ex-president of the Physics Academy of North East, and is also well-known for his contributions to education and science popularisation.

Prof. Saikia's talk encompassed the history of modern astronomy and the evolution of the field. In light of International Women's Day, the talk also highlighted the contributions and lives of women astronomers who have contributed significantly to enhancing our understanding of the cosmos. The 90-min long talk was concluded with a lively interaction session.



Today's event was organised by the Director, Interdisciplinary Research, ADBU, in association with the Department of Physics. The response from the student community was overwhelming, with over 220 participants from the departments comprising SFAS, Depts. of Botany, Zoology, Psychology, and Economics.

Community Outreach Programme at Parijat Academy

With an aim to promote Atma Nirbhar Asom Abhijan and Viksit Bharat @2047, the Department of Management conducted an outreach programme on 23rd February 2024 at Parijat Academy, located at Gorchuk, Guwahati, a School for under privileged students established by Mr. Uttam Teron and his wife Baijayanti Teron.

The Academy has been receiving fund from various sources and is now looking for ways to be self-sustained by other initiatives including making their own re-usable sanitary pads, handlooms for various silk fabrics, banana fiber for commercial purposes.

A few students of BBA 4th Semester and 6th Semester accompanied by the faculty co-coordinators and HOD, Department of Management spent the whole day with the students engaging them to learn various skills including making paper bags, painting, making photo frames out of wastes, dance and music. The student volunteers in return too learned a lot from the kids as well as from the owner. The team from the university also donated groceries for the hostel along with few craft materials.

Workshop on Communication and Group Dynamics

The Department of Management organized a workshop on 'Communication and Group Dynamics' on 21st March 2024 at Azara Campus with Ms Juhi Baruah, Director, Human Resources at the University as the resource person. The workshop delved into the intricate processes of group dynamics, including the FSNPA model: forming, storming, norming, performing, and adjourning. This framework illuminated the stages through which groups evolve.

Through visual aids such as graphs and interactive discussions, attendees gained insights into the natural evolution of teams and the challenges inherent in each stage. A significant highlight of the workshop was the distinction drawn between groups and teams. Furthermore, the workshop delved into essential components of team building, emphasizing the pivotal role of communication, cooperation, collaboration, motivation, goal clarity, and leadership.

The session on interpersonal relationships introduced participants to the Johari Window, a model for understanding self-awareness and mutual understanding. Through discussions on the window's quadrants - open, private or hidden, blind spot, and unknown or discovery - participants gained insights into how communication and empathy can deepen interpersonal connections and facilitate effective teamwork.



In conclusion, the workshop on Communication and Group Dynamics provided a comprehensive framework for understanding and optimizing group interactions and team dynamics. Participants enhanced their skills in effective communication, collaboration, and leadership, poised to contribute positively to their respective teams and organizations.

Workshop on the Power of Advertising



The Department of Management organized a workshop on the 'Power of Advertising : An initiative towards upskilling management students for creation of advertisements to understand how to spread ideas among the masses as a part of Viksit Bharat 2047 and Atmanirbhar Asom' on 3rd March 2024.

In view of the Viksit Bharat @2047, the workshop was designed with full participation of the students from the Department with an aim to upgrade their skills in creating advertisements on an abstract product given to them. The session started with a welcome speech by the resource person Ms Chayanika Das, Asst. Professor at the Department of Management who explained the importance and benefits of

strong advertisements and also the dos and don'ts while designing an advertisement. She also laid examples of some famous and heart touching advertisements.

The floor was left open for questions and answers. The resource person then invited the students of BBA, BCom and BCA 2nd Semester to showcase their talents in making the videos of advertising for various products and services. The videos were played followed by presentations by students and reports submission. These were all evaluated and feedbacks were given to the students.

Workshop on Multilingualism in Education

The University's Azara Campus organized a Workshop on Multilingualism in Education at Parijat Academy for the teachers and volunteers with Dr. Nabamita Das, Asst. Professor as the resource person on 28th March 2024.

