

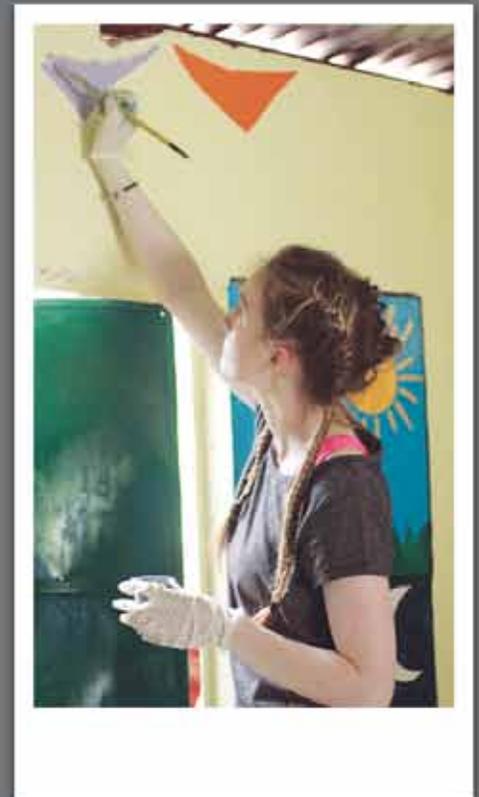
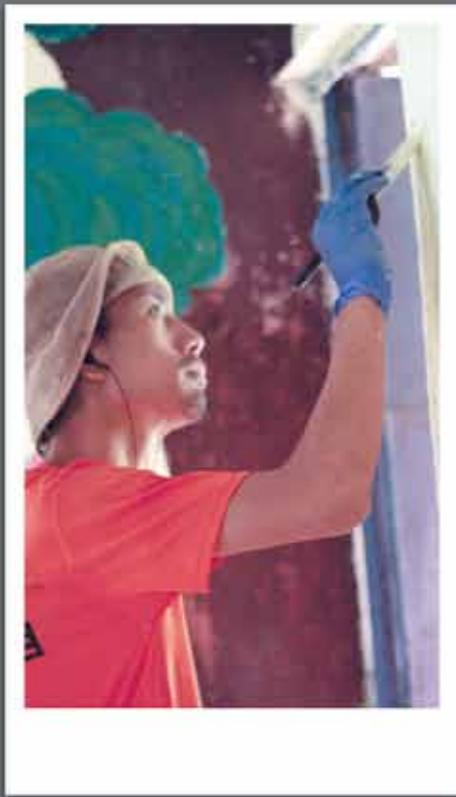
SPARK



A Newsletter for Don Bosco University family, alumni and friends

Volume 11 | Issue 2 | 2019

INTERNATIONAL STUDENT VOLUNTEER EXCHANGE 2019 WITH UNIVERSITY COLLEGE DUBLIN VOLUNTEERS



National Workshop on Research Publication and Intellectual Property Rights



Workshop on Turtle Biology



International Yoga Day



Kiddies' Day Camp at Green Pastures Children's Home

Message from the Vice Chancellor

In pursuance of our long-standing tradition of ensuring that we cater to the personal and professional development of our Faculty and Staff, we just completed a two-day Workshop on 'Design Thinking'. Conceived by our Director of Human Resources, and ably translated into reality by Prof Lata Chakravarthy and Prof Sanjeeb Kakaty from the Indian Institute of Management (IIM, Shillong), the workshop was, by all accounts, a runaway success.

Design Thinking is the buzzword today in all spheres of life. In a nutshell, Design Thinking involves framing driving questions that inspire the search for creative solutions, pushing past obvious past solutions to arrive at breakthrough ideas, making those ideas tangible through experimentation and proto-typing, and sharing with relish the story of this process of learning and innovation.

It is being adopted globally by higher education, not as a mere phenomenon, but for its relevance in a world transiting through volatility, uncertainty, complexity and ambiguity; and to actually go beyond the clichéd talk of preparing students to solve problems that the world is still not in a position to imagine.

More than ever before, we stand in need of the critical skills of empathy, collaboration, persisting through failure and being comfortable with ambiguity – these are the abilities required to lead and innovate in present day world; and they need to be cascaded in educative processes and inculcated in students. Against the increasing reality that what works today may be obsolete tomorrow, it is critical for educators to learn how to guide their students and put them through learning experiences that call for their creative imagination and involvement.

The workshop was not meant to project Design Thinking as a "cure-all" that "can transform anyone into an innovator". Instead, in some manner, it marvelously led to an understanding of design thinking as a process that overlaps areas of inspiration, ideation and implementation.



In this endeavor, we also explored "mindfulness" as a tool and a technique to help us focus our attention, and to observe our thoughts and feelings without judgement.

'Mindfulness' is a proven technique to increase our ability to regulate emotions, decrease stress, anxiety and depression, enabling us to make better decisions and to be more fully engaged in life – open to greater realities, open to challenging questions, open to creative solutions.

'Mindfulness' comes as a result of deliberately cultivating a habit of 'awareness' of others, of one's surroundings, of nature, of possibilities and dreams, of a life without addictions, of the joys of empathy, love and friendship, of the loving providence of a Power greater than our own (God) on whom we can pin our dreams, our joys and sorrows, our aspirations and our frustrations.

The workshop concluded with two marvellous sessions by the renowned Violinist and Management Trainer, Ms Sunita Khaund Bhuyan, transporting us into the sort of awareness and mindfulness that lie right the heart of our feelings of inner joy, contentment and peace – a place and a state of mind where we can look on everyone else with empathy, keeping us functioning and working at our best.

