



Connections

Quarterly Newsletter for Institute's Friends, Patrons, Mentors and Students

Nov. 2021 - Jan. 2022 Vol 11 - Issue 2

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NEWS IN GENERAL

DBCE participates in India International Science Film Festival 2021



The 7th edition of the India International Science Film Festival was held from December 10 - 13, 2021, at Panaji, Goa. The festival was inaugurated by the Union Minister for Science and Technology - Dr. Jitendra Singh. Chief Minister - Pramod Sawant, Union Minister- Shripad Naik, Union Secretary - Dr. M. Ravichandran, Director CSIR-NCL Hyderabad- Dr. Chandrasekhar, Director General of CSIR Lab's Dr. Shekhar Mande, Secretary, Department of Biotechnology (DBT)- Dr. Rajesh Gokhale, and Senior Scientist-Javed Beg. The festival was organized in collaboration with the Union Ministry of Geology, Department of Science and Technology, Vigyan Bharati, National Institute of Polar and Marine Research, and Government of Goa. Over 10,000 students from all over the country had participated in the festival.

Our College participated in the IISF 2021 for the Science and Technology Expo under the Stall of Directorate of Technical Education, Goa. Three Projects which were displayed for the Expo were as follows "Ergonomic Chair" by Adarsh Naik, Binay Vansraj Sharma, Omer Qabeer, Omkar Dilip Bhandari.

"Oxygen Concentrator" by Keenan Cardozo, Sahil Chitrapur, Akshay Bhatule, Nirbhay Borkar, Sahul Ahmed & "Sanitizing Robot" by Mr. Vivek Khadilkar.

The above Innovative projects drew the attention of Dr. Jitendra Singh-Minister for Science & Technology during his visit to the expo.

A research paper titled "Smart Agri Wine: an

Artificial intelligence approach to predict wine quality" presented by Dr. Gaurang Patkar, HOD - Department of Computer Engineering - DBCE was published in the journal of Computer Science. And a research paper titled "End correction for double-tuning of same-end inlet-outlet muffler" presented by Prof. Chetan Gaonkar was published in Elsevier Journal and was displayed as a poster under the aegis of the Department of Technical Education (DTE).

Prof. Gaurish Mahabaleshwar Samant was the nodal officer from the college for coordinating the Expo for the IISF 2021. Prof. Jeffery Valadares, Prof Selvin, and Prof Ankit Tiwari were the coordinators for the event.

Prof. Satish Kakodkar was a member of the organizing committee of IISF 2021 and was coordinating the engineering project festival.

Liberation Day, 2021

College staff and NSS volunteers celebrated the 60th year of Goa's Liberation on 19th December 2021 in the college campus at 8:45am. The Chief Guest for the ceremony was Mr. Deep Karapurkar, Owner of City Scape Builders. Among the dignitaries present were Director, Rev. Fr. Kinley D'Cruz, Rector, Rev. Fr. Paul D'Souza and Principal, Dr. Neena Panandikar, Registrar Dr. Kala Nayak, CEO of FiIRE, D.S. Prashant and COO of Fiire, Mr. Thejus Joseph.

Sports Officer, Dr. Avertano Barreto gave the commands and the flag was hoisted at the hands of the Chief Guest, after which the National Anthem was patriotically sung by all. Rev. Fr. Kinley D'Cruz welcomed the Chief Guest with a bouquet of flowers. Dr. Neena Panandikar addressed the gathering and



recited a poem on “Sobit Amche Goen” by Goan poet Ms. Pradnya Naik and then introduced the Chief Guest to the gathering and invited him to address the gathering.

In his speech, Mr. Deep Karapurkar wished everyone on account of 60th Goa liberation Day and said “The sacrifices undergone by the martyrs for the freedom struggle of Goa are unforgettable.” He also said “If we want to see overall progress of Goa then, we personally have to work on individual progress.” He too recited a poem written by Shri. Bakibab Borkar after Goa liberation in 1961.

Rev. Fr. Paul D'Souza, then presented a memento to the Chief Guest. Compere, Mr. Reo D'Mello thanked the dignitaries and all the staff who helped in the smooth conduct of the event.

Project Felicitation Ceremony: Design And Development Of Oxygen Concentrator



A Felicitation ceremony was held at Gera Imperium Palace, Panjim on December 28, 2021 by Technowings to felicitate the winners of the Technophilia event. Students namely Sahil Chitrapur, Akshay Batule, Keenan Cardozo, Shahul Ahmed, Nirbhay Borkar were Felicitated for their project of “Design and Development of Oxygen Concentrator”. This concentrator prototype was developed by the above mentioned final year students of our college guided by Prof Gaurish Samant, Head of Department- Prof Ajit Salunke, Principal - Dr. Neena Panandikar and Director-Rev Fr. Kinley DCruz.

This project was also shortlisted for Indian International Science Festival 2021 held at Panjim

Goa. The money spent for building the prototype was around Rs. 80,000 and the prototype was built using indigenously sourced parts. The cost will further reduce when mass produced, which will be far less than the ones available in the commercial market. This concentrator can be used by 2-3 patients simultaneously depending upon the necessity. It is also integrated with IOT so that the parameters such as oxygen purity and flow rate can be remotely monitored and the concentrator is well adapted to the Indian environmental condition.

Technophilia was hosted on Dec 16, 2021 by Technowings at Panjim Convention Centre. This event was open for all college students across Goa. Students from different engineering colleges participated. It was an event full of activity and enthusiasm, creativity, decision making, problem solving, interpersonal skills and teamwork. Various talks were organised such as panel discussion on "Job & business opportunities for IT in Goa", and other competitions like robo war, dance competition, wealth out of waste, IOT, project exhibition for the benefit of the students. Students really came up with wonderful ideas exploring their talents and skills. Winners from every category were awarded.

73rd Republic Day of India

73rd Republic Day of India was celebrated in the college premises on January 26, 2022. This short ceremony started in the presence of the Director – Rev. Fr. Kinley D'Cruz, who unfurled the National Flag. The staff members of our college 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 Rector – Rev. Fr. Paul D'Souza, Administrator – Rev. Fr. Ralin De Souza,



Registrar– Dr. Kala Nayak. Director – Rev. Fr. Kinley D'Cruz welcomed the teaching as well as non-teaching staff and his wise words he wished all a very happy Republic day and mentioned that “For the betterment of the society, one as an individual should start making a good change in our self, which will gradually make change in the society”. The function was coordinated by Dr. Avertano Barretto, Director of Physical Education & Sports.

DEPARTMENT OF CIVIL ENGINEERING

Webinar Series II – “Be Water Wise”

A webinar series “Be Water Wise” was organized by the Department of Civil Engineering in association with Indian Water Works Association, Goa Center from 9th October 2021 to 13th November 2021.

Lecture I was held on 9th October 2021 titled “Integrated water resources management: Special reference to global warming”. The resource person for the lecture was Dr. H.K. Ramaraju Professor and head department of Civil Engineering, Dayanand Sagar college of Engineering, Bangalore. 123 participants attended the lecture.

Lecture II was held on 23rd October 2021 titled “SDG 6 and its implementation in India”. The resource person for the lecture was Er. Rajendrakumar V Saraf, Managing Director, Viraj Envirozizing Pvt. Ltd, Pune. 117 participants attended the lecture.

Lecture III was held on 13th November 2021 title “Sustainable Water use in India” delivered by Dr. T Phani Madhavi, professor dept. of Civil Engg, Bapatla engg college, Bapatla, AP. 94 participants attended the lecture. The mode of conduct of the webinar series was on Microsoft teams platform and the participants for the same included students, Academicians and industry professionals. Asst. Prof. Satyesh kakodkar and Asst. Prof. Shruti Jambhale. from Civil Engg Dept, coordinated the webinar series.

Field visit to Goa Waste Management Corporation, Goa State Pollution Board and Zuari Bridge



The Faculty of Department of Civil Engineering went for a field trip on November 29, 2021 to Goa Waste Management Corporation, Goa Pollution Board and Zuari Bridge.

On reaching the Solid Waste Treatment Plant site at Saligao Mr. Shaukan Teli welcome the faculty and gave them a brief idea of the plant. He informed that “the plant was inaugurated in the year 2016 and the Government has issued a letter to Hindustan Waste Treatment Pvt Ltd to increase the capacity of the facility from existing 100 tonnes per day to 250 tonnes per day.” The faculty then proceeded to see the plant which has been planned with state-of-the-art modern facility based on mechanical biological treatment (MBt) process with proper segregation, recovery of recyclables and a bio-methanation process. Mr. Shaukan Teli concluded that currently the plant handles waste generated by 27 coastal village panchayats.

The faculty then visited the Goa State Pollution Board. The Chairman Mr. Ganesh Shetgaonkar said “the building was designed by Ar. Gerrard Da Cunha and the building mostly runs on natural ventilation”, he later stated also that the building roof has heat resistant glasses which keep the building cool throughout the day. The faculty later saw the State of the Art building which has a full-fledged Laboratory and office complex.

During the latter half of the day, the faculty was taken to the Zuari bridge site where Er. Dev Patil Senior Construction Manager and Er. Dyaneshwar Deshmukh Senior Manager (Planning and Billing) stated “the existing bridge is a composite structure of steel and concrete” they later explained the 4 lane section of the bridge in detail right from the bridge deck slab to the pylons and method of tendon prestressing. 13 faculty members attended the fieldvisit.

