DON BOSCO COLLEGE OF ENGINEERING

Excellence in Education

Connections

Quarterly Newsletter for Institute's Friends, Patrons, Mentors and Students Nov. 2020 - Jan. 2021 Vol 10 - Issue 2

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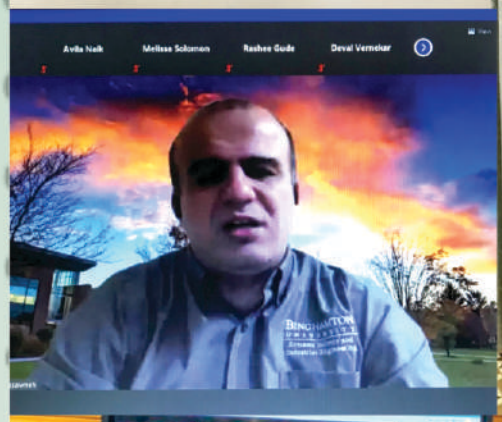


NEWS IN GENERAL

State Level Elocution competition by Goa shipyard Limited

Goa shipyard Limited organized a state level Elocution competition as a part of vigilance awareness week from October 27 – November 7, 2020 for the students of different colleges across Goa. The topic was "Vigilant India, Prosperous India". As the competition was conducted online, two students from Don Bosco college of Engineering participated in the same (Rea Saramaria DSouza, SE Computer & Declan Luis, TE Civil).

MOU between Don Bosco College of Engineering – Fatorda and Xavier Institute of Engineering, Mahim, Mumbai-400 016

A Memorandum of understanding was signed between Don Bosco College of Engineering, Fatorda, Goa and Xavier Institute of Engineering, Mahim, Mumbai on December 2, 2020.

Rev. Fr. Kinley D'Cruz (Director, DBCE) and Fr. (Dr.) John Rose S.J. (Director, XIE) signed the MOU in the presence of Dr. Neena Panandikar, (Principal, DBCE) and Dr. Y.D. Venkatesh (Principal, XIE). The MOU will be executed by Dr. Varsha Turkar (Chairperson, R & D Cell, DBCE) and Dr. Vijay Katakar (Dean, R & D, XIE).

The MOU was signed with the objective to recognise the mutual interest in the various fields of research and development. The MOU will set the ground for long term partnerships promoting Joint Research Projects, Faculty exchange, Joint Conferences/ Training and Skill Development Programs. The MOU signed is valid for two years from the date of signing.

Goa Liberation Day

60th Goa Liberation Day was celebrated in the college premises on December 19, 2020. This short ceremony started in the presence of the Administrator – Rev. Fr. Ralin De Souza, who unfurled the National Flag. All the staff members of Don Bosco college of Engineering sang the National Anthem and showed their respect to the national flag and to the whole nation including the state of Goa. The ceremony was held while maintaining all the rules & regulations of the COVID-19 pandemic.

The ceremony was graced by the presence of Rector- Rev. Fr. Paul D'Souza, Director – Rev. Fr. Kinley D'Cruz, Principal – Dr. Neena Panandikar, D.S. Prashant – CEO FiiRE. Dr. Neena Panandikar welcomed the teaching as well as non-teaching staff. Rev. Fr. Ralin De Souza addressed the whole gathering and wished all a very happy liberation day. The function was headed by Dr. Avertano Barretto, Director of Physical Education & Sports, Don Bosco college of Engineering.

Goa Republic Day

72nd Goa Republic Day celebrated in the college premises on January 26, 2021. This short ceremony started at 8:45 am in the presence of the Rector – Rev. Fr. Paul D'Souza, who unfurled the National Flag. All the staff members of Don Bosco college of Engineering sang the National Anthem and showed

their respect to the national flag and to the whole nation. The ceremony was held while maintaining all the rules & regulations of the COVID-19 pandemic. The ceremony was held in the presence of Director – Rev. Fr. Kinley D'Cruz, Rev. Fr. Paul D'Souza, Administrator – Rev. Fr. Ralin De Souza, Principal – Dr. Neena Panandikar and D.S. Prashant – CEO FiiRE. Director – Rev. Fr. Kinley D'Cruz welcomed the teaching as well as non-teaching staff. Rev. Fr. Paul D'Souza addressed the whole gathering and wished all a very happy Republic day. He stated the exact meaning of being republic, i.e. the people of India are the supreme power who elects their representatives. He also said that we as individuals should know our own responsibility and should contribute to the overall growth and development of our country -India. The function was headed by Dr. Avertano Barretto, Director of Physical Education & Sports, Don Bosco college of Engineering.

Grant of Scholarship to 15 DBCE Students

Noted educator and mentor Mr. Vijay Hede an alumnus of (IIT Madras) a Rotarian & Co- Founder Managing Director of Shivranjani Securities Co. Pvt. Ltd, provided scholarships to 15 students of Don Bosco College Of Engineering, Fatorda under the CSR initiative of Shivranjani Securities Co. Pvt. Ltd, a Vimson (Shivanand Salgaocar) Group Company.

Mrs. Maya Lin Noronha welcomed the dignitaries and students. The Director of DonBosco College of Engineering, Rev. Fr. Kinley D'Cruz, in his address said that there are 3 types of people, ones that make things happen, one that only see the things happening and one that do nothing. He expressed his thanks to Mr. Hede for making things happen and for his generosity. Principal of DonBosco College of Engineering, Dr. Neena Panandikar introduced Mr. Vijay Hede and also thanked him for granting scholarships to 15 deserving students of DBCE.

Mr. Hede expressed that he was very pleased to begin an association with Don Bosco College of Engineering. In his address to the 15 scholars, Mr. Hede said that they should have a positive mind-set. The only constraint is one's mind and there are no limitations to bringing one's vision to life. He said that one should never look at failure as a deterrent, but as a process to learn. He told the students that this is the beginning of an adventure that they will enjoy and at the end they will see the change in themselves. Mr. Hede encouraged the students who he referred to as "HIS 15 JEWELS", to read widely and not restrict themselves to just their text books. He cited illustrations of the scholars assisted, who through their positive mind-sets and diligent efforts had brought about change in their lives and recorded achievements on domestic and international platforms.

Mrs. Maya Lin Noronha proposed the vote of thanks and expressed hope that this would be a beginning of a long lasting friendship and association.

DEPARTMENT OF CIVIL ENGINEERING

Webinar on Green Building Environment

Dr. Shwetha Prasanna, Head of Civil Engineering department organized a talk on Green Building Environment on virtual mode for final year civil engineering students at Don Bosco College of Engineering on November 26, 2020. The speakers were Prof. Amol Shimpi MRICS, Associate Dean and Director, School of Real Estate, RICS SBE, Mumbai and Prof. Pallavi Patil, Architect, DACA, DMK, MBA in Marketing Amity University. Prof. Pallavi Patil spoke on an overview of green building environment, principles of sustainability, green building technologies, fundamental principles of green building, and sustainable construction technologies used in green buildings. Prof. Amol Shimp spoke about the importance of emitting good values, skills and opportunities that RICS School of build environment provides to the students in career. It

was an inspirational talk and helped students to know in detail about the opportunities available for carrier development in green building environment.

Webinar on SMARTCRETE for Innovations in Concrete Technology

A webinar for the students of Civil Engineering Department organized by Prism Johnson Limited on December 28, 2020. The department has signed a MoU with Prism Johnson Limited.

Mr. Girish Joshi, Zonal Head, Marketing and Customer Service Group was the speaker.

Mr. Joshi while addressing, elaborated the role of Concrete in construction industry and how in the recent past the developments have taken place in the field of Concrete Technology. Mr. Girish Joshi also explained the various properties of concrete which made concrete as one of the prime materials in construction industry. Further addressing the students, Mr. Joshi enlightened them on the different tests performed on fresh and hardened concrete. Seven holy steps of concrete manufacturing were elaborated by Mr. Joshi.

Further in his talk, Mr. Joshi , highlighted how curing plays a role in making better concrete and explained the various methods of curing. Lastly, he explained the innovative technologies adopted by Prism Johnson, where he showcased 15 different types of innovative items manufactured at the plant.

Mr. Gaurish Bhartu, Assistant Manger, Customer Service took the students through the virtual gallery of Prism Johson. Prof. Satyesh Kakodkar, Assistant Professor -Civil, coordinated the programme.