This challenge and the exhilaration of 'mindful living' shall be our theme for this year... because it actually works!

Fr Stephen Mavelly
Rector & Vice Chancellor



University signed 'Green Pledge' in collaboration with European Union



Assam Don Bosco University is pleased to collaborate with the Delegation of the European Union and the European Union embassies in India to join the common fight against environmental degradation and agrees to follow the principles adopted by the EU embassies as part of the "EU Green Pledge" adopted by the EU missions in India on 5th June 2018.

EU Green Pledge was signed by the Registrar, Fr.(Dr) Biju Michael on behalf of the University while Ms. Henriette Faergemann, First Councillor, Delegation of the European Union to India signed the same on behalf of EU.

As a part of the initiative, the University agrees to make sincere efforts towards the following:

- Eliminate the use of single use plastic products wherever possible such as plastic straws, stirrers, cups etc. in the university campus and residences.
- Switch from plastic bags to other material such as paper, cloth or jute bags.
- Stop serving water in plastic bottles.
- Request hotels and conference facilities where we organize our events to follow these principles.

International Student Exchange Programme 2019

The International Student Volunteer Exchange Programme, a one month Intercultural and Participatory Community Education and Development Programme between the University and University College Dublin Volunteers Overseas, Ireland, concluded on 13th July 2019.

This year, the Programme was implemented in the villages of Arabari, Barkhat No. 1, and Gojaiguri, under Sonapur, Assam.



This is the sixth edition of the programme which began in the year 2014. During such exchange programmes interventions similar to the following are implemented:

- Awareness campaign on alcoholism, domestic violence and its effects on social and economic life
- Programmes and workshops which will enhance the community life of the people

- Organising weavers of the locality and setting up groups or a cooperative of weavers
- Intervention to enhance the functioning of the anganwadis - infrastructure and learning environment
- Adult literacy classes
- Language (English) enhancement classes to the students and youth
- Work with children, youth and women (clubs and groups formations)
- Health awareness programmes and campaigns
- Help in opening of Bank Accounts and facilitate in getting subsidized LPG connection.
- Training on Art and Craft for enhancement of livelihoods.
- Organise health/medical awareness and camps

Some volunteers have written their experiences of the Programme which will give you an insight into what the volunteers went through during this Programme.



Deirdre Neavyn, UCDVO

My name is Deirdre Neavyn and I am a general volunteer from Ireland on the International Exchange Programme 2019. This was my first year taking part in this programme and my time here has been indescribable. Our volunteer team consisted of students from University College Dublin and Assam Don Bosco University. The team split further into 3 groups with each group based in different villages close to ADBU.

The first half of the programme was spent developing relationships with the locals in the villages and renovating anganwadi centres. The renovation portion of the programme involved a great deal of cooperation, hard-work and communication between team members. I was lucky to have such brilliant students on my team and was privileged to spend time with them learning about their culture, hearing about their experiences and sharing some of my own. This helped me develop a deep bond that I'm sure will survive long after the 2019 volunteer programme has ended.

We spent many days mobilising the community by completing house visits. The locals in my village welcomed all of us with open arms; inviting us into their houses, preparing snacks and serving a lot of tea! Although there was a language barrier, their enthusiasm and openness allowed us to get to know them well. We also used this opportunity to gather information about struggles the community faces on a daily basis. We used this information to structure our workshops which we held in the latter part of the programme.

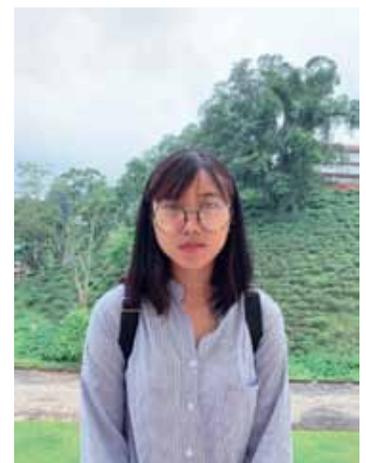
Once our anganwadis had been completed, we focussed on our workshops. Firstly, we held a cultural workshop to officially introduce ourselves to the community and tell them a little about Ireland and Irish culture. We also ran workshops on education, English language classes, health and hygiene and recycling. Although many of the issues facing our village are complicated and cannot be fixed by organising a single workshop, I felt like we helped start the conversation and hopefully, our efforts will be replicated and improved on by people living in the village after we have left.

I am so grateful to have gotten the opportunity to take part in this amazing programme. It has been an invaluable life experience and I would like to encourage everyone to apply”.

Ngurang Mana, ADBU

International Student Exchange Programme has set forth a new chapter in my learning experience and attitude to life in a very broad way. It taught me how to deal with various situations because of the different cultural background of each individual in the group. Working with my team mates demanded patience and tolerance, and taught me to accept criticisms and compliments with a positive mind set.

Sometimes, the differences in opinion based on our different experiences posed as a block to moving forward, but, I am glad that we managed to navigate through such difficulties through discussions and compromises. We were bound together by a strong need for a healthy team spirit without which a step forward was not possible. I was often reminded that we are not that different even though we all come from different backgrounds, cultures, traditions as we belong to one race called ‘the human race’. I am glad that I made friends for life through this programme and I am very grateful for the opportunity to be one of the volunteers in the International Students Exchange Programme. Lastly, my sin-



ere gratitude goes to the faculty guides whose hard work and advices helped me cope with my doubts and gave me strenghts to conquer various barriers during this programme.