Entrepreneurship and Patent

The Department of Civil Engineering organized a lecture on October 27, 2021 on 'Entrepreneurship and Patent'. This lecture was organized to bridge the gap between the industry and academia. The speaker for the lecture was Mr. Jason Almeida, Commercial Pilot turned entrepreneur and the owner of the RAZE-ergonomic manual grass cutting tool. The talk was organized By Asst. Prof. Jeffrey Valadares who is engaging the Subject of 'Entrepreneurship and Intellectual Property Rights' as a core subject for the Third year Civil Engineering students.

Mr. Almeida began his lecture by introducing the class to the concept of pain points and made the students understand the driving force that led him to design a manual grass cutting tool, keeping in mind ergonomics. He also displayed the different prototypes he made in the process to obtain the final design and explained to the students why he made changes to the prototypes and how he finalized on the design.

Mr. Almeida explained to the students the process of patent as he had applied for patent for his design and the tool. He explained on what the different concepts in marketing are and how he plans to expand in the market with his product.

“Scaling up and mass production is always a dream of any startup” Mr. Almeida spoke about selling his product on e-commerce websites and the nitty-gritties involved with e-commerce.

At the end of the session the students were taken to the ground and a live demo of using the tool was

demonstrated. The number of students who attended the lecture was 71.

DEPARTMENT OF MECHANICAL ENGINEERING

One Day National Level Virtual Technical Event THERMOFEST-2021



The Department of Mechanical Engineering in association with ISHRAE Goa Chapter organized a One Day National Level Virtual Technical Event THERMOFEST-2021 on November 13, 2021. Under this virtual technical event there were three main technical events like Virtual Technical Paper Presentation, Virtual Technical Poster Presentation and Virtual Technical Quiz. The event started off with a brief virtual inaugural ceremony. The inaugural ceremony was graced by the Principal – DBCE -Dr. Neena Panandikar who appreciated the efforts taken by the ISHRAE DBCE Student Council Members and the event coordinators for organizing the event. She thanked all the participants and judges of the event for their participation in the event.

Director - Rev. Fr. Kinley D'Cruz highlighted the importance of such events mentioning that it will bring students out of stage fear and improve their communication skills by providing an opportunity to learn in detail about a core subject which is a part of curriculum and develop effective presentation skills.

President of ISHRAE Goa Chapter Prof. Sunil Shetye spoke about value addition and added to the statements made by Rev. Fr. Kinley D'Cruz about being well versed with current / modern technology. He also appreciated DBCE ISHRAE student chapter for their active involvement in organizing the virtual technical event.

Prof. Ajit Salunke- Head of Department of Mechanical Engineering thanked ISHRAE Goa Chapter for their continuous support and encouragement in organizing the event. Mr. Rajay Naik, President, ISHRAE DBCE Student Chapter and student of final year Mechanical Engineering proposed the vote of thanks. The virtual inaugural ceremony was hosted by Mr. Bradley Rodrigues, student of final year Mechanical Engineering

The Virtual Technical event THERMOFEST- 2021 started off with the first Virtual Technical Paper Presentation event. The theme given for the virtual paper presentation was technical papers in the field of HVAC, Heat Transfer, Renewable Energy Sources, Alternate fuels, Cryogenics etc. Participants from different states presented their papers on different topics like Solar thermal Power Plants, Thermoacoustic Refrigeration, Vertical axis wind turbine design and Cooling Tower Design.

The next event was on virtual technical poster presentation and the participants from different colleges presented their posters on projects, research, and innovative ideas.

The judges for the virtual technical paper and poster presentation were Prof. Vinod Kotebavi, Department of Mechanical Engineering, Amrita School of Engineering, Amrita Vishwa Vidyapeetham, Bangalore and Prof. Mayur Shetty. Both the judges were impressed by the active participation and the level of creativity shown by the participants.

The first prize for the virtual paper presentation event was bagged by Mr. Akash Pawar from our college and the second prize was bagged by Mr. Deepak Kumar Kushwaha from Government Engineering College, Bhavnagar.

For the virtual poster competition, the first prize was secured by Mr. Bharath. H. R from Maharaja Institute of Institution, Mysore and the second prize was bagged by Mr. Akash Pawar from our College.

In the afternoon session the virtual technical quiz event based on thermal domain subjects was held.

There were 25 participants from different states who went through a tough qualifying round held through Google form and the top 5 (Five) participants were selected for the actual quiz round. In the actual quiz round, there were mainly 3 (Three) rounds of MCQ type, Image based and Problem solving. These rounds went on for more than an hour with tough competition between the top 5 participants and finally arriving at the winners; Mr. Shikhare Akshay Prabhakar from Rajendra Mane College of Engineering achieving 1st prize and Mr. Jignesh Kumar Saroj from Government Engineering College Rajkot achieving 2nd prize. The winners of each of these events were presented with a cash prize and winning certificate.

It was an amazing experience conducting the event virtually and meeting with new people and the efforts of the entire team had paid off. The event was successfully conducted by the event coordinators Prof. Sharad Shanbhag, Prof. Pringle Alfonso and the ISHRAE Student Council Members and were supported and guided by Prof. Ajit Salunke, HOD Mechanical and Prof. Tanay Rege, Student Chair ISHRAE Goa Chapter.

National Level Technical Webinar

The Department of Mechanical Engineering organized a national level technical webinar on November 18, 2021. Honorable speaker for this event was Dr. Shekhar Deepak Singh, Professor & Research Scientist, Research Institute of Humanity and Nature (RIHN) – Japan. The webinar was themed “Can Technology alone solve the challenges of climate change? – Rethinking, training and operational paradigms for future Engineers”



Dr. Deepak Singh is working as a Researcher in the WG-1 of Project Aakash and is trying to help show the linkages of air pollution in northern parts of India with historically embedded socio-economic and environmental realities. Dr. Singh is an electrical engineer turned social scientist with a PhD in Science Policy from Jawaharlal Nehru University (JNU), New Delhi. He has over fifteen years of cumulative industrial, field and academic experience and his areas of interest are in Energy, Environment and Public Policy.

This talk mainly covered the following five aspects:

- (I) Understanding Science, Engineering and Technology.
- (II) Contextualize climate change and sustainable development in Global, National (Indian) and local context.
- (III) The role of Engineering Education and Engineers in such scenario.
- (IV) A case study related to above discussion.
- (V) Future prospects.

The webinar was presented in a very apt manner, providing students from various parts of the country a broader perspective about how they can not only build a bright future for themselves with the Engineering education but also a sustainable socio-economic environment at a global level to grow, keeping mother nature as healthy than ever.

It was an amazing experience conducting the event virtually and was attended by over 100 participants across the country paying off the efforts of the entire team. The event was successfully conducted by the event coordinators Professor Dr. H. K. Amarnath, Prof. Amey Patil and they were supported and guided by Prof. Ajit Salunke, Head of Department of Mechanical Engineering.

Webinar on Maintenance in Pharma Engineering (Audit Course in Maintenance Engineering)

The Department of Mechanical Engineering held its sixth webinar in Audit Course in Maintenance Engineering for the academic year 2021-2022, on December 8, 2021. The session was delivered by Mr. Prasad Adpaikar, Manager Engineering, Sanofi along with Mr. Nagraj Naik, Calibration in-charge,

Engineering, Sanofi and Mr. Rupesh Mopatkar, Engineering (Water Systems), Sanofi on “Maintenance in Pharma Engineering”.

The webinar was hosted via Zoom. 55 participants from among the Third year Mechanical Engineering students and Faculty from Department of Mechanical Engineering attended the webinar. The event was hosted and coordinated by Prof. Swapnil Ramani . The event was initiated by Prof. Swapnil who welcomed the participants and gave a brief introduction about the resource person.

Mr. Prasad started by talking about the different products manufactured by Sanofi and the generalised requirements of the products. He elucidated the criticality of maintaining certain psychrometric conditions in the pharmaceutical processes. He gave a general outline of the manufacturing processes and the machines utilized as well as the auxiliary systems used. He spoke about the different subsystems present in the machines used. Role of Engineers in the pharma industry was highlighted. The job of engineers for equipment purchase, installation, calibration & certifications, and eventual maintenance was also discussed. Mr. Adpaikar explained the different types of maintenance processes (Breakdown, Preventive & Predictive).

Mr. Nagraj spoke about the importance of calibration in the pharma industry. He spoke about the theory, techniques, and terminologies & methodology of calibration. The different standards & machines were covered. Mr. Nagraj stressed the need of calibration, saying that “The true effect of non-calibration comes during failure.”

Mr. Rupesh spoke on the water purification systems used in the pharma industry. He spoke about the different machinery utilized in the processes of water purification. He shared videos to show the principle and working of the systems utilized at Sanofi.

The talk was very interactive, with students posing questions displaying curiosity and a willingness to learn more about the topics covered.

DBCE installs FSAI Student Chapter Committee

2021-22



Our College organized an Inaugural program in which new office bearers were inducted into the FSAI (Fire & Safety Association of India) DBCE Student Chapter Committee 2021-22 virtually on December 11, 2021. The Chief Guest for the program was Shri Ashok Menon, Former Director, Directorate of Fire & Emergency Services, Goa. The other dignitaries Dr. Jennifer Lewis (President, FSAI Goa Chapter), Fr. Kinley D'Cruz (Director DBCE), Dr. Neena Panandikar (Principal, DBCE), Mr. Vinod Rodrigues (Secretary, FSAI Goa Chapter), Dr. Kala Nayak (Registrar, DBCE), Prof. Ajit Salunke (Head of Department of Mechanical Engineering) and Prof. Saurabh Raikar (Coordinator, FSAI DBCE Chapter) were also present at the Inaugural.