DEPARTMENT OF MECHANICAL ENGINEERING

DBCE Mechanical Engineering Students develop Machine to Harvest Water from Air

India faces a crippling water crisis today and it is directly or indirectly affecting us. Today, one in every 10 human beings has no access to clean water. This is due to various reasons such as droughts, lack of natural supply of water, inadequate infrastructure,

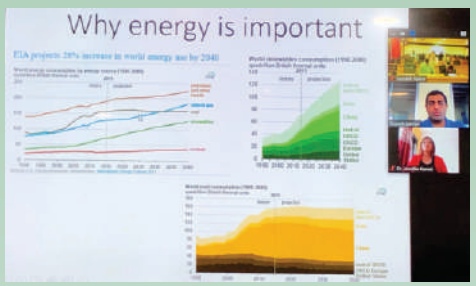
and contaminated water, etc. With the increasing population and rising global warming, the water crisis is becoming a huge danger to our ecosystem.

In this dire situation, there comes a unique solution from a team of Mechanical Engineering students of the 2019-20 passing out batch of Don Bosco College Of Engineering, Noah Gomes, Gerhard Lourenco, Johan Godinho, Hubert De Barros and Anand Raikar developed and tested a prototype of Atmospheric Water Generator. The Project was guided by Prof. Gaurish M Samant, Assistant Professor, Department of Mechanical Engineering and Mr. Valentino Barbosa, Maintenance Engineer, Turbocam India Pvt. Ltd.

Atmospheric Water Generator (AWG) is a device that collects humidity available in our atmosphere utilizing condensation and is the principle is similar to the condensation happening around a glass filled with cold water. The collected condensed water is purified using purification cartridges and then mineralized before dispensing it for drinking. The present prototype generates 24 liters a day and it's cost is approximately Rs. 65000/- The team members are grateful to the Director, Fr. Kinley D'Cruz, Principal, Dr. Neena Panandikar and Prof Ajit Salunke for the help rendered during the execution of the project.

FSAI Student Chapter DBCE organizes a webinar on Net Positive Energy Buildings in association with FSAI Goa & Bengaluru Chapter

A webinar on Net Positive Energy Buildings was organized by FSAI DBCE Student Chapter in association with FSAI Goa & Bengaluru Chapter on November 28, 2020. The program began with FSAI Anthem and Welcome address by the Principal of



DBCE, Dr. Neena Panandikar. The resource person for the webinar was Dr. Rupesh Iyengar, President FSAI Bengaluru Chapter and Director at Services Consultants. He gave brief statistics about the energy consumption in the country and introduced the concept and explained the importance of Zero energy and net positive energy buildings. Dr. Iyengar also highlighted MEP, HVAC, Electrical, PHE and Architectural considerations in the design of Zero energy/ net positive energy buildings. He concluded the session with some case studies which he has worked on in India and other countries. Dr. Jennifer Lewis praised the session and expressed interest in organizing more events in the near future. Around 98 members including industry professionals, academicians and students attended the session. The event convener was Prof. Ajit Salunke, HOD Mechanical Department and the event coordinator was Prof. Saurabh Raikar.

Alumni Talk by Mr. Kedar Acharya (Alumnus 2015 Batch)

A Webinar Session was organized by the Department of Mechanical Engineering under the Alumni Committee of Don Bosco College of Engineering, on December 5, 2020 for the Third Year Students. The session was presented by Mr. Kedar Acharya, Alumnus of Mechanical Engineering Department 2015 batch and currently working as an Application Engineer, Schindler India Pvt Ltd.

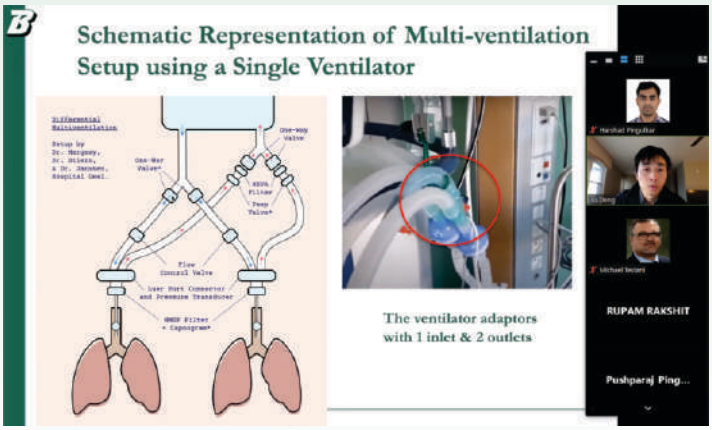
Mr. Acharya focused on the Organizational Disciplines in a company, the corporate Goals of the organization and the ways to achieve those goals. He also emphasized on the Corporate life and his Journey from Don Bosco College of Engineering to the Corporate Atmosphere. He guided students regarding GATE Exam preparations and job opportunities in Goa. The Session was Coordinated by Asst Professor Sanjeel Naik (Alumni Coordinator-Mechanical Engineering Dept) and was hosted via Google Meet Platform.

Webinar on Additive Manufacturing for Medical Applications

The Department of Mechanical Engineering in collaboration with Thomas J. Watson College of Engineering and Applied Sciences, Binghamton University, USA organized a webinar on Additive Manufacturing for Medical Applications on December 5, 2020 from 7.00 pm to 8.30 pm. The webinar was actively attended by academicians, industry professionals and engineering students from various organizations/institutes. The resource person for the webinar was Dr. Jia Deng, Assistant Professor, Thomas J. Watson College of Engineering and Applied Sciences, Binghamton University, USA.

Dr. Deng gave an introductory insight into application of additive manufacturing in various fields ranging from aerospace to biomedical. This was followed by an overview on the additive manufacturing process from techniques to develop 3D models, creation of STL file, material extrusion processes to the final 3D print and its end application. Dr. Deng further discussed on the recent utilization of additive manufacturing for combating COVID-19 in preparing ventilator adaptors made of PLA/PETG biocompatible thermoplastics and face masks made of TPU+PLA.

Dr. Deng also discussed the application of additive manufacturing for Orthodontics by printing teeth models and its quality inspection. The webinar was well received by the attendees while they raised queries pertaining to the research in the domain to the speaker. The conveners of the event were Principal, Dr. Neena Panandikar and HOD Mechanical, Prof. Ajit Salunke while the event was coordinated by Prof. Gaurish Samant and Prof. Harshad Pingulkar.



DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

Prof. Yeshudas Muttu conducted a Hand's on Sessions on "Circuit Design & Simulation"

IEEE Student Branch of Don Bosco College of Engineering, Goa organized a Workshop on Circuit Design & Simulation for second year students of ETC Department. To bridge the gap between industry & academia, Prof. Yeshudas Muttu conducted a hands on workshop using the trending software in companies like Proteus & TinkerCad Circuits. The main objective of this course was to design & simulate the circuits and understand its working in detail that keeps students engaged with Practical applications.

The workshop commenced with a brief introduction on TinkerCad circuits, followed by a brief session on initialization of the online platform, to simulate simple circuits like ohms law setup, series parallel connections, use of breadboard, power supply, oscilloscope and building rectifiers circuits. Later, Prof. Yeshudas Muttu explained Proteus software & its use in industry. This was followed by simulation of simple circuits like rectifiers, filters, amplifiers, oscillators, Multivibrators and RC circuits. To get well trained with the software, after each and every session, small exercises were given to the students.

Prof. Yeshudas Muttu conducted a Short Term Course on "LaTeX: a Professional Report Writing Tool"

IEEE Student Branch of Don Bosco College of Engineering, Goa organized a short term course on LaTeX platform for final year students of ETC Department. A hand's on workshop was conducted on 22nd & 28th October, 5th, 12th, 19th & 26th November, 10th and 17th December 2020 from 2:30 p.m. – 4:30 p.m. right from installation of MikTeX & Texmaker softwares till creation of final LaTeX document. The event received a good feedback and students were able to submit their mid-year project report, perfectly compiled and executed using Texmaker & MikTeX software

The resource person for the course was Prof. Yeshudas Muttu, Vice-chair, IEEE Bombay Section TPAC. The main objective of this course was to make students aware about software involved in LaTeX which will help them build the final year project reports in a most effective way.

Prof. Mohini Naik meets Honorable Chief Minister of Goa Dr. Pramod Sawant

Prof. Mohini Naik, Assistant Professor at ETC Department, Don Bosco College of Engineering was called on by the Honourable Chief Minister of Goa, Dr. Pramod Sawant at the CM's Residential Office on November 11, 2020.