Priyam Barouah, ADBU

Our major focus was to initiate community engagement with reference to Anganwadi centers in Borkhat 1, Arabari and Gojaigaon. It was a completely different experience as the students got to engage with the fellow volunteers from Ireland. Due to differences in culture, lifestyle and ideas, we were blessed with numerous innovative ideas and experiences. We learned to understand, respect the cultural and professional differences. With a multi-linguistic approach, each student worked towards the achievement of the goals. From designs for paintings on the walls of Anganwadis to conducting fun games for local children - I learned various new approaches.

This programme has helped me to develop confidence in me and has motivated me to work hard with dedication inspite of challenges. I believe the programme will help me face with confidence different situations, from both personal and professional fronts in the future.

National Workshop on Pedagogy for 21st Century Teaching and Research

A two-day national workshop on 'Pedagogy for 21st Century Teaching and Research' was held from 12-13 May, 2019 at the Azara Campus of Assam Don Bosco University.

The key objective of the workshop was to provide an opportunity to the educators of Higher Education Institutions (HEIs) of the region to re-visit their roles and re-define their teaching frameworks, make efforts towards adapting to the 21st century teaching methodologies, curriculum design and evaluation, and basic research skills for effective teaching-learning process. The workshop was organised by the Internal Quality and Assurance Cell (IQAC) of the University in collaboration with National Assessment and Accreditation Council (NAAC) as academic partner.

The resource persons for the workshop were Prof. P.K. Acharya, Department of Education, Rajiv Gandhi University (RGU), Itanagar; Prof. T. Lunghdim, Department of Education, RGU, Itanagar; Prof. K.C. Kapoor, Department of Education, ADBU; and Dr. John Jose, Assistant Professor, Department of Computer Science and Engineering, IIT-Guwahati.



Addressing the gathering at the inaugural session, Fr. Joseph Nellanatt, Pro-VC, ADBU said. "21st century skills are more important to teachers as well as students now than ever before. They not only provide a framework for successful learning in the classroom, but ensure students can thrive in a world where change is constant and learning never stops. They are also tremendously important for our nation's well-being." It had a good balance of lecture sessions, experience sharing sessions and hands-on training sessions that gave insight into the areas of outcome based education model, student-centric effective teaching methodologies and learning designs, research and academic writing skills, curriculum design, and modern schemes of evaluation. 57 educators from across the country participated in the workshop.

NSIIAAD 2019

The Department of Computer Science & Engineering and the Department of Computer Applications jointly is organizing a two-week National Level Workshop cum Summer Internship on IoT and Android Applications Development (NSIIAAD'19) from 11th June to 23rd June 2019 in collaboration with industry partners Orcheetech, Guwahati and Inquitechs, Guwahati,

The workshop aims to expose and acquaint the participants with state-of-the-art tools and technologies in MEAN Stack, Internet of Things (IoT), Android Applications Development and Introduction to Data Analytics using Python.

The workshop is coordinated by Mr. Syed Sazzad Ahmed, Asst. Professor, Department of Computer Science & Engineering and Mr. Rupesh Mandal, Asst. Professor, Department of Computer Science & Engineering. The resource persons are from the industry partners, NEHU, Shillong and experienced faculty members from the departments. The workshop is conducted in a full-time mode, involving lectures, practical sessions, demos and hands-on practices that will go on for over twelve days and consists of forty-three technical sessions including group project development competition.



National Workshop on Research Publication and Intellectual Property Rights

The IPR Cell at Assam Don Bosco University under the aegis of the Board for Research, Innovation and Consultancy, ADBU in association with Patent Information Center, Assam Science Technology and Environment Council, Govt. of Assam organized a One day National Workshop on Research Publication and Intellectual Property Rights (WIPD 2019) on 26th April 2019 at Tapesia Campus.



The workshop brought together the UG, PG and Doctoral students from universities and Colleges to provide in-depth knowledge in the fields of IPR and research publications.

Addressing the gathering at the inaugural session, Dr. Arup Kumar Misra, Director, Assam Science Technology & Environment Council, Government of Assam spoke on the importance of innovation, saying, "Innovation does not mean re-inventing the wheel, but, using the wheel for the best purpose". He also told the story of Uddhab Bharali, an Indian inventor from the Lakhimpur district of Assam who is credited with about 118 innovations and how he contributed in changing the lives of the common man with his inventions. "You may go for rocket science and contribute in that area, but, try to go for the kind of science that changes the lives of millions of people" he added.

The Vice Chancellor, Fr. Stephen Mavelly reiterated the University's commitment to 'research with social relevance' and that a number of innovations that have come out from research at the University address the need of the common people. He added that 'for such kind of research and innovation, sophisticated instruments and laboratories are not a necessity'. He encouraged the participants in this line saying, "Think of what you can do to bring about real changes in your society".

The workshop had sessions on 'Research Publication: An Introduction' by Prof. JN Vishwakarma, Director of Research at the University; 'How to write a good research paper' by Dr. Hridoy Jyoti Mahanta; 'Selecting the Right Journal' by Dr. Sunandan Baruah, Director, Center of Excellence in Nanotechnology, DBU; 'Publication Standards: Impact factor, h index, i10 index, citations etc' by Dr. Samrat Dey, HoD, Department of Physics; Plagiarism, Tools for Plagiarism Checking and Proofreading by Dr. Vikramjit Kakati, Associate Professor, Department of Civil Engineering, DBU; 'Funding your Research by Dr. Uzzal, 'IPR: Patent and Copyright' by representatives from ASTEC and Competition on Innovation and IP.