The incoming committee members include President- Mr. Omkar Mangesh Naik, Secretary- Mr. Eshan Lotlikar, Jt. Secretary- Ms. Ayisha Shaik, Treasurer- Mr. Ashish Ajay Mishra, CWC Mech- Mr. Aadarsh V. Chodankar, CWC ETC- Ms. Melissa Solomon, CWC Civil- Mr. Leonardo Vaz and CWC Comp- Mr. Ved Vithal Sukhathankar.

The function began with a brief report read by Mr. Tanmay Bhagat, outgoing President of FSAI DBCE Student Chapter 2020-21 regarding the activities conducted by the outgoing FSAI committee 2020-21. Prof. Ajit Salunke welcomed the guests on the occasion and mentioned the importance of technology in Fire Safety.

Dr. Neena Panandikar complimented the outgoing committee for the activities conducted in the field of Fire & Security and motivated students to organize a fire extinguisher training session at the institute. Fr. Kinley D'Cruz said that fire safety has to be learnt from a very young age and quoted 'Careless hands are fire brands. Be safe & be aware.' The President of

FSAI Goa Chapter Dr. Jennifer Lewis initiated the oath taking ceremony and inducted the new FSAI chapter committee 2021-22. The Chief Guest Shri Ashok Menon delivered a session on Disaster Management explaining its framework, committees, types and targets. He also mentioned that the college students can also help in managing disasters with proper training and the Institutes can think about having a training/ skill development course on safety in the curriculum.

The program ended with the vote of thanks proposed by the incoming FSAI Student Chapter president Mr. Omkar Naik.

Webinar on 5S AND TPM **(Audit Course in Maintenance Engineering)**

The Department of Mechanical Engineering held its third webinar in Audit Course in Maintenance Engineering for the academic year 2021-2022, on December 15, 2021. The session was delivered by Mr. Raymond Joseph, Assistant Professor, Mechanical Engineering Department, DBCE on "5S and TPM"

The webinar was hosted via Google meet. 55 participants from the Third year Mechanical Engineering students and Faculty from Department of Mechanical Engineering attended the webinar. The event was hosted and coordinated by Prof. Swapnil Ramani. The event was initiated by Prof. Swapnil Ramani who welcomed the participants and gave a brief introduction about the resource person.

Mr. Raymond started the session by talking about Manufacturing Scenario in India and around the world. He explained the importance of 5S in improving quality. Implementing 5S motivates employees to work better. He also spoke about Total Productive Maintenance. He explained 8 pillars of TPM and its importance in Industry.

Mr. Raymond's delivery on the subject was precise and to the point. He kept the entire session very interactive, ensuring to answer all questions as and when they arose. The students gained valuable knowledge in this area of engineering.

Chairman & President of Turbocam International, USA visits Don Bosco College of Engineering

Mr. Marian Noronha, Chairman & President, Turbocam International, USA visited our College along with Mr. Savio Carvalho, Director, Turbocam India Pvt. Ltd., on 18th January 2022. Fr Kinley D'Cruz, Director, Dr. Neena Panandikar, Principal, Prof Ajit Salunke, HOD Mechanical, Prof Gaurish M. Samant, Coordinator, CNC Centre, Mr. D. S. Prashant, CEO, FiiRE, Mr. Thejus Joseph, COO, FiiRE, officials from Turbocam India Pvt. Ltd. and staff members of Mechanical Department were also present on the occasion.



Turbocam International has supported the Mechanical Department to set up the CNC centre along with NSTEDB, DST, Govt. of India and FiiRE. The centre will be inaugurated shortly.

Mr. Noronha handed over the CNC Vertical Milling Machine to Fr. Kinley and said that “Turbocam International substantiated on the importance of the Center and that it will create an ecosystem of innovation and add to the hub for research and academia partnerships”. “In the world where lines between all fields of engineering are blurring, it will close the skill gap”, he added. He also presented a memento to the college for its dedicated service and ongoing commitment to local student community. Mr Savio applauded the college and said that “DBCE has historically contributed towards the technological development of the region and its

wonderful alumni base have been excelling in various spheres”. Appreciating the management and faculty for various initiatives, he encouraged the college to strengthen its connect with the industry network and seek support from them through various programmes. Fr. Kinley expressing gratitude towards the Almighty said that “Every member of the Don Bosco, Fatorda family has contributed towards the growth of the institute and it has scaled great heights in the last decade since its inception”. Dr. Panandikar appreciating the Turbocam management and mechanical faculty and staff for their efforts in realising the CNC centre said that “The centre will help to make students industry ready”.

This state-of-the-art center covers a total area of 1200 square feet and intends to align engineering education with the latest industry trends and practices, skill training, Industrial Consultancy in tool design and manufacturing of customised engineering jobs. In addition to the VMC, it has a CNC lathe, Mastercam software and the department plans to add more facilities like CMM, EDM etc. in the near future.

NPTEL Online Certification

Mr. Sharad M Shanbhag, Assistant Professor, Department of Mechanical Engineering successfully completed four (4) NPTEL online certification courses during the year Jan-Dec 2021 and was the all India topper in three (3) courses.

During the first semester from Jan-June 2021, he successfully completed two courses. The first course was on “Theory and Practice of Non Destructive Testing” offered by IIT, Madras. It was an 8 week online course from Jan-March 2021. He also appeared in the top 5 % of certified candidates in the online certification exam attaining a consolidated score of 84% and certified in the ELITE+ Silver category. The topics covered during the course were related to the different Non Destructive Testing techniques used in the industry.

The second course was “Non-Conventional Energy Resources” offered by IIT, Madras. It was a 12 week online course from Jan-April 2021. He appeared in the

online certification exam attaining a consolidated score of 70% and was certified in the Elite category. The topics covered in this course were related to exploring the different non-conventional energy sources to meet the energy demand of the world.

During the second semester from July-Dec 2021, he successfully completed two more courses. The third course was on “Product Design and Development” offered by IIT, Roorkee. It was a 4 week online course from July-August 2021 and he was the topper in the online certification exam attaining a consolidated score of 90% and was certified in the ELITE+ Gold category. The main objective of the course is to acquaint the learners/students with the practical knowledge regarding conceptualization, design and development of a new product.

The fourth course was on “Energy Conservation and Waste Heat Recovery” offered by IIT, Kharagpur from July-Oct 2021. He was the topper in the online certification exam attaining a consolidated score of 83% and was certified in the ELITE+ Silver category. The proposed course introduces the various methods of Waste Heat Recovery that has been employed by the industry to harness the energy stored in waste heat and use it for generation of additional electric power.

Prof. Suraj Marathe awarded PhD in Mechanical Engineering

Assistant Professor in the Department of Mechanical Engineering, Suraj Ravindra Marathe has been awarded Doctor of Philosophy (PhD) by Assam Don Bosco University, Guwahati, for his thesis on “Application of Six Sigma Methodology to increase the overall performance of Hydraulic Machinery”, He carried out his research work under the guidance of Dr. C.E. Quodros.



Dr. Suraj has published four research papers in international journals and two papers at an international conference as part of his research. According to Prof. Marathe, a lot of research work is being carried out in the area of manufacturing, inclusive of many processes and hydraulic systems configuration are in great demand. 'Six Sigma methodology and data analysis are the most important to maintain a quality control system that describes the performance of the hydraulic machinery. Hence, Six Sigma approach usually try to maximize both these characteristics. No concrete work was carried out for the hydraulic system on machine parameters”, said Marathe.

Dr. Suraj further added “As part of his research work, a study of different quality tools and techniques was used at different stages of the Six Sigma Methodology to improve the overall performance of the system. The major contribution of this research work is the design and development of the system parameters and their combinations to increase the overall performance of hydraulic machinery. Further, the optimal parameters are enhanced to address the hydraulic machinery technology which directly influences the quality of the final product in terms of Shapes, Size and Weight. The outcome of this research work have also been the development and implementation of a cooling system for the engineering tooling using simulation”. “It was my dream to become a medical doctor and completing this PhD has in a way compensated for my dream. Enrolling for a PhD was a dream come true since it was in my mind from 2013 when I started the second innings of my career in academics after working 10 years in the Industry”, he reiterated.

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

ThinkTech2k21

ThinkTech 2021- a National Level Project Idea competition was organized by the Final Year Project Quality Assurance Committee, Department of



Electronics & Telecommunication Engineering in association with Don Bosco Electronics and Telecommunication Society (DBEATS). This competition was organised for the first time with an objective to encourage students to exhibit their innovative ideas and showcase their technical skills not just in the state of Goa but all over the nation. The esteemed jury for the competition were Dr. Yogesh Agarwadkar- Director of InfiCorridor Solutions Pvt. Ltd. and Mr. Thejus Joseph, Chief Operating Officer (CEO) of FiIRE.

ThinkTech -2k21 commenced in the month of September with the submission of abstract proposals which went on till November 6, 2021. It received an overwhelming response of more than 75 entries with around 48 groups from colleges outside the state of Goa. Some of the themes floated were Intelligent Systems, E- Learning, Energy Harvesting, Urbanization and Rural Development, Healthcare, Virtual Communities, Environmental Monitoring, Disaster Management and e- Business Technologies. The competition saw 2 categories: the mini project idea category and the academic project idea category.

Some of the colleges who participated were Vidyalankar Institute of Technology- Mumbai, SRM Institute of Science and Technology- Tamil Nadu, KLE Institute Of Technology- Hubli, St. Joseph's Institute of Technology- Chennai, Shree L. R. Tiwari College of Engineering- Mumbai, The NorthCap University- Gurugram, Haryana, Goa Engineering College- Farmagudi, Padre Conceicao College of Engineering- Verna and Don Bosco Collge of Engg- Fatorda.