The Chief Minister appreciated the work done by, Prof. Mohini Naik and encouraged her to work further on the project. He also appreciated & congratulated her Family, Principal and Management of Don Bosco College of Engineering for supporting this activity. Discussion was held on Atal Innovation Mission (AIM), Mentor India & Atal Tinkering Lab. AIM is a flagship national Innovation initiative of the Prime Minister- Shri Narendra Modi and the Government of India under the NITI Aayog (National Institution for Transforming India). AIM's goals are to establish and promote a vibrant culture of innovation and entrepreneurship nationwide.

IEEE Student Branch WIE AG Organizes five days Online SKEP on "Introduction to AI & its Applications"

IEEE Bombay Section WIE AG, IEEE DBCE Student branch WIE AG, Goa & IEEE DMCE Student branch, Navi Mumbai organized a 5 – days online Skill & Knowledge Enhancement Programme on "Introduction to Artificial Intelligence & its

applications" in association with IEEE Bombay Section from November 3-7, 2020. The main objective of this event was to make the participants aware about the fundamentals of Artificial Intelligence, Case studies & Hands on tools for its implementation. The event received a total of 182 registrations.

The first session was on Introduction to AI and ML delivered by Dr. Shreyas Simu. The second session held on November 4, 2020 was on Artificial Neural Systems: Preliminaries, Models and Algorithms delivered by Prof. Deron Rodrigues. On November 5, 2020 Prof. Deron Rodrigues spoke on Applications of Neural algorithms and systems. The next session held on November 6, 2020 on Fuzzy Systems and Evolutionary Algorithms was delivered by Dr. Shreyas Simu and on November 7, 2020, Dr. Sangita Chaudhari spoke on Demystifying Machine Learning using Orange. The questions posted by the attendees were then answered by the speakers. At the end of the session, the host delivered a vote of thanks to all the Resource persons - Dr. Sangita Chaudhari, Dr. Shreyas Simu & Prof. Deron Rodrigues, Patrons - Dr. Neena Panandikar, Dr. Sudhir Kumar, Convener - Dr. Varsha Turkar, Event coordinators- Prof. Yeshudas Muttu, Prof. Saumya Salian, Prof. Mohini Naik, Volunteers and the Participants for their support and efforts in making the five day Programme a success.

Prof. Mohini Naik, invited as resource person for 1 day awareness program on Atal Tinkering lab for schools across Goa

One day orientation program on setting up of Atal Tinkering Lab was organized by State Council of Educational Research and Training, Department of Education, Government of Goa on Tuesday, December 15, 2020 as per detailed given below. Prof. Mohini Naik, was invited as resource person for the said program.Sr. No.DateTimeTaluka wise schools115.12.20209.30am to 11.00amPernem, Bardez, Bicholim, Sattari215.12.202011.30am to 1.00pmTiswadi, Ponda, Sanguem, Dharbandora, Quepem, Canancona315.12.20203.00pm to 4.30pmSalcete, MormugaoMr. Nagaraj Honnekeri, Director- SCERT Goa State Council of Educational Research and Training (SCERT), gave a brief introduction about the state programs for the schools and its benefits. He also mentioned the achievements of Prof. Mohini Naik who is the regional mentor for the state under ATL project. Prof. Mohini Naik, than continued with the session by explaining details of ATL and its benefits to the school. This session was attended by nearly 350 schools across Goa. Entire program was divided into three batches as per the location of the schools. All the head of the schools have attended this orientation program.

IEEE DBCE EXE-COM 2021: Duties and Responsibilities

The IEEE Student Branch of Don Bosco College of Engineering hosted a session on 'IEEE EXE-COM: Duties and Responsibilities' on Wednesday, January 6, 2021 at 11 a.m. The talk was delivered by IEEE Student Branch Counselor, Prof. Yeshudas Muttu using Google Meet. The attendees included the IEEE Student Branch executive committee (EXE-COM) of 2020, the newly appointed members of EXE-COM and the sub-committee leads for the year 2021. The motive of such a meeting was to familiarise the upcoming committee with the responsibility that they have been placed with and the roles that they will be playing in the IEEE DBCE Student Branch.

Prof. Yeshudas Muttu began the session by explaining the roles and duties that each member has in the EXE-COM and the tasks to be completed to provide a good IEEE Annual Activity Report. Furthermore, the IEEE DBCE student branch sub-committees were mentioned & the duties of the sub-committee leads were briefed up. Later, a detailed plan about events to be conducted during the year 2021 was specified. Prof. Yeshudas Muttu laid emphasis on the communication & coordination between the student branch committees. To conclude with, the branch counsellor congratulated the outgoing committee for their dedication towards their work that led to smooth functioning of the Student Branch. Subsequently, Former chair Mr. Renvick Fernandes, and Former Vice-chair Mr. Gautam Desai, shared their experiences and gave some parting piece of advice to the entrants.

The members of the Executive Committee for the year 2021 are: Ms. Neha Joshi (IEEE Chair), Mr. Saiesh Naik (IEEE Vice-Chair), Ms. Sheena Mashelkar (IEEE

Secretary), Ms. Rosann Godinho (IEEE Joint Secretary), Mr. Saish Mandrekar (IEEE Treasurer), Ms. Anjima Rajesh (IEEE Joint Treasurer), Mr. Nafiro Fernandes (IEEE Webmaster).

Don Bosco College of Engineering is the Remote Centre for Indian Institute of Remote Sensing-Indian Space Research Organization (IIRS-ISRO)

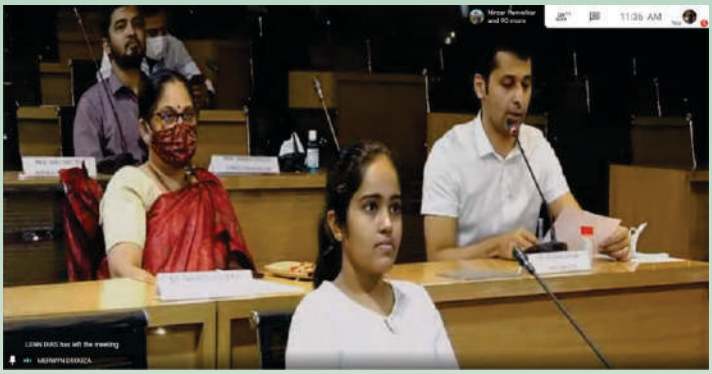
Don Bosco College of Engineering is the remote centre for conducting the outreach programs by Indian Institute of Remote Sensing (IIRS) from July 2020. The Indian Institute of Remote Sensing (IIRS) is a premier institute for research, higher education and training in the field of Remote Sensing, Geoinformatics and GPS Technology for Natural Resources, Environmental and Disaster Management under the Indian Department of Space. Objective of this outreach program is to provide an opportunity for individuals to learn Remote Sensing and Geoinformation Science for the benefit of their professional career. Courses in Remote Sensing and Geoinformation Science will allow graduates to build their knowledge and practical expertise in RS and GIS technologies with independent study and project experience at the certificate level.

IIRS ISRO E-learning platform offers different courses such as Basics of Geocomputation and Geoweb services, RS & GIS Applications, Geographical Information systems, Understanding of Coastal Ocean processes using RS & Numerical Modelling, Global navigation satellite systems, RS & Digital image analysis, RS Applications in agricultural water management and many more. Till date DBCE has enrolled for 11 courses. Out of 11, 9 courses are completed and 2 are ongoing. More than 80 students are enrolled for all the above mentioned courses from all over the country. To encourage the program, IIRS also provides the certificates for the Institute and the coordinator for each course.

Prof. Mohini Naik, Asst. Professor at ETC Department is the Coordinator for the IIRS-ISRO Outreach Programs. This program was initiated under the guidance of Head of ETC Department - Dr. Varsha Turkar and received a lot of support from Director - Fr. Kinley D'Cruz, and Principal - Dr. Neena S.P.Panandikar.

DEPARTMENT OF COMPUTER ENGINEERING

INSPIRUS 2k20



C-Codes of the Department of Computer Engineering organized its annual event "INSPIRUS 2k20 – make it happen", for the fourth consecutive year. It was a national level inter-collegiate event, where students in Goa and all around the country attended and participated in various technical events held on November 20-21, 2020.