The session commenced with PowerPoint Presentation, delving into the topic of multilingualism. This presentation thoroughly explored and defined key concepts and terms related to multilingualism, shedding light on its positive impacts on cognitive development, cultural appreciation, and academic success. Furthermore, it underscored the advantages associated

with multilingualism and additionally, emphasis was placed on the Government of India's support for multilingual education. Through this comprehensive presentation, participants gained a deeper understanding of the significance of multilingualism and its implications in various spheres, including education and government policies. The "Multilingualism in Education" workshop effectively familiarized the Parijat Academy community with the importance of multilingualism in educational settings. Through an interactive storytelling session, the workshop created a dynamic and enjoyable learning ambiance, accentuating the significance of linguistic diversity. Well-received by participants, it provided valuable insights and instilled a positive attitude toward multilingual learning. This approach is believed to enhance educational experiences and contribute to building a more inclusive society. The workshop's success at Parijat Academy underscores its potential to promote cross-cultural understanding and appreciation, thus facilitating broader social cohesion and academic enrichment.

Industrial Visit to CG Foods

The Department of Commerce organized an Industrial Visit to Guwahati Tea Auction Center (GTAC) on 8th February 2023 for the students of B.Com (Honours) final semester students.

On arrival, students were taken to the tea auction room and the guide explained how the auction of the tea leaves takes place. The buyers bid on different tea leaves like CTC, dust and Orthodox Tea (highest graded tea in India). The auction is run by brokers who take bids from the buyers. Before everything was digitalised, the room would be full of buyers from different companies and it used to be really loud and chaotic. But nowadays bidding is done through digital platforms.



Students were then taken to the Conference Room where they were shown the technical part of how the bidding of tea leaves work through their platform. Generally, buyers and sellers have to register themselves with the Guwahati Tea Auction Centre. The auctions are usually conducted 52 times in a year. The auction is done in lots and 1 lot contains about 20-30 packets having a weight of about 30-35kg per pack. The technical part of the auction was interesting as we got to see how tea auction is actually carried out.

The Guwahati Tea Auction Centre (GTAC) is one of the busiest tea trading facilities in the world. In fact, it has seen the largest volume of CTC tea auction in the world. Established on 25th September 1970 as a result of the commitments of a few pioneers, the Guwahati Tea Auction Centre (GTAC) has been nurtured and sustained through the joint efforts of the State Government and the four segments of tea trade – sellers, brokers, buyers and warehousemen.

Workshop on Waste Management

On 19th March 2024, a workshop titled 'Waste Management - From Waste to Profits through Reduce, Recycle, and Reuse - An Initiative towards Viksit Bharat @2047' was conducted by the Department of Management with Dr. Suman Mahanta Bordoloi, Asst. Professor at the Department. The workshop aimed to address the critical issues of waste management and explore sustainable solutions that align with the vision of a developed India by 2047.

The workshop commenced with an overview of the current state of waste management in India, highlighting the challenges posed by rapid urbanization, population growth, and industrialization. Participants examined statistics showcasing the alarming rates of waste generation and the inadequacy of existing waste management infrastructure. Emphasis was placed on the principles of Reduce, Recycle, and Reuse (3R) as fundamental pillars of sustainable waste management. Through engaging presentations and case studies, attendees gained insights into how adopting these principles can mitigate environmental degradation, conserve resources, and create economic opportunities.



The workshop also showcased innovative technologies and initiatives aimed at transforming waste into valuable resources. Discussions revolved around advancements in waste-to-energy technologies, biodegradable packaging solutions, and decentralized waste management systems, highlighting their potential to address waste challenges while generating revenue streams.

Quiz Competition

In line with the vision of Vikshit Bharat, a quiz competition was organized jointly by the co-curricular clubs of the Department of Chemistry and the Department of Physics in association with IQAC cell, Assam Don Bosco University on 20th March 2024.

The competition sought to engage participants in a constructive dialogue about the nation's progress and challenges. More than ten teams from various schools participated in the competition which consisted of multiple rounds, including general knowledge questions, audio-visual rounds featuring key developmental projects and schemes. The questions were designed to cover a broad spectrum of topics related to the theme of Vikshit Bharat. After several rounds of intense competition, the winners were announced based on their cumulative scores across all rounds.



The Quiz Competition in connection with Vikshit Bharat proved to be an enlightening and engaging event, providing participants with valuable insights into the developmental journey of India. It served as a platform for fostering dialogue, promoting awareness, and celebrating the progress made towards building a more developed and inclusive nation.