The valedictory function of ThinkTech 2k21 was held on November 27, 2021. The dignitaries present were, the judges for ThinkTech 2k21 – Dr.Yogesh Agarwadkar, Director of InfiCorridor Solutions

Pvt.Ltd. and Mr. Thejus Joseph, Chief Operating Officer, Forum for Innovation Incubation Research and Entrepreneurship(Fiire), Rev Fr.Kinley D'cruz-Director,DBCE , Dr. Neena Panandikar – Principal-DBCE, Dr. Kala Nayak-Registrar and HOD of Science and Humanities Department-DBCE, Mr. D. S. Prashant -CEO of Fiire and Dr. Varsha Turkar -HOD of ETC.

The event was compered by DBEATS Student Coordinators, Mr Maynard Gomes and Ms. Reeva Caldeira. The event commenced with the welcome address by Rev. Fr. Kinley D'Cruz.

Re. Fr. Kinley D'cruz concluded his address by quoting Patrick Lencioni “If you could get all the people in the organization rowing in the same direction, you could dominate any industry, in any market, against any competition, at any time”.

Later, Dr. Neena Panandikar addressed the gathering and appreciated the efforts put in by the students, coordinators and judges.

The Coordinator of ThinkTech 2k21, Prof. Anisha Cotta presented the report of ThinkTech 2k21 and acknowledged the support, motivation and guidance received to make the event a success. Later, the top shortlisted project ideas were presented from academic project and mini project idea category.

DBEATS Coordinators Mrs. Michelle Araujo e Viegas and Mr. Deron Rodrigues introduced the judges to the audience. The Judges then shared their experience in playing such a key role for the competition and declared the winners. Mr. Thejus Joseph said “With an idea, if you work alone, there is a certain limit to what you can achieve, but as a team you can achieve magic”.

The first place in the Academic Project Category was bagged by Shane Gomes, Yash Sinai Sukhtankar, Sayad Lamiha, Shubham Sutar and Raj Telang – Don Bosco College of Engineering, Goa for their project titled 'F.E.A.R.(Fire Extinguishing Land Rover)'. The first place in the Mini- Project Category was bagged by Bhairav Phukan, Keegan Colaco, Nilay Laddha and Unnati Mishra-SRM Institute of Science and Technology, Tamil Nadu for their project titled 'The Sustainable Store'.

The second and third place in Academic Project Category was secured by Padre Conceicao College of Engineering, Verna and KLE Institute of Technology, Hubli respectively. In the Mini-Project Category, the second and third place was awarded to Vidyalankar Institute of Technology, Mumbai and Don Bosco College of Engineering, Goa.

Dr. Varsha Turkar presented mementos to the Judges as a token of appreciation. The event concluded with the Vote of thanks by the Coordinator of the event, Ms. Priyanka Padiyar. The event was coordinated by Mrs. Anisha Cotta and Ms. Priyanka Padiyar.

“Circuit Simulation and Analysis using Proteus and TinkerCAD”

A one day workshop on “Circuit Simulation and Analysis using Proteus and TinkerCAD” was conducted for the Second year-Electronics & Telecommunications Engineering students on November 13, 2021 under DBEATS Student's Council, DBCE. The main objective of this workshop was to design, simulate and analyze electronic circuits using industry oriented software like Proteus and TinkerCAD.

Asst. Prof Yeshudas Muttu began the session by explaining the importance of software simulation and said “Software circuit implementation is a good practice before mounting it using hardware devices”. This was followed by simulation of various RC circuits, Amplifier, Automatic light detector circuit using LDR, etc. using Proteus software.



The afternoon session was conducted by Asst. Prof. Melba D'souza. In her session, she explained about various libraries involved in TinkerCAD simulation platform. Use of input and output devices, simulation of various analog circuits, implementation of logic gates and Boolean expressions were demonstrated using TinkerCad Circuits platform.

To encourage project based learning, the students were asked to work on a Mini project using both the softwares. It was a very good experience and the students showed a lot of interest in learning and working on the circuits during the workshop. The workshop was conducted by Asst. Prof. Melba D'souza and Asst. Prof. Yeshudas Muttu.

Two day Workshop on “Basics of Electrical”



A Two day workshop on “Basics of Electrical” was organized by the Department of Electronics and Telecommunication Engineering on December 15 & 17, 2021. The workshop was attended by 24 industry professionals from Chowgule and Company - Shipbuilding Division.

The first session on day 1 commenced with the session by Mr. Joseph Dias who gave a brief insight on “Electrical Safety at workplace”. The following sessions of the day were practical sessions in which the participants were divided into 3 batches.

The practical sessions were engaged by Mr. Joseph Dias, Mr. Roland Gomes, Mr. Jaiprakash Fadte. These sessions were a hands on experience of Electrical Wiring, usage of Multimeter, protective devices etc.

The second day of the workshop commenced with a session on “Sensors” by Mr. Joseph Dias. He explained the various sensors used in Industry. This

was followed by a practical session in which Mr. Joseph Dias, Mr. Roland Gomes, Mr. Jaiprakash Fadte covered the following topics: Generation of Electricity, choice of motors, Electrical Maintenance etc. For the last session an exam was conducted for the participants and feedback was taken. A very positive feedback was given by the participants. The course coordinator was Ms. Kimberly Morais

Cardiovascular Health Analysis Using Physiological Signals And Machine Learning – By Ms Nidhi Sawant

As part of the Alumni activity, a webinar on 'Cardiovascular Health Analysis Using Physiological Signals and Machine Learning', was held in online mode to enlighten the students on recent research in biomedical engineering. The webinar was held on the 07th January 2022 on Google meet platform. The resource person invited to deliver the talk was our very own alumni, Ms. Nidhi Sawant, who is currently a PhD scholar at NIT Goa. The audience comprised second year and third year ETC students.

Ms. Nidhi commenced the session by giving a brief introduction to what biomedical signal processing and its applications. She then went on to explain the block diagram of the process.

Ms. Nidhi explained that her research involved combination of signal processing and machine learning. She briefly touched upon the flowchart of how heart sound signal analysis is carried out and how the classification is made of whether the heart condition is normal or not. In her methodology, she presented the tools and algorithms used to arrive at the result. She also presented some results obtained from the procedure.

In conclusion, Ms. Nidhi advised students on where to find resources pertaining to biomedical data and offered to help in anyway if students were to take up projects in these areas. The event was very well received by all and the students had an opportunity to learn about the biomedical field.

Don Bosco College of Engineering secures 12th place for eSim Initiative

The FOSSEE project is a part of the National Mission on Education through Information and Communication Technology (ICT), Ministry of Education (MoE), Government of India. This project has been promoting the electronic circuit design skills of students in India through the home grown software, eSim. eSim is being used by the Electronics and Telecommunication Engineering Department of DBCE to aid various teaching activities. A successful project of FOSSEE undertaken with eSim is that of Circuit Simulation through collaborative contribution. This project allows people to design circuits using eSim, and offers them to the community. Ms. Kimberly Morais of Don Bosco College of Engineering has contributed to this activity by submitting 5 circuit simulations. With these submissions the college has attained a national ranking of 12. Don Bosco College of Engineering aims at further promoting Engineering education through FLOSS (Free Libera Open Source Software) tools.

DEPARTMENT OF COMPUTER ENGINEERING

Tech Mania 2021 Report

Department of Computer Engineering organized Tech Mania 2021- an annual project competition for the final year projects on November 12, 2021. The Tech fest was powered by Stanza Info Tech Pvt. Ltd. The herculean task of judging such an event was brilliantly done by the eminent technocrats namely Mr. Rohan Warty, Managing Director at Xerviz Wlobal who is also The Secretary, Goa Technology Association. and



Mr. Sohan Anvekar, Founder and CEO of YSM Media Labs Pvt. Ltd.

The formal function began with the arrival of the Chief Guest Mr. Atul Jadhav, Chairman - Confederation of Indian Industry (CII), Rev. Fr. Kinley D'cruz- Director, Dr. Neena Panandikar- Principal and Dr. Gaurang Patkar- Head of Department of Computer Engineering.

The Department's annual project "TechSeed 2021" was released at the hands of the Chief Guest and the other dignitaries during the function.

Addressing the gathering, Rev. Fr. Kinley D'Cruz said: "what makes a good project is passion and hard work. Tech Mania allowed the final year students to showcase their talent, skills and innovative ideas through their projects."

The Department of Computer Engineering with remarkable achievements such as receipt of project funding from various prestigious Institutions such as DRDO were felicitated. These include Dr. Vivek Jog, Prof. Amey Tilve, Prof. Christina Barretto and Prof. Sweta Morajkar Rane.

The third place was given to the project titled: 'Prediction of Malignancy in lung nodules' guided by Prof. Amrita Naik, Second place was given to the project titled: "Conversion of 2D engineering drawings into 3D models using Augmented Reality" guided by Prof. Amey Kerkar and the first place was awarded to the project titled: "Detection of traffic black spots using deep learning techniques."

The participants of this tech event also prepared short videos explaining their respective project titles, scope and implementation which were shown to the audience present for the prize distribution function. It really gave an insight on the efforts put in by the students to achieve the milestones in their final year project journey.

Mr. Atul Jadhav addressing the gathering spoke about his experience and the career path that he chose. He appreciated the Institute's efforts and guidance to inspire the students to inculcate

different innovative technical skills into their young aspiring minds. He ended his speech by asking the students to follow their dreams.

Prof. Amey Kerkar, Department Project coordinator who is also the Tech Mania 2k21 coordinator proposed the vote of thanks. The program ended with the felicitation of the proud winners of Tech Mania 2021.