The Chief Guest for INSPIRUS 2k20 was Dr. Rishabh Anand(MBA, PhD and POSTDOC)-who is a Global Service Delivery Manager at HCL Technologies, Noida. Events held on November 20,2020 were Mindspark, Framed, Razzmatazz and Relay coding. Events held on November 21,2020 were Competitive Coding and Scavenger hunt. The main highlight of INSPIRUS 2K20 was INSPIRATHON, a 48 hour online hackathon was held on November 19-21, 2020.The event was organized in association with FiiRE (Forum for Innovation Incubation Research and Entrepreneurship) the incubation centre at DBCE. Student from over 5 states- Tamil Nadu, Andra Pradesh, Karnataka, Maharashtra and Goa, were eager to take part in the above mentioned events. A total of 120 students from around 33 colleges and higher secondary schools participated in the event.

The coordinators for the event were Prof. Merwyn D'Souza and Prof. Amey Tilve.

C-CODES COUNCIL INSTALLATION & INSPIRUS 2K20 INAUGURAL CEREMONY

The Installation of students council of computer

Engineering (C-CODES) and 4th inaugural ceremony of "INSPIRUS 2K20" was held on November 20, 2020. This ceremony was held online in the presence of the Chief Guest for the day, Dr. Rishabh Anand, Global Service Delivery Manager at HCL Technologies, Noida, Director Rev. Fr. Kinley D'Cruz, Principal Dr. Neena S. P. Panandikar, Head of the Computer department Dr. Gaurang Patkar as well as the faculty members of Computer Engineering Department of Don Bosco College of Engineering, Fatorda.

The inaugural ceremony commenced with the introduction to C-CODES by Ms. Ritika Ghanti, who spoke about C-CODES and what it stands for and aims to achieve. Special mention of the highlight of Inspirus 2K20 – the 48 hour online Hackathon called Inspirathon was also mentioned. An overwhelming response was also recorded for this year's Inspirus with entries from 5 states.

Principal- Dr. Neena Panandikar then spoke a little about the Chief Guest and furthermore shared her views on C-CODES and Inspirus, and applauded the efforts taken by the council and faculty coordinators for the same. Rev. Fr. Kinley D'Cruz then spoke and gave his views on the transpiring event and wished the participants his best. The report for the C-CODES Council of 2019-2020 was then delivered by Prof. Merwyn D'Souza in which he stated the activities carried out by the C-CODES council for the previous year and a brief overview of the previous year's Inspirus as well. Appreciation towards the outgoing C-CODES members then took place which was followed by the introduction of the new C-CODES council headed by chairman Mr. Cyndroy Rebello for the academic year 2020-2021. The members of the new council took an oath.

The Chief Guest for the day Dr. Rishabh Anand then declared Inspirus 2k20 open. Prof. Amey Kerkar then introduced the noteworthy guest, Dr. Rishabh Anand and listed off his salient accomplishments. Dr. Rishabh Anand then delivered insightful knowledge on the working industry 4.0 technologies.

The vote of thanks was proposed by Dr. Gaurang Patkar who echoed words of appreciation and thanks. A question and answer session then transpired between Dr. Rishabh Anand and the present attendees.

INSPIRATHON (48 HOURS HACKATHON)

The main highlight of Inspirus 2K20 was that a 48 hours non stop Full Stack Hackathon "INSPIRATHON". It was held for the 2nd time in Goa. The event was organized in association with FiiRE (Forum for Innovation Incubation Research and Entrepreneurship) the incubation centre at DBCE.

The hackathon began on November 19, 2020 at 5pm and ran continuously for 48 hours till 5pm on November 21, 2020. Despite it being an online event, the organizing team received a huge response in the registrations, there were participants even from colleges outside the state. A total of 14 teams registered for the hackathon. The participants were from various engineering, polytechnic colleges; under-graduate and master level students included. The cash prizes for the event were sponsored by FiiRE.

The hackathon served as a great platform for the organizers as well as the participants to network and know each other. All the teams were told to upload their work on Github so the judges could evaluate all the work by the participants by sitting in the comfort of their own homes. The teams had to present their solutions to judges on Google meet whereby they were judged on complexity of the solution, completion, innovation, presentation, execution and the solution itself.

Dr. Gaurang S Patkar, invited as Keynote Speaker in CCME2020, Xiamen , China

Dr. Gaurang S Patkar was invited as Keynote Speaker

for 2020 2nd International Conference on Computer, Communications and Mechatronics Engineering, held in Xiamen, China during December 20-21, 2020. The goal of CCME2020 is to bring academics, experts, and students to share original research contributions on topics such as computer, communications and mechatronics engineering. He spoke on his PhD thesis topic named "Automated Grading of Oil Palm Fruits using Soft Computing". The keynote speech was scheduled on December 21, 2020 at 9.20 am (China Standard Time) via Voovmeeting platform. The session was attended by more than 100 participants followed by oral and poster presentation.

SCIENCE AND HUMANITIES

STUDENT INDUCTION PROGRAM – FE ORIENTATION 2020

As mandated by the AICTE Model Curriculum, the Science & Humanities conducted a one-week orientation program for the newly inducted first year engineering students. Due to pandemic, the Induction program was held in online mode through Google meet. The Google meets were hosted by Prof. Natasha D'Souza e Jaques, Prof. Gladys D'Silva, Prof. Vaishali Parakhi, Prof. Harison Cota, Prof. Steefni Cruz, Prof. Ulpa Waingankar and Prof. Sanford Mascarenhas from the Science & Humanities Department. The Induction program was co-ordinated by Institute Induction Program Cell (IIPC) members Prof. Gladys D'Silva & Prof. Harison Cota. The schedule was meticulously prepared keeping in mind the norms and recommendations set in the model curriculum.

On November 16, 2020 the students were addressed by the Director, Fr. Kinley D'Cruz and Principal Dr. Neena Panandikar, Dr. Kala Nayak, Registrar & HOD of Science & Humanities and Fr. Ralin De Souza, Administrator, DBCE. On November 17, 2020, the morning session began with meditation & breathing exercises conducted by Mr. VIshvanath Swar. This was followed by a workshop on Communication skills conducted by Prof. Jyoti Lewis and Prof. Steefni Cruz. In the afternoon session, the HODs of the different departments interacted with their respective branch students and enlightened them about the vision, mission of department, activities of the department and NBA accreditation process.

On November 18, 2020, Ms. Nirmala Rebello, Counselling Psychologist, gave a talk on "Facing challenges with a smile" in which she highlighted the benefits of positive thinking. Mr. Roland D'Cruz, Librarian along with Library Assistant Vanessa Fernandes enlightened the students about the college library system and gave a demo of the library portal. In the afternoon the students were given an insight into all the activities through sessions on Cultural activities, Sports, NSS, E-cell, IEEE, SEEDS, Satellite Club, FSAI, NPTEL and the respective department Associations.

Mr. Rahul Naik, Co-founder, Internship Station interacted with Computer Enggineering , Mr. Kedar Acharya, Executive, Schindler India Pvt Ltd and DBCE Alumnus spoke with the Mechanical Engineering students, Prof. Flavia Leitao, ETC Engg. Dept, DBCE, conducted a workshop for the ETC Engineering students .

On November 19, 2020,Ms. Grebian Alemao, Counsellor, explained the students the mentoring system while Ms. Mya Lin Noronha, Counsellor gave a session on Time Management.

This was followed by a session on FiiRE by Mr. Venugopal TR, Incubation Manager. He spoke to the students about the incubation process and the facilities provided at FiiRE.

Later, a few senior students and Alumni shared their experiences of the college. Mr. Milind Anvekar, VP, Open Destinations gave a session to the Computer Engineering students. Dr. Suresh Mane, Principal, GSIT Karwar delivered a session to the Mechanical Engineering students.

On November 20, 2020,the day began with a talk on "Being positive during COVID" by Dr. Dayanand Rao, Medical Officer, GMC. This was followed by fun and talent search activities conducted by Ms. Maya Lin Noronha, Ms. Grebian Alemao, Prof. Steefni Cruz, Prof. Sanford Mascarenhas & Prof. Ulpa Waingankar.

Finally the students were given a virtual tour of the college campus through a short video.

Mr. Gajanan Nagarsekar, MD, Kallows Engineering India interacted with the ETC Engineering students and explained "How to use Engineering curriculum in today's Industry".

Dr. Neena Panandikar, Principal, DBCE, gave a session to the Civil Engineering students on" Innovation in Civil Engineering".

The above two sessions were conducted in association with the Institute Innovation Cell (IIC) and FiiRE.

Ms. Juvairiya Shaikh, Maintainance Trainee, Dabolim Airport, Goa and DBCE Alumna, spoke to the Civil Engineering students about her professional journey.

Apart from the above, sessions were also conducted for the students by the DBCE faculty introducing them to the various first semester subjects.