Kiddies' Day Camp

A 5-Day Kiddies Day Camp, an initiative of the Centre for Development Studies and Initiatives (CDSI) and Alumni Association of Assam Don Bosco University was held from 1-5 July 2019 at Green Pasture Children's Home. The Camp was inaugurated by Mr. W. Shabong, District Child Protection Officer, West Khasi Hills District, Meghalaya, and Mr. A. S. Dohling, Secretary, Life Light Focus Concern.



In the short inaugural programme, a welcome speech was delivered by Ms. A. Marbaniang, Superintendent of the Home and a welcome song was presented by children of the Home. Addressing the children, Mr. W. Shabong and Mr. A. S. Dohling encouraged them to participate in every activity scheduled at the camp, to give their best in everything, to be sincere in what they do and work hard as that is the way to a bright future where they can one day be who they want to be and become good human beings in the society. The Programme is coordinated by Ms Hazel B. Wahlang, Coordinator, CDSI, Assam Don Bosco University.

The five-day programme aimed at enhancing the psychosocial competence of the children, included life skills sessions, arts and crafts, sports, and other recreational activities.

A one-day workshop on 'Mushroom for the people: Issues and opportunities'

A one-day training program on mushroom cultivation, "Mushroom for the people: Issues and opportunities" was organized by the Department of Life Science for local farmers, on 8th April 2019 as a part of an activity of Vita Scientia Club.

Prior to this, students had undergone a twenty-five-day training programme to learn the steps of cultivation and to be able to give training to the local farmers around the University in the month of March, under the supervision and guidance of Dr. Monika Soni, Asst. Professor in the Department. Mr. Mohan Sharma, Chairman of USHA (NGO) was invited on 8th of March to provide hands-on training to the students on Oyster (*Pleurotus* spp) mushroom cultivation.



During this training, students learned about the nutritional, medicinal, economic, environmental, and ecological benefits of this particular mushroom and also cultivated it themselves. After twenty-five days of the training, there was a successful production of an adequate quantity of mushrooms. Students were encouraged to find a market for selling their products, which was part of encouraging and developing entrepreneurial skills among the students. Oyster mushroom is the third most commercially cultivated mushroom globally.

So, on 8th of April 2019, this training was extended to train and encourage women of the nearby villages and interested students from other departments of the university on mushroom cultivation method. The event was graced by Fr. Joseph Nellanatt, Pro Vice Chancellor, Prof. JN Vishwakarma, Director of School of Life Sciences and Dr. Peter Paul Hauhmar, Development Officer.

About 20 women who participated in this programme were provided with all the raw materials required for the cultivation, including paddy straw, spawn, packets, etc. Members of the Vita Scientia Club guided and trained them in cultivating and packaging processes of mushrooms.

The main aim of the programme was to create awareness about how small scale investment can be a reliable source of income for them. The substrate required for the cultivation can be collected from the agriculture waste and it can be produced in temporary clean shelters with little maintenance. The participants were also shown ways to identify poisonous and non-poisonous varieties of mushrooms.

One concern and challenge the participants raised was about the supply of spawns and the Department of Life Science is committed to training the students in generating enough spawns to supply to these local farmers.

International Yoga Day 2019

International Yoga Day 2019 was observed at the University by performing various Yoga postures at the University's Tapesia Campus at 7:00 am in the morning.



As the University is on a summer break, there were only students of Master of Social Work who remained in the campus for International Student Volunteer Exchange Programme 2019 who worked with volunteers from University College Dublin, Ireland in the surrounding villages, re-innovating Anganwadis, giving English tuition classes, and a variety of social development works.

Some student volunteers from University College Dublin also joined in the observance of this day in the morning hours in front of Women's Hostel I.

The instructors were Carrie Grace Tron and Leah Meiling Shangpliang from the Department of Social Work, who are pursuing their Master Degree Studies at the University.

Red Hat Linux & Python with Machine Learning

The Department of Computer Science & Engineering and the Department of Computer Applications jointly organized a 15 Day National Level Workshop cum Summer Internship on Red Hat Linux & Python with Machine Learning from 11- 27 June 2019 in collaboration with COSS Bangalore and Red Hat Academy.



The workshop aimed to make the participants capable of using Linux Administration (RHEL) and introduce them to Machine Learning using Python. The workshop was coordinated by Mr. Vijay Prasad, Asst. Professor, Department of Computer Applications and Mr. Alok Choudhury, Asst. Professor, Department of Computer Science & Engineering. The resource persons were from Red Hat Academy and a total of 50 participants registered for this workshop cum internship.

Street Play at Sonapur

The Department of Mass Communication, Assam Don Bosco University carried out two street play performances on the 18th of May. The performances were delivered at two different locations of the same locality in Sonapur near its Tapesia Campus.



The first-year Mass Communication students, following the footsteps of the second-year students who had done the same the previous year, were divided into two groups. Each group under the supervision of Assistant Professors Mr. Kaushik Bhuyan and Mr. Jai Kishan attempted to create a 10-minute play focusing on different social themes to generate awareness and bring about changes among the people in the locality. While one group focused on cleanliness and the detrimental effects of littering, the other highlighted the insecurities surrounding women as a result of eve teasing and to make them aware of the presence of organisations that provide security to women faced with similar situations. Both groups delivered dialogues in Hindi as well as Assamese.