Field Trip to Pobitora Wildlife Sanctuary

On 17th February 2024, the Department of Botany organized an educational field visit to Pobitora Wildlife Sanctuary, Morigaon, Assam for the students of M.Sc 4th Semester. The students were led by three faculty members of the department: Dr. Jyotishman Deka, Dr. Thounaojam Premrata Devi and Dr. Thounaojam Thorny Chanu. The main objective of this educational tour was to explore the neighboring flora and fauna for research and social purposes.

After reaching the place, the students took jeep for the safari ride into the wildlife sanctuary to explore the bioresources. The forest authority provided a forest ranger in each safari ride with armament to guide and protect as well. They explained about the history, geography, topography, and the various flora and fauna present in the wildlife sanctuary. The students came across majestic Elephants by the ponds, behemoth of the Rhinos, graceful water Buffaloes grazing in meadows, elusive wild Boars passing by the prairies, and colorful birds perched on tree branches and water birds hunting fish by the ponds.



The trip came to an end at 2:40 pm and the team reached back the university campus at 4.30 pm. The trip gave insights on the workings of the natural habitats, the delicate balance of nature and their interactions with the human existence.

Seminar on India's Semi-Conductor Mission

The Electrical and Electronics Engineering Department held a seminar on "India's Semi-Conductor Mission: India's Techade-Chips for Viksit Bharat" on March 13, 2024.

The seminar, led by Dr. Bikramjit Goswami, Head of the Department and Dr. Sunil Deka, Assistant Professor, delved into the technological evolution and future of semiconductors, with a special emphasis on India's potential in the global landscape. Dr. Goswami deliberated on India's Techade vision and how Viksit Bharat @2047 can be achieved through research and innovation. The event also featured a live broadcast of the foundation stone laying ceremony for three new semiconductor facilities in Dholera; Gujarat, Sanand; Gujarat and Morigaon; Assam, officiated by the Prime Minister of India Sri Narendra Modi. The event was attended by 72 students from B.Tech. and M.Tech. along with the faculty, and staff members where the collective energy mirrored the nation's aspirations.

Seminar on Sustainable Development

The University conducted a seminar on 28th March 2024 as a part of an initiative under Viksit Bharat 2047 titled 'Access to critical resources - Bharat journey towards energy independence by 2047 and net zero by 2070' and 'Bharat as a thriving circular water economy achieving 100% waste water treatment.' The event tackled crucial aspects of India's sustainable development.

Spearheaded by Dr. Girija T.R., Head, Department of Civil Engineering, and Dr. Bikramjit Goswami, Head, Department of Electrical and Electronics Engineering, the seminar featured insightful presentations and discussions led by a total of 30 students from both departments. These students explored various facets of India's path towards energy independence and sustainable water management, in the presence of 13 faculty members and 79 Engineering students of the university. Discussions ranged from the burgeoning renewable energy revolution and wastewater treatment strategies to the integration of clean energy technologies and circular water economy principles.

Prof. Manoranjan Kalita, Director, School of Technology, emphasized the importance of student engagement in these critical areas. "The present students are fortunate," he remarked, "as they have a vital role to play in shaping our nation's sustainable future." The seminar concluded with a renewed sense of purpose among participants, who left the seminar committed to realizing India's vision of a prosperous and sustainable tomorrow.

Two-Day Workshop on Service Learning & Community Engagement



The Department of Mathematics conducted a Two-day Workshop on Service Learning and Community Engagement on 17th February 2024 and 23rd February 2024 for students, where students showcased their service learning work through presentations. The objective of the programme was to provide a platform for students to demonstrate their service learning projects, highlighting their efforts and accomplishments within their communities. The session started with a welcome address by Dr Apil Uddin Ahmed, Assistant Professor, Department of Mathematics, Assam Don Bosco University. He encouraged the students to reflect on their experience, identify personal and professional growth, lessons learned, and challenges they faced throughout their projects.

MNE Outreach Program

As a part of Departmental Outreach Programme, a Career Awareness Workshop was organized by the Department of Mechanical Engineering on 20th January 2024 at Parijat Academy, Garchuk, Guwahati. The resource persons for the workshop were Dr. Buljit Buragohain, Head of the Department and Ms Leena H. Nemade, and Kamaldeep Kalita, Assistant Professors of the Department.

Dr. Buljit Buragohain discussed various trades of ITIs and three-year diploma courses of Polytechnics that students can study after passing the high school examination. He explained that students should choose disciplines and subjects in higher secondary according to their personality, interests and skills. He also discussed various career options in different streams - Science, Commerce, Arts, vocational etc.