Flutter - Design Beautiful Apps

C-CODES in association with the Alumni committee and Computer Engineering Department organized a webinar on 'Flutter - Design Beautiful Apps' on December 11, 2021. It was held via the Google Meet platform. The 2 resource persons for the day were Ms. Sahili Desai (DBCE Alumni - 2021 batch) and Mr. Shubham Gupta, Flutter Engineer. There were 50 Computer Engineering students attending the session. The session was divided into 2 parts:

The first part began by introducing Flutter, a popular and powerful tool in the field of app development. This open source framework works on Google's Dart a client optimized programming language and can be used to create multi-platform apps. After the introduction, the students were briefed on UI design on Flutter. This was followed by live coding examples.

The second part of the session was based on Firebase which is used for database management. All the popular features of Firebase were explained.

Mr. Shubham said that "The advance of technology is based on making it fit in so that you don't really even notice it, so it's part of everyday life."

The session, along with the live coding helped generate a lot of interest in the students and ended with a question and answer session.

The coordinators for the webinar were Prof. Merwyn D'Souza and Prof. Siya Naik. The student coordinators were Mr. Carson (TE Comp), Ms. Gauravi and Mr. Vadiraj (SE Comp).

Intellectual Property for Start-ups



C-CODES in association with the Department of Computer Engineering organised a webinar on “Intellectual Property for Start-ups”. The guest speaker was Mr. Tushar Gulati, IPR consultant from Aumirah IP. The webinar was held for the Third year Computer Engineering students through Google Meet on December 11, 2021. The faculty coordinators for the event were Dr. Gaurang Patkar, Prof. Merwyn D'Souza and Prof. Siya Naik.

Mr. Tushar began the talk by introducing the participants to different types of intellectual property rights like patents, industrial design and copyrights. The students were informed of the importance of these rights and the methods by which these could be obtained. He further explained how inventions require to be novel, have an inventive step, be industrially applicable in order to be considered to be granted a patent. Mr. Tushar guided the students on the Patent filing application process in India. He also highlighted the importance of filing for Intellectual Property Rights.

The session then touched IPRs for mobile application software which included trade marks for Name and Logo and Patents for ideas and AI based applications/software. The session concluded with a Q&A session.

Mr. Tushar said that “He who receives an idea from me, receives instruction himself without lessening mine”. Overall, the session was very informative, demonstrating real-life examples to provide a better insight on the topic.

SCIENCE AND HUMANITIES

9th SEEDS Council Induction Program

The installation of the members 'of the Students Association (SEEDS) 9th Council for the Academic Year 2021-2022 was held on January 29, 2022. The Chief Guest for this occasion was Mr. Rajendra Kerkar, an internationally renowned environmentalist.

The program commenced with a prayer song to mother earth, followed by the 'Nurturing of the Neem Plant which is regarded as a sacred gift of mother nature. It was symbolized by the watering of the plant by all the dignitaries, Rev. Fr. Kinley D'Cruz, Registrar Dr. Kala R. Nayak, and the SEEDS faculty coordinators Ms. Ulpa Waingankar, Ms Jyoti Lewis and Ms Grebian Alemao.

Thereafter, the newly elected SEEDS members were administered the oath by the HOD of Science and Humanities Department Dr. Kala R. Nayak.

SEEDS faculty coordinator Prof. Ulpa Waingankar welcomed the guests, the faculty, the new and the outgoing SEEDS members, the students and everyone present on the occasion. She thanked the out-going members for their zeal, cooperation and enthusiasm in making SEEDS 2020-2021 a success.

Dr. Neena Panandikar in her address appreciated the outgoing Council. She congratulated the new Council



Members and asked them to make a proper road map. The Principal also requested the SEEDS Committee to be a part of the plastic free scheme "Sensible Earth". Rev. Fr. Kinley D'Cruz welcomed the Chief Guest, Mr. Rajendra Kerkar, noted environmentalist and recipient of state, national, international awards. He exhorted the new Council to have a sense of responsibility and be focused. The Director, Fr. Kinley said that he liked the theme Prakriti, which means nature, also anything original or the primary. He said, "To be human we need to be connected to mother earth."

Dr. Kala Nayak appreciated the outgoing council and stated that the amount of effort put in was awesome. Quoting the smallest ETC class in number (19 students) last year who won the SEEDS trophy, she said, "Quantity does not matter, but quality work, dedication matters." She exhorted the new council to think out of the box and to have mini projects throughout the year.



Speaking on the theme Prakriti, the Chief Guest, Mr. Rajendra Kerkar, said, 'Prakriti is everything that surrounds us – our environment'. He said that it is high time that we thought about Prakriti. He exhorted the engineers to do so. He said, "It is the responsibility of the engineers to plan to save mother earth. " Engineers must be aware of the ecology, environment, culture, tradition, history, while planning.". The Chief Guest said, " Engineers must possess creativity planning." He said, "We need engineers with scientific temperament to think and plan about Goa." Mr. Rajendra Kerkar concluded by saying, " Prakriti gives us what we want and hence we need to respect nature."

The Inaugural Function came to a close with the declaration of results of the logo and tagline competition, followed by the vote of thanks.

TRAINING AND PLACEMENT

Session on Marine Engineer – Career Path

Training and Placement Cell and Department of Science & Humanities organized a session on Marine Engineer: Career Path on December 14, 2021 for First Year Mechanical Engineering Students. The main purpose of the event was to create awareness among students of the opportunities in Marine Engineering. The resource person for the session was Captain Norbert Rebello was introduced to the audience by Mr. Rio D'Mello. Captain Rebello began by reminding us that Marine Engineering is not an easy job and is not as glamorous as they show on social media. He added that at times they must work in engine rooms with temperatures as high as 45°C and the working hours range from 10 to 12 hours a day. They often had to stay away from home and had to work even through sickness. Apart from all these hardships, there was indeed good pay, but he added that job satisfaction holds priority over salary. He advised the students who were interested in joining the marine industry to take up placements on campus. Talking from experience he explained that it took him 3 years of applying to every accessible company to finally land a job.

He, then, moved on to the Q&A session. Of the many questions asked, some were, "What work do you have to do as a marine engineer?" He answered saying marine engineers must work with everything from machinery, sewage plant, main engine, cleaning tanks and so on. Another question asked by a student was, "What is the one thing you would like to change in the shipping industry?" And he replied saying that he would like to see a change in the



attitude of the people working in the shipping industry towards each other. He mentioned some of the institutions for Marine Engineering like IMS Goa and JESCO. He said that the best of companies are the ones which care for you and your well-being. Sharing one of his fond memories of his entire shipping career, he shared that "Once at the end of 1999, while I was working on the ship 'Erika', which was paying a very high salary it, unfortunately, sank and the entire crew was stranded in Yugoslavia for a year without any money for food and clothes. This episode taught me a great many things, the greatest lesson of which was how to survive when one has nothing." He said that this was his fondest memory as he learnt a lot from it like how to survive when you have nothing. He concluded by saying "Don't study to pass exams, study to gain knowledge". This informative event ended with the vote of thanks proposed by Mr. Aaron Rodrigues. Dr. Neena Panandikar expressed gratitude to Event Coordinators - Dr Kala Nayak, HOD, Science & Humanities and Avila Naik, Training and Placement Officer for taking the initiative to organize this session. She thanked the speaker Captain Norbert Rebello for a wonderful and interactive session.

ENTREPRENEURSHIP CELL

SAMBHAV – e-National Level Awareness Programme of Ministry of MSME, Govt of India

Entrepreneurship Cell organized SAMBHAV – e-National Level Awareness Programme of Ministry of MSME, Govt of India for the students at the Institute on Wednesday, November 17, 2021. Mr. Satyesh Kakodkar, Host and Event Coordinator welcomed MSME team, E-Cell faculty, and participants for this event. MSME team present virtually were Mr. D R Johari - Assistant Director, MSME; Mr. P. P. Kulkarni - Assistant Director, MSME; Ms. Deepa GL - Deputy Director and HOO, MSME DI Madgaon; Mrs. Mayuri Bhate – Entrepreneur, M/s Durvankur Enterprises and Mr. Joseph Mathew – Chairman, Madgaon Industries Association.

Ms. Deepa GL in her welcome address gave an overview of the Ministry of MSME and the

importance of the sector in the Indian economy. Mr. D R Johari moderated the session. He explained the importance of entrepreneurship and the way in which MSME does the handholding for the youth to promote entrepreneurship. Mr. P. P. Kulkarni instructed the participants to visit the website www.msme.gov.in for further information on all the schemes for young and budding entrepreneurs. He mentioned, "MSMEs play a crucial role in making youth job providers rather than job seekers." Mrs. Mayuri Bhate – Entrepreneur, M/s Durvankur Enterprises narrated her journey from being a Civil Engineer to an Entrepreneur and the manner in which MSME has provided all the necessary assistance towards schemes for raising funds. Later, three videos were screened for the participants. One was a motivational video on encouraging participants to be entrepreneurs, second was a short, animated documentary explaining different schemes of MSME ministry and third was on success stories of youth across different states of India.

The event concluded with the vote of thanks proposed by Mr. Satyesh Kakodkar, ECell Faculty Member and Event Coordinator who echoed the words of appreciation to MSME team, Rev. Fr. Kinley D'Cruz, Dr. Neena Panandikar, Mrs. Avila Naik – TPO & ECell Convener, ECell Faculty members and participants.