The first performance of both the groups were delivered at a public transport parking area while the second performance was carried out near the Circle Office. It was an overwhelming experience as both groups sought for their voices to be heard in the midst of a busy street lined with piping vehicles and street vendors. The performers sung call songs to grab the attention of passers-by who soon became part of the spectator. The onlookers huddled around the performers, who stood in a circle, amused as slogans were cried out by the performers. While some looked on intently, some even began recording the performances on their mobile devices.

As the performances came to an end, the crowd cheered on with applause. A spectator even shook hands with the performers saying, 'Thank you' and 'Well done'. Both performances drained the energy out of the performers who at the end of the day felt pleased with the turnout and believed that they had brought justice to their respective themes.

Substance Abuse Awareness Camp

The Community Counselling Cell of the Department of Psychology and Counselling, Assam Don Bosco University, Tapesia Gardens organized a Substance Abuse Awareness Camp on 17th of May, 2019. This camp was organized for the residents of Kamarkuchi village. The purpose for conducting this camp was to create awareness among the villagers about the ill-effects of using substances and how it impacts an individual's physical, mental and behavioural well-being.



The Department of Psychology and Counselling extended an invitation to the members of the Hope Foundation, Guwahati to join the Community Counselling Cell as a Resource Team, which they gracefully accepted.

The event saw the participation of 14 male participants from the village and some of the participants also brought along their children to the camp. The MSc. Psychology and Counselling (2nd semester) students played an active role in ensuring that the entire event was conducted smoothly and most of them took care of the logistics of the event.

The team from Hope Foundation started off the event by giving a speech on Substance Use and Addiction. They also shared their own personal experiences of using substance and how that caused an impact in their as well as their family members' lives. The participants also indulged in an interaction session in which they had various queries. The members of Hope Foundation answered all the questions the participants had regarding Substance Use and helped them clear any doubts and queries that they had regarding the same.

After the interaction was done, the MSc. Students conducted a self evaluation screening test using- Michigan Alcohol Screening Test (MAST) for the participants which helped them gain an understanding about their level of problem drinking.

World Autism Day

To commemorate World Autism Day the Department of Psychology and Counselling in collaboration with Ashadeep Day Rehabilitation Center organised an exhibition cum sales programme on 3rd of April 2019 at Assam Don Bosco University Tapesia Campus.



Ashadeep is a center that caters to individuals with intellectual disability and associated disorders and persons recovering from mental illness. The centre has a vocational unit that provides skill development training to the intellectually disabled adults and persons recovering from mental illness which forms a part of the therapy as well as a source of facilitating income generation. It is from this unit an exhibition-cum-sales programme was held.

The objective for organising this programme was to create awareness about Autism as well as to help, encourage and support individuals who were recovering from mental illness through the fund raised from selling the items made by the individuals themselves and would be handed back to Ashadeep who in turn will use the money to support these people.

The event began with a brief talk about World Autism day during the morning Assembly followed by a seminar conducted by Dr. Sanghamitra Bora (State Lead – Palliative Care, Assam Cancer Care Foundation , Joint Initiative of Govt of Assam and Tata Trusts, Guwahati, Assam). She explained about what Autism is, its signs and symptoms and treatment. After the talk, the exhibition-cum-sales program was held at the Atrium of Academic Block Two. Items such as laptop covers, jute bags, and varieties of doormats, water bottle bags, aprons, napkins, potholders, different types of file holders, and many more items were being exhibited and sold. The total fund that was generated amount to Rs.10, 555/- only. The sales were indeed a success as most of the items were sold out, thanks to the participation and contribution of the students as well as the faculty of Assam Don Bosco University. Further, three of the MSc. Psychology and Counselling students were also being interviewed by the Department of Mass Com. which was broadcast by the Tapesia F.M. Radio during the afternoon session. The students shared about what Autism is and their experiences of working with an autistic child.

The participation of the students and faculty was indeed encouraging as Autism was brought to the foreground through these awareness programmes and it will go a long way in highlighting about what Autism is about.

Orientation to Holistic and Transformational Psychotherapy

The Department of Psychology and Counselling, Assam Don Bosco University organized an orientation programme on one of the newly leading trends in the field of Psychotherapy on the 7th of February 2019. Holistic and transformational Psychotherapy is an integrative approach towards wellbeing. It entwines various Eastern concepts of healing to facilitate a person towards catharsis.

The session was enlightened by Dr. Gaurav Deka, Founder of Cognial Healers Academy. Dr. Gaurav Deka is a Delhi based trainer and practitioner of Holistic and Transformational Psychotherapy. His latest achievements have been, the Best Regression Therapist and Doctor in India by India Leadership Awards, Pragati International Awards and National Health-care Excellence Awards preceded by many other Prestigious Achievements. He is also an eminent TEDx speaker.



Students from the School of Humanities and Social Sciences eagerly attended the session, with witty and wise curiosity expressed during the discussion at the end of the session. It was one of the many successful programmes hosted during the session 2018-19 by the Department of Psychology and Counselling.

Workshop on Turtle Biology

A two-day workshop titled, "Let's Talk Turtles" was jointly organized by the Department of Zoology, Assam Don Bosco University, Assam State Biodiversity Board, Turtle Survival Alliance, and Help Earth on 11-12 June 2019 at Tapesia Campus.