Another resource person, Ms. Leena H. Nemade spoke about the importance of skill-based education and the differences between information and knowledge. Also, the other resource person of the workshop, Mr. Kamaldeep Kalita spoke about the use of technology based learning and briefed the students about the proper utilisation of the internet.



Industrial visit to M/S Standard Products

The Department of Mechanical Engineering organized an industrial visit to M/S Standard Products Factory, Nowapara, on 23rd February 2024. The purpose of the visit was to familiarize the students with a factory that produces standard products of cement, fly ash bricks and a similar variety of such products.

Mr. Ritesh Karamchandani, owner of the factory, gave an in-depth information on the factory, the products and production processes, marketing challenges, and its prospects. Mr. Karamchandani also showed the step-by-step production unit, the machinery involved in the unit, the variety of bricks and moulds used for making them. The processes involved in brick-making in this factory contributes less to pollution as compared to conventional methods. Mr. Karamchandani encouraged the students to take up similar business ventures and encouraged them to be entrepreneurs and even assured his help. Students were accompanied by Dr. Buljit Buragohain, Head of the Department, Mr. Kamaldeep Kalita, Assistant Professor and Mr. Champak Deka, Workshop Instructor.

Visit to Fresh Air Waste Management Pvt Ltd

The Institute of Pharmacy conducted an Industrial Visit to Fresh Air Waste Management Private Limited on 5th February 2024 for the students of Diploma in Pharmacy. The visit aimed at providing Diploma students with a rich learning experience that complements their academic studies and prepares them for future careers in waste-related fields and hope to bridge the gap between theory and practice, and helps them gain practical skills and knowledge relevant to their chosen field of study.



The events manager, Mr. Niren Kalita, welcomed all the students who arrived for the field visit at their waste treatment plant. Then, he introduced himself and Mr. Kaushik Das, who is a Factory Operation and Engineer. As site engineers responsible for the operations shared insights into various aspects of waste management and treatment processes.

He discussed the types of containers used for waste collection and the different colored containers, primarily blue, red, yellow, black, white, and green. These containers serve as a visual cue for proper waste segregation, with blue typically designated for recyclable materials and red for general waste. Segregating waste at the source is crucial for efficient recycling processes and reducing environmental impact.

Speaking of recycling, he mentioned the importance to highlight the distinction between recyclable and non-recyclable waste. He also talked about hospital waste management, which involves specialized protocols due to the potentially hazardous nature of medical waste. Hospitals generate various types of waste, including infectious, pathological, and pharmaceutical waste. Segregation and proper handling of hospital waste are essential to prevent contamination and protect public health.

The facility is equipped with an incinerator, a critical component for the safe disposal of certain types of waste. It is particularly effective for handling medical and hazardous waste.

International Day of Mathematics

The Department of Mathematics celebrated 'International Day of Mathematics (Pi-day)' on 14th March, 2024. On this occasion, the department invited Professor (Mrs.) Anjana Kakoti Mahanta, Professor & HoD, Computer Science, Gauhati University, Assam to deliver a lecture. Prof. Mahanta delivered an interesting lecture on 'Recommender System' which is one of the most important topics in modern science and technology especially Artificial Intelligence and Machine Learning. Prof. Mahanta discussed the various aspects of recommender systems with real-life examples such as Netflix, Amazon etc with power point presentation. The programme was attended by 89 students, 2 research scholars and 7 faculty members from various programmes of the School of Fundamental and Applied Sciences, Assam Don Bosco University.



Royal Enfield Freshers' Course

A group of 10 students of Mechanical Engineering students from Royal Global University underwent a 5-day training programme at the Royal Enfield Training Center at Don Bosco University's Azara campus from 29th January - 2nd February 2024.

During the course of training, the trainees were given an in-depth hands-on exposure to the Royal Enfield bikes and their components along with the relevant theory. The program was coordinated by Mr. Pranjal Sarma, Asst. Professor, Department of Mechanical Engineering, Don Bosco University.



Interaction with Dr. Jayanta B. Sharma

An interactive session on "Career and Life" with Dr. Jayanta B. Sharma was organized by the Department of Mechanical Engineering on 13th March 2024. Dr. Jayanta B. Sharma spoke on cutting edge technology like Artificial intelligence, relativity and the second law of thermodynamics with real life examples. He also spoke on the importance of skill-based education, the need to be a lifelong learner and environmental sustainability. A total of 37 students attended the talk.