BOOT CAMP on Innovation by E-Cell and GSInC

E-Cell organized a virtual BOOT CAMP for E-Cell Students from First Year and Second Year of Engineering on November 27, 2021 via Zoom in collaboration with Goa State Innovation Council (GSInC). Mrs. Avila Naik, Training & Placement Officer and E-Cell Convener welcomed the speakers and thanked the E-Cell Faculty Team - Dr. Shreyas Simu, Mr. Manjunath Narwate, Mrs. Mathilda Colaco, Mr. Amey Shet Tilve, and Mr. Satyesh Kakodkar for their support towards the E-Cell activities. Mr. Sudip Faldesai, Project Officer at Goa State Innovation Council introduced the attendees to the well-equipped Prototyping Laboratory at Don Bosco College of Engineering Campus that the students at the college can avail of. He also mentioned about the schemes available for the different innovations put

forward by the students such as the scheme for Patent Filing under Virtual Innovation Register (VIR) that safeguards unique innovations and ideas, validating them with substantial incentives or schemes to provide aid too. He introduced the next dynamic speaker Ms. Divya Kakkar, Business Mindset Coach who enlightened the students about an idea that can be implemented someday into a new start-up. She mentioned some methods on how to generate ideas like defragmentation; disintermediation; by bridging the supply and demand gap with new combinations, by growing one's followers and she also mentioned an amazing idea which is to introduce globally successful ideas to a target media by changing certain details concerning one's target customers. She said, "You need to visualize your idea with your clients and see if their needs are met and if there is anything else you need to provide."

The next speaker Mr. Damodar Pai Patnekar, Co-founder - Bodhami narrated his entrepreneurial journey. Recently he received National Start-up Award, and his start-up is in the top 5 start-ups in Goa to get the seed grant of 10 lakhs. As a start-up from Goa, he has over 1200 counsellors and HRs working with over 25000 students in more than 250 schools. He explained that it is valuable to start small to keep the cost manageable. He said that he faced several problems but then he made it a point to study the market growth to understand market, he needed to approach his clients and their opinions and their feedbacks. He elaborated, "You need to find the right candidates for you and the right role fitment for the candidates." The main business focus areas are growth, cost reduction, agility, and customer engagement. One needs to know what the customers need and think about the future of the start-up. The Boot Camp truly helped the students think about the new and wide range of opportunities available for them in the future as job providers.

Mr. Krish Sharma, FE Civil in his vote of thanks expressed gratitude on behalf of the E-Cell to Mr. Sudip Faldesai and Goa State Innovation Council for organizing the BOOT CAMP at the college and for arranging sessions by amazing speakers.

Entrepreneurship: Idea to Startup session on Entrepreneurship 101

E-Cell organized a session via zoom on 10 December 2021 under the Audit Course Entrepreneurship: Idea to Startup by Dr. Poonam Ojha, Ph.D. in English, Founder - SAGA Enterprise which offers services in Spoken English and Professional Skills. Ms. Sharanya Ojha, budding entrepreneur too joined the session and provided inputs on highs and lows in the early phase of being entrepreneur.

Clarita Theresa Liane De Souza, FE Civil and E-Cell Student Member introduced the speaker Dr Poonam Ojha to the audience. In the interactive session, Dr. Poonam enlightened the students on how an idea can be implemented someday into a new startup. She informed the students about the importance of ideas and focused on how to deal with failures. She said, "An entrepreneur cannot stop when there is a hurdle but needs to deal with such hurdles." She covered the reasons for not being an entrepreneur and why one should be an entrepreneur.

She mentioned that it is important to convert an idea into business and it is essential to work forward to market the product in the right way so that it reaches the right customers that need the product. Clarita proposed the vote of thanks on behalf of the college.

This session truly helped the students think about the new and wide range of opportunities available for them in the future to provide to society. The session was coordinated by Avila Naik, TPO and E-Cell Convener.

E-Cell Installation and My Story – Interaction with Alumni Entrepreneurs

Don Bosco College of Engineering's E-Cell installed its first ever Core Committee on December 17, 2021. in the Seminar Hall at the institute. The comperes for the day were Mr. Aaron Rodrigues (SE Computer) and Ms. Clarita De Souza (FE Civil).

Welcoming the gathering, Principal Dr. Neena Panandikar highly appreciated the overwhelming number of students showing interest in entrepreneurship by enrolling themselves under the

EIS (Entrepreneurship: Idea to Startup) course under E-Cell (Entrepreneurship Cell). She also said, "Millions of problems might exist in our world, but students can find millions of solutions to each of these".

In his address, Director, Fr. Kinley D'Cruz acknowledged the crowd that had turned up for the afternoon. He spoke about the goals of the E-Cell and the plans to achieve the same. He mentioned about the new extension of FiiRE in Don Bosco Higher Secondary School in Panaji and stated, "Make it innovative, Make it creative, Make it big, Make it proud, Make it happen." Quoting Michael Dell, he said, "You don't have to be a genius or a visionary or even a college graduate to be successful. You just need a framework and a dream."

The newly installed E-Cell Core Committee members are:

Chairperson - Shubham Tendulkar (SE Computer), Secretary - Vadiraj Inamdar (SE Computer), Treasurer - Gauravi Kamat (SE Computer), Members - Mr. Jovan Pinto, Mr. Pranav Naik, Mr. Nikhil Rao (FE Computer), Mr. Krish Sharma (FE Civil), and Mr. Prathamesh Chandgadkar (FE Mechanical).

Chairperson, Shubham Tendulkar, in his address spoke about his experience in E-Cell and about the course-EIS and gave insights into the activities planned for the students. He thanked the E-Cell for introducing the EIS course for E-Cell members.

Next up was the 'Journey of E-Cell' by Avila Naik, TPO & E-Cell Convener where she gave a overview of the progress made by E-Cell since 2016. She also emphasized on the newest implementation of two major activities – My Story: Interaction with Alumni Entrepreneurs and EIS Course. She acknowledged all the E-Cell faculty coordinators over the years. She elaborated about the three-year certified audit EIS course where the students are trained towards an entrepreneurship mindset and their skills are upgraded in that direction.

Next part of the day was 'My Story': An insightful interactive session with alumni entrepreneurs moderated by Nishil Hoogar (SE Computer). The

Alumni Guest Speakers in the panel were Mr. Divyajeet Naik – Alumnus Batch 2018, Mechanical Engineering, Founder & Proprietor (DJN Creations); Mr. Noah Gracias – Alumnus Batch 2020, ETC Engineering, Proprietor (NG Autocare Goa, Un-Weed Goa, Sands & Waves Restaurant); Mr. Uddhav Uday Naik – Alumnus Batch 2016, Civil Engineering, Owner (Risaura – Engineers, Designers & Contractors, Co-Owner, Pinaki Builders and Developers); and Mr. Shравan Hegde – Alumnus, Batch 2015, Computer Engineering, Co-Founder & CTO (The Legal Capsule).

Thejus Joseph, COO, FiiRE addressed the E-Cell students on three points:

- Why it is best to start working on something you like, right now!
- How to do the same
- Ways in which FiiRE can help you further ahead

The winners of the Business Idea Competition were awarded at the Prize distribution ceremony.

1st Place: Sonic Drone Fire Extinguisher (Kezia Margaret Fernandes, Nicole Ana Fernandes, Nitya Pai)

2nd Place: Quarantined Chefs (Leo Dinar Barros, Isaiah Abner D' Costa, Vaughan Royston D'souza)

The speakers were presented with mementos. The vote of thanks was proposed by Manjunath Narwate, Faculty Event Coordinator. The event coordinated by Faculty E-Cell Coordinators – Amey Tilve, Mathilda Colaco, Satyesh Kakodkar, Manjunath Narwate, Dr Shreyas Simu and Avila Naik (E-Cell Convener), Student Core Committee and the volunteers.

Session on Qualities of an Entrepreneur

E-Cell of our College organized a session via Google Meet on January 08, 2021, under the Audit Course Entrepreneurship – Idea to Start-up by Sumeet Naik, Life Coach, Columnist and Motivational Speaker and Proprietor of Soi Easy, to the First Year E-Cell Students. Avila Naik, TPO and E-Cell Convener introduced the speaker to the audience.

In the interactive session, Sumeet Naik enlightened the students on how an idea can be implemented into

a new start-up. He mentioned how working in Media made him aware of the importance of social network. He discussed about various business ideas and venture opportunities in Goa. He spoke about Eco-Tourism having great potential in Goa. E-Cell students took this opportunity to clear their doubts and queries regarding their potential start-up ideas and business models.

One thing that he constantly stressed on, was the need of a 'Purpose', he said “we need a strong purpose, which will be our guiding light and fuel our passion”. He also suggested some books, which would help in expanding our imagination and broadening our perspective about life. Ved Sukhathankar, E-Cell Member proposed the vote of thanks on the behalf of E-Cell of the College.

This session truly helped the students think about the new and wide range of opportunities available for them in the future to provide to society. The session was coordinated by Avila Naik, E-Cell Faculty Member.

Session on Ideation

E-Cell of our College organized a session via Google Meet on January 15, 2021, under the Audit Course Entrepreneurship: Idea to Start-up by Ramchandra Prabhu Salgaonkar, Investment officer at Goa Investment Promotion Board with Government of Goa, on the topic Ideation to First Year E-Cell Students. Clarita De Souza, FE Civil and E-Cell Student Member introduced the speaker Ramchandra Prabhu Salgaonkar to the audience. In the interactive session, Mr. Ramchandra Salgaonkar enlightened the students on the current job opportunities in Goa and Entrepreneurship. He spoke about diversifying our ideas approach different audiences. He said, “Concept that works well in a particular place doesn't guarantee its success everywhere”. He stressed on 'Timing' as one of the most important factors to consider while working out the business model for a start-up. He also busted some myths about entrepreneurship and covered the reasons for not being an entrepreneur and why one should be an entrepreneur.

He made the students realise that they don't have to come up with something complex to make it BIG. He explained to us how we can touch on any problem and come up with a simple innovative idea. Clarita De Souza proposed the vote of thanks on behalf of E-Cell.