The workshop was designed to imbibe an interest in Turtle biology among the participants and building capacity of the youth in turtle conservation. Topics covered in the workshop included turtle taxonomy, turtle biology, legal aspects, molecular taxonomy, turtle survey methodology etc. The resource persons of the workshop were experts in the field in turtle biology including Dr. Shailendra Singh of Turtle Survival Alliance, Dr. Saibal Sengupta of Assam Don Bosco University, Dr. Rajeev Basumatary of D.R. College and Dr. Madhurima Das from IBT Hub, Arya Vidyapeeth College and Dr. Jayaditya Purkayastha from Help Earth. During the workshop, turtle taxonomy, turtle biology, legal aspects, molecular taxonomy, the turtle survey methodology was addressed. A special session on threatened species of Assam notified U/S 38 of Biodiversity Act of 2002 was conducted by Dr. Oinam Sunanda Devi, Scientific Officer in Assam State Biodiversity Board.



The program was inaugurated by Fr. (Dr.) Francis Fernandez, Controller of Examinations, Assam Don Bosco University, Dr. Shailendra Singh of Turtle Survival Alliance and Dr. Prasanta Kumar Choudhury, Head of the Department, Department of Zoology, Assam Don Bosco University.

The participants were researchers and research students from Cotton University, Gauhati University, ICAR, Assam Don Bosco University and NGOs.

Assam is home to 20 species of turtles making it the most species-rich state in India in terms of turtle diversity but unfortunately, 70% are threatened with extinction.

Feyn-videos 2019

The Physics Department organised "Feyn-videos 2019" - An audio-visual show of science videos (commemorating the birthday of Richard Feynman), commemorating his 101th birthday, on 11/05/19 at 10:00 a.m., in the Hall-240 of the Academic Block I. One of the best known and most renowned scientists in history, Richard Feynman was probably also the most celebrated and appreciated teacher of last century. To listen to his lecture students and faculty members from different departments were present in the programme. Earlier, Dr. Samrat Dey, Head, Physics Department, welcomed everyone to the event and Mr. Parag Bhattacharya spoke on the life of the Nobel Laureate.

World Press Freedom Day Observed

The Department of Mass Communication, Assam Don Bosco University observed World Press Freedom Day on 3 May 2019 at Tapesia Campus by conducting an invited lecture.

As part of the event, senior ward winning journalist and Executive Editor, NE Zine, Ms Ratna Bharali Talukdar was invited to deliver a special lecture on “Media for Democracy: Journalism and Elections in Times of Disinformation” to the media students and faculty members of the University. While highlighting the current challenges faced by media during elections and the growing prevalence of disinformation, along with the media’s potential in supporting democracy, peace and reconciliation, Ratna Bharali emphasised that “it is necessary to ask critical questions and verify facts before putting it on public domain. Lies travel faster than truth.”



Visit to Water Treatment Plant

Students of 6th semester of Civil Engineering Department paid a visit to the water treatment plant located at IIT Guwahati on 18th may 2019.

Students were demonstrated the functioning of the various components of a water treatment plant on . The students were quite enthusiastic about the trip and got to know about the actual processes involved in water treatment. Various components of a treatment plant like the flocculator , aerator, sedimentation tank etc. were quite elaborately explained by the faculties. Moreover a very important and relevant test called the jar test was also discussed with the students.

This visit was very informative. Students could practically see and learn various stages in the water treatment plant which we learned theoretically during our theory classes.

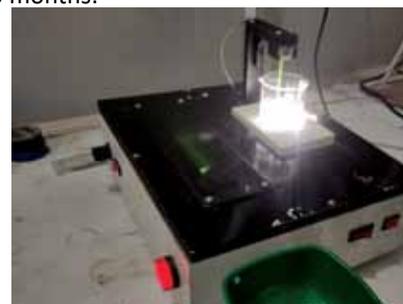


Reports from the Center of Excellence in Nanotechnology

The Center of Excellence in Nanotechnology (CoEN) at ADBU is committed to the quest for innovative solutions to existing problems of the masses as well as develops concepts and systems to promote Poor Man’s Nanotechnology (PMNT). Researchers at the CoEN are putting in efforts to make a difference in the way existing systems work and materials behave. Following are some of the new innovations from the CoEN that were completed during the last 3 months:

1. Real-time size Estimator for Metallic Nanoparticles

This indigenously designed size estimator measures the size of metallic nanoparticles during the formative stage. The estimator works on the principle of variation in Surface Plasmon resonance (SPR) peak with nanoparticles size. This system estimates the sizes of metallic nanoparticles with an accuracy of 98%. No such system has been reported till now that allows scientists to observe particle sizes during synthesis and this will give them the flexibility of stopping the reaction the moment the nanoparticles come to the size they want for their use.



2. Low cost Estimator for Metal Pollution in Water

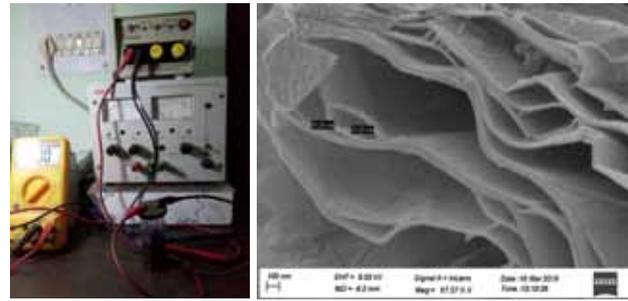
This device is can be used to detect and display the amount of metal ions present in water. The principle of operation is based on the shift in Surface Plasmon Resonance (SPR) due to agglomeration in the presence of metal ions. A simple mimic of UV spectroscopy is done here. White LED illuminates the object of interest, which I a mixture of colloidal gold nanoparticles and contaminated water kept in a cuvette. The light is allowed to pass through the cuvette and fall on the sensing circuit consisting of a Light Dependent Resistor (LDR) that detects any change in the absorbance of the



nanoparticles. The LCD shows the level of contamination in ppm level.