On November 21, 2020, an orientation programme was conducted for the parents of the FE students through google meet.

SEEDS Valedictory function

The SEEDS 2019-2020 Valedictory function was a very unique experience held on December 5, 2020. It was held online for the first time, using the Google meet platform, with students from different departments joining in through their laptops. Prof. Ulpa Waingankar, the SEEDS coordinator began the function by welcoming the dignitaries. Prof. Ulpa also thanked the HOD, Dr. Kala Nayak, the staff members of Science and Humanities and the students for all their assistance , cooperation and enthusiasm during the 7th SEEDS academic year. This was followed by the HOD- Dr. Kala Nayak, thanking and appreciating the coordinators and students. Dr. Kala also shared words of wisdom with the students and wished them all the very best. Prof. Ulpa Waingankar then invited the Principal -Dr. Neena Panandikar to say a few words. In her address the Principal congratulated the winners of the various events and also the Science and Humanities HOD -Dr. Kala Nayak and the SEEDS coordinators Prof. Ulpa Waingankar and Mrs. Maya Lin Noronha for organizing this event and for its success. She also wished the students for their future. The Director- Rev. Fr. Kinley D'Cruz, in his address congratulated the SEEDS committee and Coordinators for their time and energy. He also wished them success and positivity to fulfill their future endeavors.

The Chairperson Ms. Ritika Ghanti read the report of Seeds 2019-20. She then presented a video, showing clips of the various events held. Prof. Steefni Cruz read the names of the winners for the various events held and presented e-Certificates to them. Dr. Kala Nayak announced the winners for SEEDS which was the Computer Class. The class C.R Mr. Reeve proposed a thank you speech for receiving the SEEDS championship trophy.

All the members of the seeds committee shared their experience and gave valuable feedback. The coordinator Mrs. Maya Lin Noronha also thanked and appreciated the SEEDS council, her colleagues and HOD and students, too. Secretary of SEEDS, Jolton Fernandes proposed a vote of thanks.

Webinar on Mathematical Modeling and Number Theory

On the birth anniversary of the Indian mathematical genius Shrinivas Ramanujan, Dept of Science and Humanities in association with R & D cell organized its first Sci-Minds web series on Mathematical Modeling and Number Theory on December 22, 2020 at 10am to 1pm using Google meet and live you tube link. Prof. Vaishali Parakhi welcomed the participants and Dr. Kala Nayak shared her views on the webinar.

The speakers of the event were :

1) Dr. T. Venugopal, Professor of Mathematics in Department of Mathematics and Computer Science of Sri Sathya Sai University for Human Excellence, Kalburagi, Karnataka.

2) Dr Himadri Mukherjee, Department of Mathematics and Statistics, Birla Institute of Technology and Science Pilani, Goa Campus.

Dr. T. Venugopal spoke about how a real life problems can be solved by using Mathematical Modeling. He gave the participants various examples like: algebraic modeling, Decision problems, Transportation problem etc. He also spoke about Graph coloring and Mathematical optimization. He explained modeling and optimization problems in operation research with Microsoft Exel and solver.

Dr. Himadri Mukherjee spoke about continued fractions (Ramanujan's stairway to infinity) He discussed an interesting puzzle and its solution with the participants. He also shared some anecdotes of Shrinivas Ramanujan.

NPTEL Awareness Program 2021

The awareness program was held in online mode through Google meet. The Google meet was coordinated by Prof. Vaishali Parakhi (NPTEL Coordinator of Science and Humanities Department). Prof. Vidhya NPTEL SPOC gave an overview of the registration and enrolment to NPTEL Online Certification Courses using SWAYAM App and portal. She also highlighted the benefits of taking NPTEL courses. Students were given an idea regarding NPTEL Certificates, fee waiver benefit for SC, ST and low-income students. The importance of Domain courses, Mentorship was also discussed. The NPTEL course Registration & Exam enrolment form video was shared with the students.

On January 4, 2021, Prof. Sanjeel Naik (NPTEL coordinator for Department of Mechanical Engineering) interacted with First Year Mechanical students and discussed about various NPTEL courses related to Mechanical Engineering.

On January 5, Prof. Swaroopa Sail (NPTEL coordinator for Department of Civil Engineering) briefed regarding Domain courses for civil engineering students.

On January 6, 2021 ETC Department Coordinator Prof. Vidhya D S interacted with First Year ETC students and discussed about various NPTEL courses related to ETC Engineering.

On January 7, 2021 Computer Department Coordinator Prof. Amey K. ShetTilve interacted with First Year Computer students and discussed about various NPTEL courses related to Computer Engineering.

TRAINING AND PLACEMENT

Webinar on GRADUATE STUDIES AT BINGHAMTON UNIVERSITY

Training & Placement Cell organized a Webinar on GRADUATE STUDIES AT BINGHAMTON UNIVERSITY for the students of Don Bosco College of Engineering on Wednesday, November 18, 2020 at 6.00 p.m. IST. via virtual platform Zoom.

Dr. Mohammad Khasawneh, Professor and Chair of Systems Science & Industrial Engineering, Associate Director for the Watson Institute for Systems Excellence (WISE) was the speaker for the webinar. He presented an overview of Binghamton University. He mentioned about The Thomas J. Watson College of Engineering and Applied Science as a top-ranked engineering and computer science education in upstate New York with exceptional faculty members. He presented a broad overview of student life at Binghamton where they are nurtured with broad-based skills and the entrepreneurial spirit to succeed in fields ranging from mechanical engineering to hospital operations and more. He spoke at length about the Department of Systems Science and Industrial Engineering (SSIE). Participants asked many questions and showed interest in studying abroad. He was also assisted by Lindsay Buchta, Graduate Administrative Assistant and Erin Hornbeck, Assistant to the Chair. At the end of the webinar, Principal, Dr. Neena Panandikar thanked the Binghamton team for the session. The host, Avila

Naik, Training & Placement Officer showed gratitude to Professor Krishnaswami "Hari" Srihari, Dean of the Thomas J. Watson School of Engineering and Applied Science at Binghamton University and Director of the Watson Institute of Systems Excellence for the initiative and collaboration with Don Bosco College of Engineering. She also thanked Dr. Mohammad Khasawneh for the wonderful session and interaction with everyone.

UMANG Placement Drive

The UMANG placement drive was organized by Training & Placement Cell, DBCE for 2020 batch students of Computer & IT branch of all colleges on January 22, 2021. The drive started off with registrations at 9:30 A.M. outside the seminar hall 1. Pre-placement Talk was delivered by Ms. Poonam, CTO, UMANG and Mr. Mangirish Salelkar, CEO, UMANG. They spoke about ten year's journey of the company and its accolades. Mr. Salelkar stressed about the right 'Attitude' of candidates towards job. Many videos related to company work culture and environment was presented by UMANG team. After the pre-placement talk , a written test comprising of aptitude and technical questions was conducted. The test went on for an hour and after the test the candidates dispersed. The selected candidates from this drive will be called for interview to their office in Margao. The Umang team thanked the Principal and TPC team for their efforts in conducting the drive.

E-CELL

E-Cell Installation and MY STORY - Interaction with Alumni Entrepreneurs

The installation ceremony of E-Cell and MY STORY - Interaction with Alumni Entrepreneurs was virtually held on Saturday, November 28, 2020 via Google Meet. Amey Tilve - Host and E-Cell Faculty Coordinator welcomed everyone for this event. During the E-Cell installation he introduced the E-Cell Faculty Coordinators and E-Cell Student Coordinators of respective departments.

Principal – Dr. Neena Panandikar shared her views about E-Cell and applauded the efforts taken by the team in organizing this event. She appreciated the students for showing interest in joining E-Cell. The speakers for the event were the Alumni Entrepreneurs - Mr. Shwetang Nadkarni, Alumnus, Civil, Batch 2019, Owner Treads and Risers; Mr. Deepak Kolur, Alumnus, Mechanical, Batch 2018, Founder-K2 Engineering & Techno-Wheelz Pvt. Ltd.; Mr. Rakib Sarmadi, Alumnus, ETC, Batch 2016, Co-founder and Managing Partner Carbon-E; and Mr Anoop Kothambikar, Alumnus, Computer, Batch 2017, Founder SecDevOps and Principal SOC Analyst – Securesys Technologies Pvt. Ltd.