This session truly helped the students think about the new and wide range of opportunities available for them in the future to provide to society. The session was coordinated by Mathilda Colaco, E-Cell Faculty Member.

INSTITUTE INNOVATION COUNCIL

Exposure Visit to Preincubation Prototyping Lab

Institution Innovation Council organized an exposure visit to Preincubation Prototyping Lab, Makers Space and Design Centre at Goa State Innovation Council, on December 14, 2021. There were 46 participants for the visit which included students and faculty. Dr. Suraj Marathe, the faculty coordinator of the exposure visit, welcomed everyone and explained the purpose of IIC and its objectives. He then introduced the Project Officer. The visit was coordinated by Mr Sudip Faldesai, Project Officer, Goa State Innovation Council, Government of Goa.

The session commenced with a welcome note from Mr Sudp Faldessai, who introduced GSiNC contribution towards innovation with various schemes and training modules. He also explained the various schemes and opportunities provided by the government for nurturing their ideas related to startup and Innovation He elaborated on the teaching-learning process at GSiNC in pandemic times. The Prototyping Lab consists of 3D printing machines, Laser cutting, CNC machines and Soldering Station. Lab also introduced robotic hands-on and



coding training to school and college students.

The presentation was followed by a visit to the prototyping lab of GSinC. The Students and faculties were guided by the GSinC, Mr Siddharth Panjekar and Mr Sudip Faldessai, The LAB tour included visits to the Laser cutting station, Welding shop, 3D machine and CNC Shop.

A session was conducted to discuss various topics such as the role of students in the Startup and Innovation journey, how it will be beneficial to build up students ideas into reality. Various questions were then posed by the attendees which were then answered by the project officer Sudip Faldessai.

Finally, he concluded the session by mentioning the points about the importance of discipline, practice and innovation, and attitude towards quality. Mr Rajay Naik, the student from BE mechanical delivered the vote of thanks.

Webinar organized by IIC titled 'Story – Motivational Session by Successful entrepreneur / Startup founder: Mr Rajat Halarnekar and Mr Shivdas Gaad

Institution Innovation Council organized a webinar on “Story –Motivational Session by Successful entrepreneur / Startup founder”, on December 17, 2021. It was well-received by more than 100 participants of various colleges which included students, faculties and entrepreneurs. Dr Suraj Marathe, the faculty coordinator 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 speakers. The session was addressed by guest speakers Mr Rajat Halarnekar and Mr Shivdas Gaad, Co-Founder of Jatvam Abiyanntrix Pvt Ltd, Ponda Goa.

The session was very interactive. Mr Rajat 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 Rajat gave us 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. Mr Rajat and Mr Shivdass also spoke about the “opportunities and challenges that Covid-19 has created”. Mr Gaad encouraged us to follow our dreams of building our start-ups saying that we should not be afraid in taking the first step towards our goal. They also explain their journey from student to entrepreneur and how they have converted the college project model to market product.

The session ended with a Q&A session, allowing the participants to clarify their doubts about entrepreneurship. The vote of thanks was given by student coordinator Mr Bradley Rodrigues.

Environmental Concerns of Mining Operations and Applicability of Statutes: Goan Perspective

As part of the drive, a webinar on 'Environmental Concerns of Mining Operations and Applicability of Statutes: Goan Perspective', was held by Don Bosco College of Engineering- IIC, in online mode to enlighten the students on effect of mining on the ecosystem. The webinar was held on the December 2, 2021 on Google meet platform. The resource person invited to deliver the talk was Dr. Mohan R Girap, who is a Scientist at Goa State Pollution Control Board (GSPCB). The audience comprised students of our College. Also present were, the Chairman of GSPCB-Mr. Ganesh Shetgaonkar, IIC DBCE President-Prof Suraj Marathe, IIC committee and other faculty members.

Dr. Mohan commenced the session by stating that there were two ways in which mining is carried out: opencast and underground. He elaborated on the Iron ore supply chain and how the process is undertaken. In his presentation he mentioned that mining operations primarily falls under the purview of a number of Acts/Rules, some of them being: The Mines and Minerals Act, The Water Act, The Air Act etc.

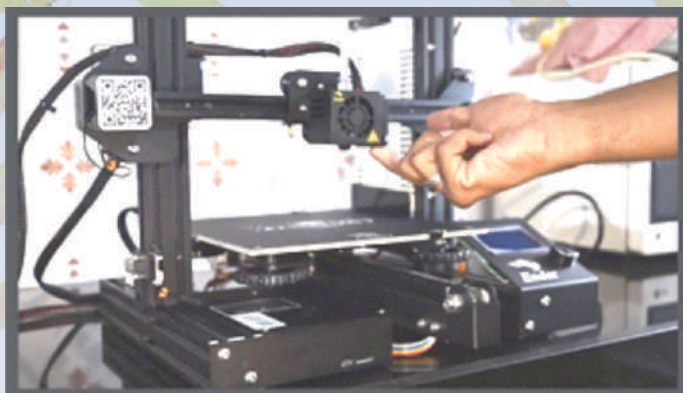
Dr. Mohan also briefed about the statutory requirements for new/renewal of existing mining leases. He spoke extensively on the salient issues connected with environmental management in mining industry. As part of pollution control, he raised awareness on the various control measures with regard to pollution.

The Chairman of GSPCB Mr. Ganesh Shetgaonkar highlighted on the significance of the day 2nd December. He said, “National Pollution Control Day is observed annually to commemorate those who lost their lives in The Bhopal Gas Tragedy in 1984”.

In conclusion, Dr. Mohan stressed on the importance of adopting an 'Integrated Approach' when it comes to complying with all the statutory requirements, in essence, State PCB, Forest Department, IBM etc.

The event was very well received by all and the students had an opportunity to learn about the effect that mining has on the environment.

Webinar organized by IIC titled 'My Story – Motivational Session by Successful innovator:3D Cake Making Machine: Dr. Suraj Marathe



Institution Innovation Council organized a webinar on “My Story –Motivational Session by Successful innovator”, on 10 January 2022. It was attended by more than 80 participants of the college which included students and faculty. The faculty coordinator Mr. Sanjeel Naik 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 speakers. The session was delivered by speaker Dr. Suraj Marathe -Assistant Professor at DBCE

The session started with Dr. Marathe telling about the concept generation and the various data collection methods that were required to generate the machine. The methodology and the work carried out in developing the prototype was explained by the speaker. A working video of the cake machine

was also demonstrated where the audience could see the different parts and mechanism of the machine. The speaker also encouraged the students to develop their own ideas and enhance their creativity.

The session ended with a Q&A session, allowing the participants to clarify their doubts about entrepreneurship. The vote of thanks was given by student coordinator Mr. Bradley Rodrigues.

“e-Symposium on Building Innovation and Entrepreneurial Ecosystem in Educational Institutions”

Under the Institution's Innovation Council as MIC Driven Activity for Quarter 2, the faculty and students of our College attended the online “e-Symposium on Building Innovation and Entrepreneurial Ecosystem in Educational Institutions” on Jan 11, 2022, as part of the 'National Innovation Week', Azadi Ka Amrit Mahotsav (AKAM) celebration from 10th – 16th Jan 2022, organized by the Ministry of Education, AICTE, and Ministry of Commerce and Industry (DPIIT) in collaboration with the Ministry of Culture, Govt. of India.

The innovation week celebration commenced on January 10, 2022 and was inaugurated by Minister of Commerce and Industry - Mr. Piyush Goyal to inaugurate the E- exhibition in which 75 innovation technology participated. On the January 11, 2022, e-Symposium on Building Innovation and Entrepreneurial Ecosystem in Educational Institutions was inaugurated by Minister of State for Ministry of Education and Ministry of External Affairs - Dr. Rajkumar Ranjan Singh and the Welcome Address was presented by, Dr. Anil Sahstrabudhe,



Chairman, AICTE. Shri Sridhar Vembu and Shri. Gautam, Founder, FarEye Pvt. Ltd were invited to give the Keynote Address. Panel Discussion on Innovation, Human Values, & Sustainability and Best Innovation and Start-up Practices in HEIs were held. More than 30 faculty and students of DBCE actively participated in these events.

Pitching Event for ideas Scouted & Linkage with Innovation Ambassadors for Mentorship Support

Don Bosco College of Engineering, Fatorda- Goa is one of the institutes to be selected for establishing MHRD – Institute Innovation Council (IIC). Ministry of Human Resource Development (MHRD), Govt. of India has established MHRD's Innovation Cell (MIC) (<https://www.mic.gov.in/>) to systematically foster the culture of Innovation amongst all Higher Education Institutions (HEIs) pan India. The primary mandate of MIC is to encourage, inspire and nurture young students by supporting them to work with new ideas while they are in formative years

As part of the drive, an IIC- Idea Pitching Competition titled “Pitching Event for ideas Scouted & Linkage with Innovation Ambassadors for Mentorship Support” was held in online mode to invite innovative ideas from young minds with the support of the institute innovation ambassadors. The competition was held on the 14th January 2022 on Google meet platform. Two eminent jury members, our innovation Ambassadors – Dr. Suraj Marathe, Assistant Professor Mechanical Engineering Department & President IIC-DBCE and Prof Satyesh Kakodkar, Assistant Professor Civil Engineering Department, DBCE were invited to judge the event. Among the audience were various faculty members and the student participants. This event helped evaluate the various innovative ideas presented by various teams with the support and mentorship of the innovation ambassadors.