3. Graphene Fabricator

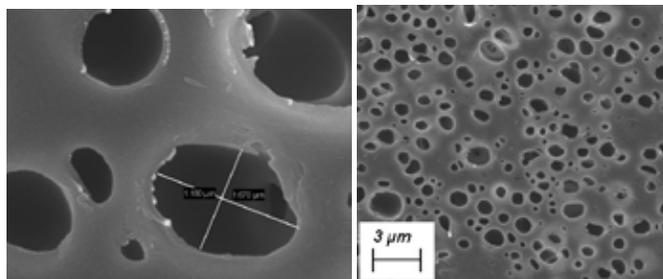
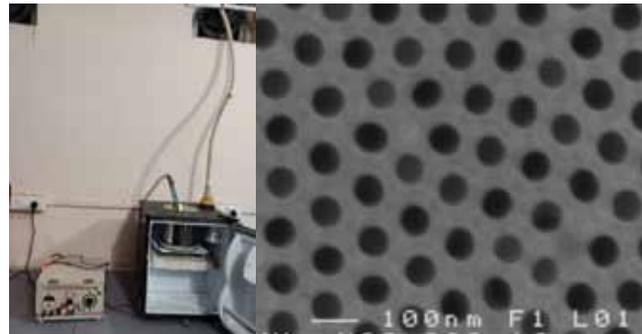
A simple low cost setup was designed and installed for fabricating single and multi layered graphene flakes. The design is based on the technique of electrochemical exfoliator. The electronic system is completely designed in house. This project is an outcome of collaborative research between researchers of CoEN and Chemistry departments of ADBU and Gauhati University.



The images show the setup and a Scanning Electron Micrograph of the fabricated graphene sheets.

4. Nanoporous Membranes for use as Templates for Nanomaterial Synthesis.

A nanoporous membrane maker was successfully designed, fabricated and tested. A systematic study on the formation and pore size control was carried out. The prepared membranes are now being used to develop electrodes for extracting energy from nanogenerators that work on the principle of piezotronics.

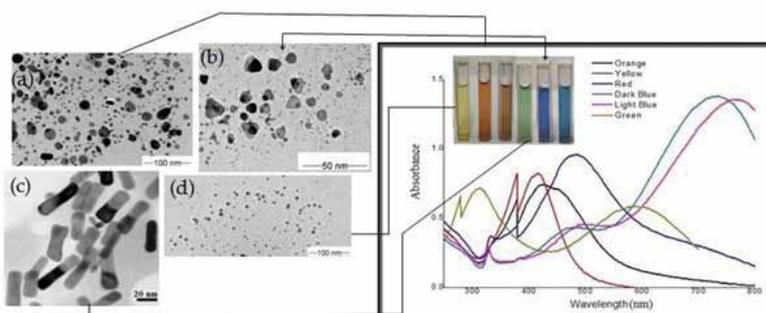
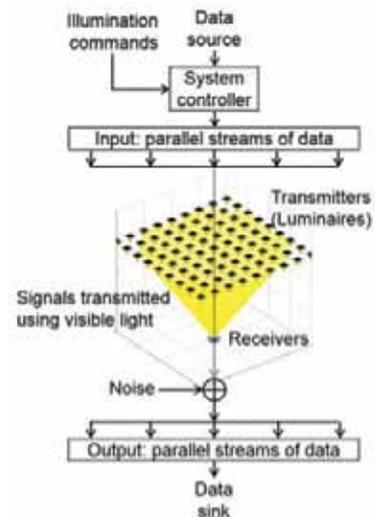


5. Microporous Membrane

In a major breakthrough, researchers from CoEN and Chemistry departments of ADBU and Gauhati University have developed microporous membranes using a composite of polystyrene and reduced graphene oxide. The microporous membranes are of thickness about 100nm and the pore sizes range from about 300nm to over 1 μm. The developed membranes will now be used for water filtration.

6. Silver Nanoparticle assisted Optical Filters for use in Visible Light Communication

Optical MIMO is a very exciting field for next generation high speed data transmission. In optical MIMO, the parallel data streams can be transmitted over different wavelengths of light at narrow bandwidths. The receiver for these system implements optical filters to recover the signals transmitted over each narrow band within the visible spectrum. Although band pass optical filters are commercially available, they generally suffer from low detection of specific bands. For visible light communication (VLC), it is of utmost necessity to fabricate the filters in such way that they can recover the exact signal from a wide band of data streams. In this regard Ag nanoparticle assisted optical filters can be useful as Ag nanoparticle show excellent optical properties due to their size and shape-dependency. Researchers at the CoEN have synthesized both shape and size dependent Ag nanoparticles. As synthesised Ag Nps are process for thin film fabrication using Layer by Layer CBD Technique, which were finally decorated with ZnO and CdS QDs to fabricate the filters for narrow band pass. An indigenously designed system is used to recover the optical variations in electrical form, which can also monitor the conversion of electrical signals in real time.