Industry-Academy Interface

On 19th January 2024, an insightful interaction programme with CEOs of two distinguished corporations, Mr Vishal Srivastav CEO at AnnalectIndia, an Omnicom Group and Mahesh Agarwa, CEO, Areteans was held in the conference hall for the final year students of all the departments of Azara Campus.

Both the corporations announced internship opportunities of 4 to 6 months duration, with the added incentive of salary for interns. These companies are looking for candidates with the ability to learn and apply knowledge of business acumen and artificial intelligence. The event not only facilitated meaningful dialogue between the corporate leaders and students but also opened doors for valuable internship opportunities aligned with the companies' evolving needs and technological landscape.

GIZ sponsored workshop on Climate Vulnerability Assessment of the Selected Fish Species in Northeast India

The Department of Zoology organized a 3-day GIZ sponsored workshop on "Climate Vulnerability Assessment of the Selected Fish Species in Northeast India" from 28th February to 1st March 2024. A total of 35 participants from Assam (10), Meghalaya (10), Manipur (5), Nagaland (4), West Bengal (1), and Zoological Survey of India Kolkata (3) including 3 experts were in the Workshop discussing about various parameters for assessment of Climate vulnerability and how to develop the model for a better prediction and strategies for mitigation.

The Workshop covered the following themes:

- Theory of fish biogeography, species distribution modeling, and vulnerability assessment.
- A broad overview of the main factors affecting fish species occurrence at regional scales.
- Hands on tools for collecting and preparing fish data for species distribution modeling.
- Methods to identify important habitat variables & Basic modeling approaches to identify suitable climate and habitat.
- An ability to predict potential habitat losses due to climate change (sensitivity).
- An understanding of adaptive capacity, including species and human-mediated aspects.



Dr. Tyrell DeWeber, Team leader and Workshop Coordinator, from Potsdam Institute of Inland Fisheries, Sacros, Germany introduced the participants to various software applications and tools on Climate vulnerability assessment required for assessing the three selected fish species from various parts of Northeastern India by practically showing them.

Dr. Lalit Kumar Sharma, Scientist E, Zoological Survey of India discussed about the species distribution modeling theory, advanced species distribution modeling, limitations of species distribution models for vulnerability assessment and the importance of adaptive capacity.

Dr. Yumnam Lokeshwor Singh, Associate Professor and Coordinator of the workshop, the Department of Zoology, Assam Don Bosco University gave a lecture on how to measure habitat variables in the field and the process of habitat inventory of streams and rivers.

The workshop was organized to train researchers, scientists, and academia particularly from the Northeast India on assessing the vulnerability of fish species to climate change through theory and hands-on exercises. The Workshop concluded with a grand musical performance organized by students of Don Bosco University Music Club at the Cenacle, Academic Block IV of the University.

Campus Bird Count 7.0

The Department of Zoology conducted Campus Bird Count 7.0 on 12th February, 2024. This exciting initiative was led by Dr. Nilutpal Mahanta, Senior Project Officer, WWF India with 85 participants braving the early morning cold to spot the diversity of avian species on campus. The team included students, research scholars, faculty and staff from the Department of Zoology as well as other Departments. All the participants reported at 6:45 AM. Dr. Mahanta briefed the participants about the event and how the participants can get involved with different organizations that will help in contributing towards conservation of flora and fauna. Around 7:00 AM the participants headed towards the “Elephant walk” area of the campus for the bird count cum bird watching event.



The event proved fruitful, with participants sighting around 36 different bird species within the campus. From Common Myna to Green-billed Malkoha, the diverse avifauna delighted both seasoned birdwatchers and newcomers alike. Dr. Mahanta, renowned for his expertise in ornithology, guided the participants, sharing insights into bird behavior and ecology throughout the event. The success of the bird counting event underscores the growing interest in wildlife conservation and ecological studies among students and the broader community within the university. Such initiatives not only promote environmental awareness but also contribute valuable data to ongoing research efforts.

Commerce Fair

The Commerce Fair was organized by the Department of Commerce as a part of the Vikshit Bharat Sankalp Yatra on 1st, 2nd and 4th March 2024. Mr. Jayanta Kalita, Senior Journalist, was invited for the inauguration of the fair. The objective of the Fair was to encourage creative thinking among the students and enhance their skills.