The session concluded with the vote of thanks proposed by Avila Naik, Convener, E-Cell who echoed the words of appreciation to the entire E-Cell Team for successful conduct of the event. The event was planned and executed by the E-Cell Team – Satyesh Kakodkar, Manjunath Narwate, Mathilda Colaco, Amey Tilve, Dr. Shreyas Simu and Avila Naik.

IIC

'Identifying IP Component at Early Stage of Innovation'

The webinar on 'Identifying IP Component at Early Stage of Innovation' was held on December 1, 2020. It began with a welcome address and introduction of the Speaker- Adv. Shalini Sitaraman Menezes by student coordinator Mr. Leon D'Souza. Adv. Shalini Sitaraman Menezes made an introductory remark saying "Innovation is Everywhere" ,she continued saying that 90 percent of the world's data has been generated in the last two years. Student coordinator Ms. Berny Dias proposed vote of thanks

Webinar on Process of Innovation Development

On December 4, 2020, the Institution Innovation Council of Don Bosco College of Engineering in association with FIIRE conducted a webinar on the

topic: Process of Innovation Development, which was organized by Faculty Coordinator Ms. Grebian Alemao, moderated by Prof. Suraj Marathe and student coordinator. The webinar was hosted under the guidance of the Director of Don Bosco College of Engineering -Rev Fr. Kinley D'cruz, Principal -Neena Panandikar, President of IIC Committee of DBCE -Dr. Varsha Turkar and Mr. DS Prashant. The Guest Speaker for the webinar was Mr. Ronald D'Souza who is the Director of Intellinects Venture and Mea Vita Technologies. The highlights of the webinar were Essential stages of successful innovation, What is innovation process? Process of innovation in entrepreneurship and Turning an idea into reality.

Mr. Ronald D'Souza initially shared a few reference books, he later went on into sharing his work experiences at MNC's like Kellogg's, Alcatel-Lucent, etc. He also briefed the participants about his personal experiences such as challenges, innovations and new ideas which he solved and developed at the MNC's too. He also shared his experience in developing Intelliadmissions: a software which benefits the parents, schools as well as the students in the admission processes in applying to various schools. He then went on by giving some tips and tricks for the steps of innovation which include: Uncovering the job, Creating the desired experience and intergrating processes around the job. Mr. Ronald D'Souza also conducted an exercise to help try find the entrepreneur mind. He summarized his talk with a few key words stating: Be people-obsessed vs product obsessed, Execution eats strategy for breakfast and emphasized on Test, Learn and repeat.

Webinar "Design Thinking – How does it fit innovation and invention"

On December 8, 2020, an online webinar on "Design Thinking – How does it fit innovation and invention" , which was organized by Faculty Coordinator Ms. Grebian Alemao, moderated by Prof. Suraj Marathe and student coordinator Mr. Aloysius Coelho do Amaral. Which was led by Mr. Deepak Pathania who was the panelist for the webinar. There were 100 participants who took part in this webinar which included students, faculty and entrepreneurs. Prof. Suraj Marathe was the moderator for the event who gave a brief introduction on the topics that were going to be discussed and introduced to the panelist and speaker for that evening. Mr. Deepak Pathania presented multiple slides and videos of his inventions and innovations such as the Digi-valet which was a small little product designed for old people in time of immediate help, to large scale innovations such as Smart Vaults for ICICI Banks. He told the participants about his inventions, AB-TAB which was a piece of gyming equipment designed to look like a stand up table and also about his other invention such as the Multi-Mask, which was a fully washable mask with an attachment in the front for a face shield as well as future innovative ideas such as oxygen line and along with other such ideas.

Call for Paper Writing and Research Report on Innovation

On December 10, 2020, a webinar on Call for Paper Writing and Research Report on Innovation was organised by the Institute Innovation Council of Don Bosco College of Engineering Fatorda-Goa. It was well-received by 100 participants from students and faculty members. The resource person for the session was Dr. Shwetha Prasanna (H.O.D.-Civil Department of DBCE). The main Highlights of the webinar were Description of Problem, How to review existing research and Description of innovation.

Dr. Shwetha provided a brief understanding of what a technical paper is and that it involves the collection, organization, and analysis of information or knowledge to increase understanding of a topic or issue. The crucial steps to start a research paper were discussed. The three stages of the writing process involved to publish a research paper are, firstly research and planning secondly writing, and lastly revision. These three processes were explained in brief as in what all elements are required to establish in a good research and planning phase. The vote of thanks was delivered by Mr. Rahul Kothru.

National Innovation and Startup Policy

Institution innovation council organized a Seminar on December 12, 2020 titled "National Innovation and Startup Policy". It was well-received by 100 participants from students and faculty. Dr. Gaurang S. Patkar started the session with a warm welcome to all the attendees and also introduced the guest speaker. The session was taken over by the guest

speaker Mr.S Mahaboob Hussain, Assistant Profesoor, CSE & Head iEDC, Mentor –AIM NITI Aayog, Vishnu Institute of Technology, Andra Pradesh, India. The entire session was an extremely interactive session. He said that The National Innovation and Startup Policy for students and faculty of Higher Education Institutions (HEIs) will enable the institutes to actively engage students, faculties and staff in innovation and entrepreneurship related activities. The vote of thanks was delivered by Prof. Janhavi Naik.

Virtual Visit to FiiRE (Technology Business Incubator)

Institution Innovation Council and E-Cell of Don Bosco College of Engineering, Goa in association with FiiRE (Forum for Innovation Incubation Research & Entrepreneurship) under IIC 3.0 Activities organized a Webinar on Virtual Visit to FiiRE (Technology Business Incubator) on Wednesday, November 18, 2020 via virtual mode – Google Meet. In all 101 registered for the webinar and all the IIC members, students and FiiRE team participated in the webinar.

The host, Avila Naik (IIC Member and TPO) showed a video about FiiRE to the participants. Inseyah Ali (Business Development Manager – FiiRE) presented an overview of FiiRE and the activities carried out so far. She highlighted the events organized under the FiiRE banner. She encouraged the students to visit FiiRE and mentioned that the entire team is always there to mentor, guide and interact with them. Inseyah Ali introduced Arbaaz Shah Muzawer and Tejas Barve who have their start-ups at FiiRE to everyone. They shared their entrepreneur journey and suggested the students to focus on projects which are challenging in nature. The host thanked the FiiRE team, IIC team and all the participants for attending the webinar.

Problem solving and Ideation

The webinar on Problem solving and ideation was held on November 20, 2020, which began with a welcome address and introduction of speaker- Mr. Abhay Valsangkar, by Mr. Leon D'Souza.

Mr. Abhay Valsangkar made an introductory remark citing the phrase from the movie 3 idiots "mera beta engineer banega" he then went on to explain a question asked in the IIT Entrance exam wherein the candidates felt that the answer could not possibly be a simple one, when in fact it was a simple answer. He went on to add that the same applies to innovators who think easy solutions cannot be innovations. He also took the audience through his life journey and went on to say that if he was offered an opportunity to handle any responsibility in college days and he was asked to do a job for the first time, he took it up as a challenge to do it and learn.

To sum up what Mr. Abhay had to say "learn and think of simple solutions". Student Coordinator Ms. Berny Dias proposed the vote of thanks

Entrepreneurship Development Phases

The webinar on Entrepreneurship Development Phases took place on November 24, 2020 with the welcome address and introduction of speaker given by Prof. Satyesh Kakodkar. The speaker Mr. Ramchandra Salgaonkar began with the examples of entrepreneurs Kalpna Saroj, Arunachalam Muruanatham and Venkatesh Iyer.

Citing an example of a selfie stick, how the innovations are ahead of time, the speaker made a remark that one should not get discouraged about the comments on the innovations rather learn how the innovation can be used in future. He further said that everyone has immense ideas but lack in implementation, hence he said a good idea is 10% inspiration and 90% implementation. The examples of start-ups like billboards from space, dogbazzar and Zuta labs were elaborately discussed. Further speaking, Mr. Salgaonkar discussed the ways in which ideas can be generated by giving examples of ola, redbus.

He presented an idea of a black board cleaning robot and how the innovation has become useless in present era of smart board and how the same trade can be adopted in solar heaters for its cleaning. He also explained about business opportunities developed in the present time of work from home. Lastly citing the example of Airbnb, he explained the trades of business.

Dr. Varsha Turkar, Chairman of IIC -DBCE Spoke on the occasion saying "the session was good and the

students will benefit from the same".