Ongoing Research by Dr. Supriyo Sen, Asst. Professor, Dept. of Life Science

In this issue, Spark requested Dr. Supriyo Sen to share in brief about the ongoing research projects he is working on based on agarwood. The reports below are in his own words.

#1 BIRAC BIG Grant

Just after joining Don Bosco University in November 2016, I got the Biotechnology Ignition Grant (BIG) of BIRAC, Govt. of India. The project was for Rs. 48.75 lakhs. The project started from March 2017 and as per mandate of the grant we incubated in Guwahati Biotech Park, IIT-G Campus. The BIG grant is aimed at promoting commercial enterprise in biotech from innovative ideas. Our work is on improving the process of fragrant agarwood oil production. Agarwood is an important bioresource from Assam that has immense commercial value in the flavour and fragrance industry.

Under this project we made considerable progress and on 11th April 2018 we formed our biotech start up company by the name Ouija Biosolutions Pvt. Ltd. We successfully completed the project in October 2018.

#2 BIRAC SBIRI Grant

During BIG we had started up as Ouija Biosolutions and with the progress made in the project we wanted to take our innovation further. We applied for the prestigious Small Business Innovation Research Initiative (SBIRI) grant of BIRAC which is considered the level-2 after BIG as a company. We were successful in securing a project grant of Rs. 55.6 lakhs for 18 months of which BIRAC's contribution is Rs. 27.83 lakhs. After detailed due diligence, the funds for the grant have been sanctioned from 4th May 2019. We are implementing the project under Ouija Biosolutions Pvt. Ltd. in Guwahati Biotech Park where we shall be developing a fermentation-distillation pipeline for fragrant agarwood oil production from Assam agarwood.

#3 BIRAC SEED Fund

We have also secured the BIRAC SEED fund from Venture Center, Pune for Rs. 30 lakhs as investment into the company. The due diligence for the investment is presently underway. This will act as matching fund for SBIRI grant.

#4 DST-SERB Core Research Grant

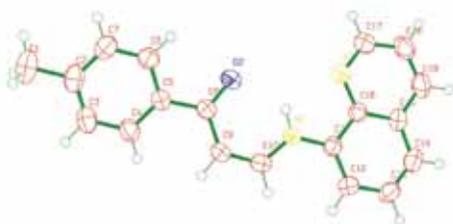
In March 2019, I got the Core Research Grant from DST, Govt. of India to be implemented in School of Life Sciences, ADBU. The project is for 3 years and the total funding is Rs. 28.32 lakhs. The project is aimed at studying the aromagenic potential of native microorganisms and using the candidate organisms to improve the aroma of agarwood. Under this project we propose to develop the "Aroma Biotechnology Lab" in ADBU. The project is likely to start from July 2019.

#5 Recent publications

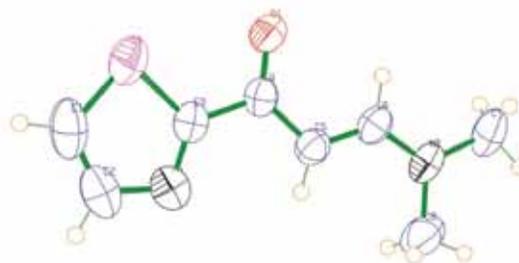
A review article jointly authored by my PhD scholars in ADBU Ms Pearlin Shabna Naziz and Ms. Runima Das has been accepted by the leading journal *Frontiers in Plant Science* (Journal Impact Factor – 4.1) recently.

From Prof Vishwakarma's Lab

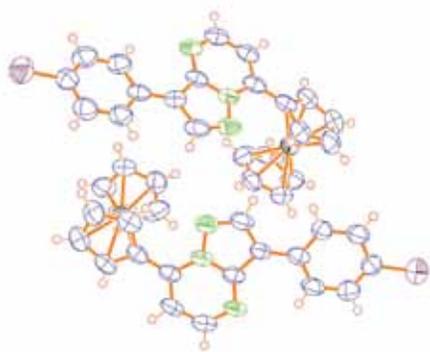
The following crystals were submitted in The Cambridge Crystallographic Data Centre (CCDC).



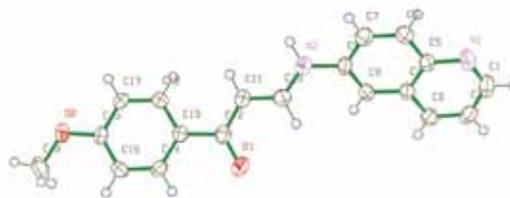
1. CCDC No.: 1892134, Compound Formula: C₁₉ H₁₆ N₂ O₁
 Depositor: Dr. J.N.Vishwakarma, Shilpika Khanikar, Susma Das, Farlando Diengdoh, Philippe Helissey



2. CCDC No: 1918412, Compound Formula: C₈ H₁₀ N₂ O₁
 S₁, Depositor: Dr. J. N.Vishwakarma, Nilofar Azmi, Susma Das, Shilpika Khanikar



3. CCDC No.: 1918415, Compound Formula: C₂₂ H₁₆ Cl₁ Fe₁ N₃, Depositor: Dr. J.N.Vishwakarma, Susma Das, Shilpika Khanikar, Farlando Diengdoh



2. 4. CCDC No.: 1892150, Compound Formula: C₁₉ H₁₆ N₂ O₂. Depositor: Dr. J.N.Vishwakarma, Shilpika Khanikar, Susma Das, Farlando Diengdoh, Philippe Helissey

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