The Fair provided an opportunity to the students to apply theoretical knowledge in practical settings and provided them practical learning experience in business models and entrepreneurship, involving various marketing elements like promotion, pricing, branding, and sales. The fair was attended by faculty, staffs, and students from various departments. There were a total of 12 stalls featuring self-made products such as home-decors, food & beverages, arts & crafts and services including beauty and spa etc.

Placement Drive by Swiggy on Campus

A placement drive was conducted on 24th January 2024 at Azara campus for a well known company, Swiggy. The placement drive was done through Don Bosco Job Placement Network of India. There were three rounds of interview conducted online followed by an HR round. Two students, Merilo Latha from B.Com 6th semester, and Brajesh Upadhyay from BBA 6th semester made it through till the end and were selected.

Awareness Drive on Empowering Educators

An awareness drive on “Empowering Educators: Recognizing and Supporting Students Mental Health Needs” was organized by the Department of Education in collaboration with SRF Foundation on the 16th of March 2024 at Kapalkata L.P School. The programme included the teachers, the staff and the students of the school. The main purpose of the programme was to spread the awareness among the teachers on how to deal with students and how to identify the students’ needs and requirements.

The programme started with a session on mental health and how each one of us should take care of our mental health, conducted by the students of MA Education. They began with meditation which lasted about 3 minutes and continued with a talk on common mental health issues such as anxiety disorder, depressive disorder, bipolar disorder, post traumatic disorder, stress disorder, attention deficit hyperactive disorder (ADHD), eating disorder, schizophrenia, personality disorder, substances disorder.



This was followed by an exercise session, conducted by Rosni Basumatary and Anupama Adhikari where all the students and the teachers took part in an exercise that created an environment which was enjoyed by the all the attendees. Lastly, Dr. Tania Sur Roy concluded the programme by mentioning the need of mental health that teachers are welcomed to contact her regarding any issues they may face. She also mentioned that the teachers are there to help the students in any problems that they have so the teachers should be attentive towards the students and provide them with love and care. She praised the students on being attentive and thanked the school for being so welcoming.

Overall, the event provided a valuable platform to discuss the critical role of educators in supporting students’ mental health. By implementing the discussed strategies, educators can create a nurturing environment conducive to students’ emotional growth and well-being.

Popular Talk

As a part of Amrit Kaal, Viksit Bharat @2047, the School of Life Sciences of Assam Don Bosco University, Tapesia, conducted a Popular Talk on 8th March, 2024. The program was held at the Auditorium at Academic Block 1 at Assam Don Bosco University, Tapesia Campus, Assam. The Resource persons for this event were Dr. Dipul Kalita, Principal Scientist, Agrotechnology and Rural Development Division CSIR, NEIST, Jorhat; Prof. Saibal Sengupta and Dr. Manasee Choudhury from the Department of Zoology, Assam Don Bosco University



The first speaker, Prof. Saibal Sengupta spoke on the theme National Tiger Mission align to the theme Environmental Cosmos and Policies. Prof. Sengupta mentioned that the Project Tiger is a wildlife conservation initiative in India that was launched in 1973 and the primary objective of Project Tiger is to ensure the survival and maintenance of the tiger population in their natural habitats by creating dedicated Tiger Reserves. He also spoke about the success stories mentioning how the Project Tiger has increased the number of Tigers in the country.

The second session of the popular talk was online in which the speaker Dr. Dipul Kalita spoke about Entrepreneurship and Prospects in North East India. Dr. Dipul Kalita briefed about the Utilization of banana fibre for making special paper board using ecofriendly process, chemical constituents and energy content of some latex bearing plants, utilization of certain weed species useful for pulp and cordage industries and greaseproof paper from Banana (*Musa paradasiaca*) plant to name a few. The second session ended with Q&A session in which Dr. Kalita encouraged the students to visit his lab and learn the different technologies which is being used in his Institution.

The third talk was delivered by Dr. Manasee Choudhury on Women Empowerment aligned to the theme Rising Nari Shakti Women Empowerment in India. Dr. Manasee highlighted the different schemes for women empowerment in India aiming to bring women into the mainstream of all the sectors in the country. She emphasized on the Scheme for Women in Science and Technology where students got to learn about different opportunities provided by Government of India for pursuing higher studies. The session was concluded with a vote of thanks. A total of 161 students attended the session.