Student Coordinator Mr. Leon D'Souza proposed vote of thanks

Innovations In Civil Engineering By Principal Dr. Neena Panandikar

The Institute Innovation Cell (IIC) of Don Bosco College of Engineering, in association with FiiRE conducted a webinar on "INNOVATIONS IN CIVIL ENGINEERING" by Principal- Dr. Neena Panandikar on November 21, 2020. The webinar was attended by the First Year Engineering students from the Civil branch.

In her session, Dr. Panandikar explained the basic methods like load bearing and framed structure and Innovative construction technology like 3D printed houses, BIM, Smart cities and roads, self healing concrete etc. She also explained about mixture and processes involved in making of concrete. Further, in her presentation she showed a short clip on how AI is taking over manual processes. She also showed the audience a clip on the construction of the Panaji highway which is currently in progress.

Pitching workshop & linkage of innovators with Innovation Ambassadors

The webinar was held on November 21, 2020 and the resource person Mr. Moorley Dharan was welcomed and introduced by Prof. Satyesh Kakodkar. Mr. K. Moorley Dharan made an introductory remark saying "Innovation is change for the better" citing on Solving a real problem, Novel application, Implementation and Sustainability. Mr. K. Moorley Dharan explained the difference between Invention and Innovation.

Further he explained the typical behaviour of Innovators. Citing an example of biomimicry, he spoke on inspiration which innovators need for their success. Further, Mr. Moorley Dharan spoke on Innovation Ambassadors and their role. He further highlighted on types of Innovation Model. He spoke on steps of how an idea can be taken towards implementation. Mr. Moorley Dharan explained on Pitching, Effective Pitching and time when Pitch.

Dr. Varsha Turkar, Chairman of IIC -DBCE Spoke on the occasion. The questions posed by Participants were answered by the speaker. Student Coordinator Mr. Leon D'Souza proposed the vote of thanks .

How to use Engineering Curriculum in the Industry – Mr. Gajanan Nagarsekar

The Institute Innovation Cell (IIC) in association with FiiRE conducted a webinar on "How to use Engineering Curriculum in the Industry" on November 20, 2020. The resource person for the webinar was Mr. Gajanan Nagarsekar, Managing Director, Kallows Engineering India. The webinar was attended by the First Year Engineering students from the Electronics & Telecommunication branch. In his session, Mr. Nagarsekar spoke about various applications of concepts learnt in different engineering courses in the industry today. He also highlighted the gap between Engineering Curriculum and Industry and stressed on learning beyond curriculum. He further shared his journey towards staring his own startup "Kallows Engineering India". He also interacted with the students and answered questions posed by them.

Webinar on 'My Story- Motivational Session by Successful Entrepreneur/Startup Founder': Mr. Samarth Kholkar

Institution innovation council organized a one-day webinar on November 16, 2020, titled 'My Story- Motivational Session by Successful Entrepreneur/Startup Founder' in association with FiiRE (Forum for Innovation Incubation Research & Entrepreneurship). It was well-received by more than 100 participants of various colleges. Prof. Suraj Marathe started the session with a warm welcome to all the attendees, introduced the DBCE IIC, and gave an overview of its' function & activities. He then introduced the guest speaker. The session was delivered by guest speaker Mr. Samarth Kholkar who is the CEO & Co-Founder of B:Live, India's fastest growing EV Experience Platform.

The session was quite interactive. He started the session by stating the company's vision and some impressive, yet important facts about the journey & growth of the company so far. Mr Samarth gave an insight into some common misbeliefs that budding entrepreneurs have about initiating their projects and start-up ideas especially about beginning one in

the state of Goa. He also enlightened the audience about the opportunities and challenges that Covid-19 has created. Mr. Samarth encouraged the audience to follow their dreams of building their own start-ups saying that one should not be afraid in taking the first step towards their goal.

IIC Workshop on Entrepreneurship, Innovation and Career Opportunities

Institution innovation council organized a one day workshop on the November 7, 2020 titled "Entrepreneurship, Innovation and Career Opportunities in online mode". It was well received by more than 260 participants from students of various colleges. Dr. Vivek V. Jog started the session with a warm welcome to all the attendees and also introduced the guest speaker. The session was taken over by the guest speaker Mr. Anay Kamat who is currently leading the mobile practices at Equal Experts India.

The entire session was an extremely interactive session. He initially started off by defining the words entrepreneurship and gave a clear idea of the same. "Entrepreneurship is not a career" he quoted and explained in detail about how an individual can launch his/her start-up. Mr. Kamat boosted the confidence of all the attendees with his interactive presentation and encouraged them all to believe in themselves. He stressed that Entrepreneurship cannot be viewed as a business purely, but as a rich legacy for generations to prosper.

DBCE awarded with 3.5 rating by IIC-MHRD for 2019-20

The Ministry of Education-Govt. of India has established 'MoE's Innovation Cell to systematically foster the culture of Innovation among all Higher Education Institutions to encourage, inspire and nurture young students by supporting them to work with new ideas and transform them into prototypes while they are in their formative years. MIC has envisioned, encouraging creation of 'Institution's Innovation Council' (IICs) across selected HEIs. A network of IICs is established to promote innovation and entrepreneurship in the Institution through multitudinous modes leading to an innovation promotion ecosystem in the campuses.

Don Bosco College of Engineering, Fatorda, a premier engineering college in the State has been awarded with 3.5 rating on a scale of 5 by Institution's Innovation Cell, Ministry of Education Government of India. The award was presented for conducting various IIC activities for the academic year 2019-2020. IIC at Don Bosco College of Engineering has organized activities like Mentoring sessions for start-ups with Mrs. Aditi Tiwari on Go to Market Strategy, Field Visit to Village – Identity real Life Problem, Workshop on "Entrepreneurship and Innovation as Career Opportunity", Hackathon, Poster Competition on Innovation & Entrepreneurship and Workshop on "Product Development and Innovation" to name a few.

RESEARCH AND DEVELOPMENT

The Department of Mechanical Engineering held its monthly Knowledge Sharing Session, under the R&D cell on January 29, 2021. The first session was taken by Prof. Manjunath Narwate on Recent Trends while Prof. Ajit Salunke presented a technical paper in the second session.

Prof. Manjunath Narwate presented a technical talk titled 'Metal 3D Printing and its Applications'. He introduced the domain of Metal 3D printing with a brief history and classification. He later discussed powder bed fusion and directed energy deposition processes used in 3D printing. The topic concluded by highlighting the advantages, limitations associated and desired applications in the automotive, aerospace and medical fields.

Prof. Ajit Salunke presented a technical paper on 'Web Based ERP Model for Flexible Manufacturing Module'. He discussed on the development of a model of a module for Reconfigurable FMM. The utilization of J2EE environment and ORACLE 9i was shown, explaining the associated architecture. Further,he also explained the FMM database and the user interface in developing a demo application for a spur gear. The presentation focussed on developing such web based reconfigurable FMM for mass production of standard components, integration with CAD/CAM applications, integration with modular ERP components etc.

The session was attended by teaching and technical support staff from the Department of Mechanical Engineering and coordinated by Prof. Mayur Shetti.

R&D Knowledge Sharing Session

The Department of Electronics and Telecommunication organized its monthly Knowledge Sharing Session, under the R&D cell on December 15, 2020. The Knowledge Sharing Session initiative involves two activities namely a Technical Paper presentation and some recent trends whose main motive was to update Faculty members with the latest trends in Technology and Research.

The first session was taken up by Prof. Kimberly Moraes and the second session by Prof. Priyanka Padiyar. Prof. Priyanka Padiyar presented a paper titled "A Comparative Study of Wavelet based ANN and classical techniques for Geophysical Time Series Forecasting", under the Signal Processing & Artificial Neural Network Domains. She began with the importance of Wavelet Transform & its scope in the future. Time Series Forecasting models such as W-ARIMA, W-Kalman Filters and W-ANN were discussed in detail. The presentation focused on comparative analysis of the time series models for Linear and Non-Linear Datasets and the advantages of using Wavelets.

Prof. Kimberly Morais presented a technical talk titled "Understanding your Electricity Bill", under the Electrical Engineering category. She began with how she came up with the idea. She broke the electricity bill into five parts and explained each part. The bill consists of consumer details, electricity connection details, and consumption details. She explained in detail how the electricity bill is calculated.

The event was encouraged by R&D Chair Dr. Varsha Turkar and coordinated by Prof. Flavia Leitao. Both the sessions were knowledgeable & received good feedback from the audience.

Talk on PV array design & estimation

The R & D Cell (Department of Science & Humanities) had the activity on January 23, 2021. The resource person was Prof. Harison Cota, Deputy HOD of Science and Humanities . In his session, Prof. Harison Cota spoke about the PV array model, the difference between the stand alone model and the grid connected (net metering) model and how the consumption of energy decides the number of PV modules required to be installed. He explained in detail how to calculate the cost and consumption of the power units & the long term benefits of the same.

Paper Presentation – Dr. Kala R. Nayak

The R & D Cell (Department of Science & Humanities) had the first activity on December 14, 2020. The resource person was Dr. Kala R. Nayak, HOD of Science and Humanities and Registrar of the college. In her session, Dr. Kala R. Nayak spoke about the model built by a reducible discrete Markov chain with eight transient states and three absorbing states which estimates the expected time the student spends in a particular study program. She concluded the session by saying that the model enables the prediction of future probability of student who repeat specific semester, withdraw or graduate.

R&D session on 5th December

The Civil Engineering department had its first session under R&D cell on the December 5, 2020. There were two speakers for this session. Dr. Shwetha Prasanna presented a research paper while Prof. Kaushik P. Fondekar presented on a recent trend. Dr. Shwetha presented on the topic 'Soil water-retention prediction from pedotransfer functions for some Indian soils'.

The key highlight of her talk was finding out the quality of subsurafce soil which is affected by agricultural or industrial activities. In order to find the quality, the soil water retention curve (SWRC) and the hydraulic conductivity fuctions need to be calculated. The SWRC is an important factor for sustainable and improved agricultural production. The paper stresses on how pedotransfer functions are an effective tool in finding out soil water retention. The paper is published in Archives of Agronomy and Soil Science 59 (11), 1529-1543.

Webinar on Effective techniques of writing research proposal and research paper

On behalf of R&D cell conducted a webinar on Effective techniques of writing research proposal and research paper was conducted in department of computer engineering on December 5, 2020. The

Webinar was well received by all faculty members of computer department. Dr. Gaurang S. Patkar and Dr. Vivek V. jog discussed on various do's and don'ts while dealing with writing research related content with the intention of getting recognition from reputed publication houses like IEEE, Springer, Elsevier, ACM. etc.

In the first session, Dr. Vivek discussed the importance of proving merit of problem statement before jumping on to the solution. He also narrated different approaches of doing gap analysis that forms the basis of future research. In the second session Dr. Gaurang focused on different ways of writing research papers considering the different standard journals. He gave some important tips on different open source tools that can be used to support effective paper writing. Deriving formulae and equations while working on mathematical model was the key highlight of his session.

R&D Knowledge Sharing Session

The Department of Mechanical Engineering held a Knowledge Sharing Session, under the R&D cell on December 5, 2020. The session was delivered by Dr. Pravin Verekar on the topic of Fluid Mechanics of Fish Swimming. Dr. Verekar introduced the topic with the motivation behind study in developing autonomous underwater vehicles (AUV) and swimming robots that could mimic the fish swimming mechanics.

Dr. Verekar gave a brief overview on hydrodynamics and associated forces like drag, lift and acceleration reaction forces that required to be understood. He discussed the periodic and transient movements in swimming and the Body and caudal fin (BCF) and Median and paired fin (MPF) propulsions employed by fish. Further, he also explained the undulatory and oscillatory fin motion associated with different fish. The drag and thrust produced from the karman and reverse karman wakes generated by the body and the tail of the fish were explained and demonstrated with videos of the wakes produced by aerofoil flapping in water.

Dr. Verekar also discussed on research studies on fish swimming through flow visualization techniques, particle image velocimetry and computational fluid dynamics. The session was attended by faculty from the Department of Mechanical Engineering and coordinated by Prof Mayur Shetti.

R&D Knowledge Sharing Session - 24th November 2020

The Department of Electronics and Telecommunication had its first Knowledge Sharing Session, under the R&D cell on November 24, 2020. The Knowledge Sharing Session initiative involves two activities namely a Technical Paper presentation and some recent trends whose main motive is to update Faculty members with the latest trends in Technology and Research.

Prof. Flavia Leitao briefed the audience about the importance and purpose of this activity under the R&D cell. The first session was taken up by Prof. Yeshudas Muttu and the second session by Prof. Mohini Naik. Prof. Yeshudas Muttu presented an IEEE paper titled "Effective Face Detection, Feature extraction & Neural Network-based approaches for facial expression recognition", under the Image Processing & Artificial Neural Network Domains.

He began with the importance of facial expression recognition system & its scope in the future. Face detection and its feature parts using the Viola-Jones algorithm and some feature extraction algorithms were explained in detail. The presentation focused on comparative analysis of pixel-wise and modified Local binary patterns. Neural network-based approaches like Back Propagation Algorithm & Radial Basis Function Network for classification of facial expressions were explained.

Prof. Mohini Naik deliverd a talk on recent trends in Millimeter wave applications. In her session, she explained the basics of electromagnetics, its spectrum and its applications. She also explained about recent 5G requirement and its impact on mankind. Further, in her presentation she explained about the millimeter wave frequencies that can be used to design 5G antenna and other components, current research areas in mm wave band. The event was encouraged by R&D Chair Dr. Varsha Turkar and coordinated by Prof. Flavia Leitao. Both the sessions were received with good feedback from the audience.

FiiRE

1. Online EAC
Date: 5th December 2020
No. of participants: 21

Session Details: Introduction to Entrepreneurship, speakers D. S Prashant and Tushar Sawant

Objectives: Assessing competencies to be an entrepreneur, identify a business opportunity, Setup an enterprise, Avail schemes for entrepreneurs

Outcome: conducted the online EAC to cater to the needs of working class participants who had strong desire to venture into entrepreneurship

2. TEDP in IoT
Date: 8th February 2021 to 27th March 2021
No. of participants: 25

Session Details: Introduction to Entrepreneurship, Experience sharing with an Entrepreneur, Entrepreneurial Competencies, Soft Skill Development: Communication and Information Seeking, Experience sharing by successful Entrepreneur, Business opportunity Guidance, Introduction to Market survey, Briefing and Planning for the Market Survey, Conducting Market Survey and Data Collection for the Identified Business Opportunity, Feedback, Discussion on Market Survey and Evaluating PPRS, Developing Entrepreneurial Ability [Achievement Motivation], Business Opportunity Guidance, Pre-feasibility study of a Project, Preparing Preliminary Project Report, Introduction to Embedded Systems 1) Device Selection for IoT 2) Introduction to Arduino platform 3) Programming Concepts 4) Arduino Programming 5) Digital Output, Digital Inputs 1) Programs on Digital I/O 2) Concept of ADC 3) Analog Inputs 4)Programs on Analog Inputs Concept of PWM 5) Labs on PWM 6)UART Serial Communication 7) Labs on Serial 8) OLED Display Labs, Introduction to IoT, IoT Architecture and Components, IoT Applications, IoT Cloud: Thingspeak, Data uploading and downloading using Thingspeak, Data Visualization, WiFi communication, WiFi device: ESP8266, Arduino program for ESP8266, Sensor data uploading on Thing speak through Arduino and ESP, Marketing Management: Product Promotion, Sales and Advertisement, Digital Marketing, Financial Management: Accounting & Costing, Product Costing and Cost Consciousness, Working Capital Assessment & Management in SSI, Break Even Point, Taxation and various taxes applicable to MSME, Legal Formalities in an Enterprise [Factory Act, EPF, Pre-Feasibility Report, Detailed Project Report, Case Study, Counseling, Schemes of Assistance for MSMEs: Financial Agencies / Institutions, Schemes of Assistance for MSMEs: NSIC, SIDBI, DIC and Other Support Agencies, Legal Formalities of Loan Disbursement Interfacing with Institutions for Business Plan, Human Resource Management, Pattern, Copy Rights, Trade Mark and Industrial Management, Negotiation and Networking, Delegation of Authority and Work Effort, Feedback and Evaluation of the Programme, Action Plan Preparation

Objectives:
a] To impart Entrepreneurial imputes along with technical sessions on IOT to create a pool of enterprises in the related field.
b] To provide hand holding support to participants for their projects.

Expected Outcome:
a] Generation of IOT based Projects./Ideas
b] Hand holding support to aspiring entrepreneurs to execute their project ideas.

Contact Information

Ph.: (0832) 2743944 / 2741045
Fax: (0832) 2742648
Don Bosco College of Engineering
Fatorda, Margao, Goa 403 602
Website: www.dbcegoa.ac.in
Email: dbcefatorda@dbcegoa.ac.in