Flower Arrangement Workshop

A workshop on Flower Arrangement was conducted by the Department of Hospitality and Hotel Administration on 16th February 2024 at the Cenacle, Academic Block V with an aim to create awareness among hospitality students the importance of flowers in enhancing the beauty of a place.

Ms. Soma Lyngdoh, Assistant Professor at the Department started the session with a brief explanation on different elements and materials required in an aesthetic floral arrangement including flowers, containers, wrapping materials, baskets etc.

This was followed by a demonstration of various flower arrangement styles and techniques by Mr. Sabyasachi Banerjee and Ms. Soma Lyngdoh giving hands-on practice to the participants and some arrangements were prepared as hands on practice by the students. Students of BSc Hospitality 6th Semester and 2nd Semester took part in the workshop along with some students from other departments.



FDP on Molecular and Phylogenetic Analysis in Research

The Department of Zoology, Assam Don Bosco University organized a week-long Faculty Development programme from 2-8 February, 2024 at its Tapesia Campus. The FDP began with the inauguration session in which a laboratory manual on On Wet & Dry Lab Techniques Of Molecular & Phylogenetic Analysis was released by the Vice Chancellor Dr. (Fr.) Jose Palely, Dr. Prasanta Kr. Choudhury, Director School of Life Sciences and Dr. Jane Shangpliang, Head, Department of Zoology Assam Don Bosco University along with Prof. Saibal Sengupta and the resource person Dr. Jayaditya Purkayastha.

The session was divided into dry and wet lab techniques of molecular and phylogenetic analysis. These techniques were intensified and made in depth by troubleshooting sessions and assignments apart from small group centric experiments. This arrangement enabled the participants to participate thoroughly and fully engrossed them in the FDP. Faculties from different institutions, Research scholars were able to experience from scratch to screen analysis of DNA isolation, PCR, Gel Electrophoresis, phylogenetic tools used in analysis of genetic data such as RAXML GUI, Jmodel Test, Mr. Bayes, BEAST, MEGA and several more.



The dry lab session was conducted by Dr. Jayaditya Purkayastha, General Secretary, Help Earth, while the wet lab was conducted by Dr. Madhurima Das, Department of Zoology, Assam Don Bosco University.

A total of 23 participants from different institutions attended the FDP. The programme received positive feedback and responses from the participants which was encouraging for the Department. The programme concluded with a valedictory session where important suggestions were recorded for future such endeavours.

Online Training on Computer Assistant Translation

The Department of English organized an Online Training on Computer Assistant Translation (CAT): Trados Studio on 21-02-2024 in collaboration with the Department of Computer Science and Engineering and Anwil Infotech, India. Mr. Savio Dbritto and Mr PS Gonvindrajan from ANWIL INFOTECH, India were the resource persons who deliberated on the scope of translation market in India and abroad and the job potentiality it has. They also took participants to the features of the Trados Studio which is an AI enabled computer assisted translation programme. Total 32 students from the department participated in the training

Lecture on the theme of 'Human and Environment'

The Department of English at Assam Don Bosco University, in collaboration with the Indian Council of Philosophical Research (ICPR), organized a Periodical Lecture on the theme of "Human and Environment" on 9th February 2024. The event aimed to delve into the intricate relationship between humans and their environment from various philosophical perspectives, shedding light on contemporary debates and dimensions in environmental ethics. In the first session, Dr. Laxmikanta Padhi elaborated on the topic "Is Nature Intrinsically Valuable? Debates and Dimensions in Environmental Ethics", The second session was delivered by Dr. Thoibisana Akoijam on "Facets of Environment and Trajectory of Human(ism) In 21st Century". The final session of the program, conducted by Dr. Sashi Mohan Das, focused on "Assigning Intrinsic Value to Nature: Some Observations". All the students and faculty members of the department participated in the event.

Alumni Speaks: Interactive Talk 2

The Department of English, Assam Don Bosco University organised "Alumni Speaks: Interactive Talk 2" on 13th March 2024 from 11:30 am to 12:30 pm. The Speaker for the event was Mr. Dipyasuruj Konwar, Alumni Batch 2017-2020 and Editor, Migration and Conflict Section, Stand News, Ireland. The main aim of the event was to introduce the present batches of students with eminent alumni of the English department, to provide a platform for interaction, mutually benefit each other with life, learning and career paths. The activity witnessed the participation of around 78 postgraduate students from the department.



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