Prof Swapnil Ramani, host and co-ordinator of the event welcomed the judges and introduced the teams. A total of 40 plus students and faculty members joined the meet and the participating teams presented fabulous innovative ideas with most of them exhibiting enormous potential for

start-ups. Before the teams pitched their respective ideas, they received guidance and training on setting up goals by Innovation Ambassadors. The Ambassadors mentored the teams to build up innovative ideas and set the context for challenges & opportunities using wonderfully done presentations. This was followed by the teams pitching their creative ideas to the jury members. A total of 8 teams from final year Engineering pitched their innovative ideas.

Students of the final year engineering, demonstrated good professional-presentation skills, with great innovative solutions to problems, that impressed the judges.

The finalists of the competition were Team 'Squat Analyser' - Design and fabrication of squat analyser for powerlifting sports, followed by team 'Try to science' - Oxygen Generation Through Pressure Swing Adsorption Method. and team 'FEAR' - FIRE EXTINGUISHING ACTION ROVER (F.E.A.R)

In conclusion, the event was a great success leaving all students very encouraged. This definitely will leave them motivated to explore more of Entrepreneurship towards having their own start-ups.

“Orientation Session on IIC 4.0 and Features”

Under the Institution's Innovation Council as MIC Driven Activity for Quarter 2, the faculty and students of College attended an online session on “Orientation Session on IIC 4.0 and Features” by Dipan Kumar Sahu, Assistant Innovation Director MoE Innovation Cell on 24th January 2022.

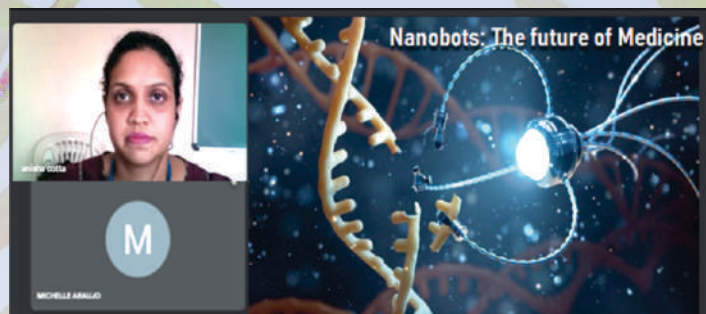
Orientation Session on IIC4.0 highlighted the achievements of IIC Institutes and also focussed on the new features on IIC 4.0 portal. Dipan Kumar Sahu welcome all the participants and appreciated the efforts of all IIC institutions for driving the innovation culture in the institute. Dipan Sahu explained the various programmes and their integration which AICTE and Innovation cell carries out under the IIC. National Innovation and Startup Policy (NISP) implementation in education institutes was explained in detail of their importance. FAQs that

arise while registration of IIC in the portal was well addressed by Dipan Kumar Sahu who explained with examples. The session was very fruitful and enriching as many suggestions were given, which can help us shape the future of our country's innovation status and make our country number one in the field of innovation.

A separate link was shared to discuss the Q & A session.

RESEARCH AND DEVELOPMENT

R&D Knowledge Sharing Session various medical applications of 3D printing & Nanobots: The future of medicine



The Department of Electronics and Telecommunication organized its monthly Knowledge Sharing Session, under the R&D cell on November 3, 2021. 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. Samantha Cardoso and the second session by Prof. Anisha Cotta.

Prof. Samantha Cardoso spoke about the various medical applications of 3D printing such as bioprinting tissues and organs, customized implants and prostheses, Anatomical Models for Surgical Preparation and as teaching aids in healthcare industry. She further elaborated on Organ printing using 3D printing technology to produce cells and cell-laden biomaterials. The process and the steps

involved were explained. The challenges faced due to the need for vascularization was also discussed in depth. The role of 3D printed customized implants and prostheses in enhancing the comfort of the patient was also discussed. The use of 3D-printed models for surgical preparation was also covered. To conclude with, she explained how simulating all surgical steps in advance using prototype models can help to foresee intra-operative complications.

Prof. Anisha Cotta spoke on Nanobots: The future of medicine. She introduced the topic saying “As technology advances, things don't always become bigger and better, objects also become smaller and faster.” She further listed the various types of Nanobots used in medicine. She elaborated on the applications of Nanobots in medicine. She spoke extensively on the application of Nanobots in Haematology and in reducing the time of haemostasis.

She explained the function of a respirocyte and how it may eventually have various application wherein RBC replacement may be considered. She elaborated on the scope of using Nanobots to cure cancer. Some of the techniques that she spoke upon for cancer treatment included the principle that Cancer cells can be considered as glucose hungry cells. Another included swarm algorithms, DNA origami. She further stressed on some of the difficulties faced by Nanobots and the ways and means devised of overcoming them. She concluded her session by saying “The next Big Thing is really Small”

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.

R & D Activity (Department of Science & Humanities)

Paper Review: A Study on Quality of Work Life: Key Elements & Its Implications

The R & D Cell (Department of Science & Humanities) had the activity on November 26, 2021. The resource person was Ms. Grebiana Alemao

In her session she reviewed the Paper by Asst. Prof. Shefali Srivastava and Asst. Prof. Rooma Kanpur (Axis Colleges). In modern era, it has been observed that stress management has become one of the most substantial concepts in the professional environment. It is also seen that working efficiency has degraded to some extent, as professionals are unable to maintain a balance between their personal and professional lives. This difference has made organizations formulate such policies that lead to better job performance which results in job satisfaction moreover employee satisfaction. This degree of satisfaction has been referred to as QUALITY OF WORK LIFE. Quality of work life is a process in an organization which enables its members at all levels to participate actively and effectively in shaping the organizational environment, methods and outcomes. This study focuses on the subjective matter of QWL i.e. its key elements like job security, job performance, employee satisfaction etc. Ms. Grebiam Alemao quoted "Never get so busy making a living that you forgot to make a life."

She concluded by giving a questionnaire to each one to assess oneself, followed by some tips to manage stress and improve quality of work life.

The session was coordinated by Mrs. Gladys Da Silva with the encouragement from Head of Department - Dr. Kala Nayak and was well attended by all staff.



Department of Mechanical Engineering **R&D Knowledge Sharing Session**

The Department of Mechanical Engineering held its monthly Knowledge Sharing Session, under the R&D cell on November 27, 2021. The first session was taken by Prof. Amey Patil and the second by Prof.

Pringle Alfanso on recent trends.

Prof. Amey Patil presented a technical talk titled 'Mathematical modelling for effective prediction of Li-ion battery thermal behaviour'. Prof. Amey began with the historical development of electric vehicles and the components associated with it. He further added, "Batteries are the key components in EVs for development and the challenge there lies in maintaining battery pack temperature and avoiding thermal runaway". He also shared some of his work in studying the thermal management system for batteries using analytical method to estimate temperature of Li-ion batteries. Prof. Amey explained the mathematical modelling towards finding solution to multidimensional, transient partial differential equation using the Green's function approach and integral transform technique.

Prof. Pringle Alfanso presented a technical talk on 'Compressor stage performance of turbocharger'. He began the presentation with an introduction to turbocharger and discussed his studies on the compressor performance investigated through CFD analysis. Explaining the significance of a compressor map, he compared CTT (Cummins Turbo Technologies) results with that of ANSYS for different models to obtain correlation with experimental tests. He made the final concluding remarks saying, "Over prediction of the performance curves for compressor is undesirable for such analysis" and also recommended an investigated model as best practice method for stage analysis.

The session was attended by teaching and technical support staff from the Department of Mechanical Engineering and coordinated by Prof. Harshad Pingulkar and Prof. Pringle Alfanso.

Department of Mechanical Engineering **R&D Knowledge Sharing Session on 'Projection of** **Lines: A Manufacturing Perspective'**

The Department of Mechanical Engineering held its monthly Knowledge Sharing Session, under the R&D cell on January 8, 2022. The session was engaged by Prof. Sachin Turi on recent trends.

Prof. Sachin Turi presented a technical talk titled 'Projection of Lines: A Manufacturing Perspective'. He began with an introduction to BIW (Body in White) representation which is how the different parts of a car are represented in a 3D system. He further discussed on the manufacturing setup of car panels that require cams to perform the operations like, punching shearing etc. A case study on this aspect was discussed on the piercing operation performed on sheet metal panels in the Generative Shape Design module of CATIA software. Prof. Sachin also showed how the projection of lines concept are useful towards creating a line inclined in space through an application developed by him. He concluded his talk saying, "A good major work in the automotive and aerospace industry lies in the area of developing required surfaces in CAD softwares for manufacture as everything is done using robotics."

The session was attended by teaching and technical support staff from the Department of Mechanical Engineering and coordinated by Prof. Harshad Pingulkar and Prof. Pringle Alfonso.

R&D session held on 'Treatment of Effluent using Low Cost Adsorbents' & 'Ground Penetrating Radar'

The Civil Engineering department had its ninth session under R&D cell on the 14th January 2022. The two speakers for this session were Asst. Prof. Prachi Dessai and Asst. Prof. Jeffrey Valadares. The former presented a study undertaken by her along with her project students, while the latter presented on a recent trend in Civil Engineering.

Prof. Prachi presented on 'Treatment of Effluent using Low Cost Adsorbents'. She addressed the major problems leading to waste water pollution viz. increasing population, industrialisation and untreated sewage. She highlighted on the need to treat the effluents to reduce the surface water and ground water sources and also save the aquatic environment. In her presentation, she discussed about adsorbents used previously by other researches to treat effluents, such as banana peels, fish scales, etc.

In her study, Prof. Prachi and her students used mango wood and teak wood powder to treat waste water samples collected from STP Shirvodem, Navelim in Goa. Varying amounts of these samples were added to the waste water and the waste water was later tested for BOD, COD, turbidity and pH. The result indicated that the mango wood had promising result in reducing the BOD, COD and turbidity.

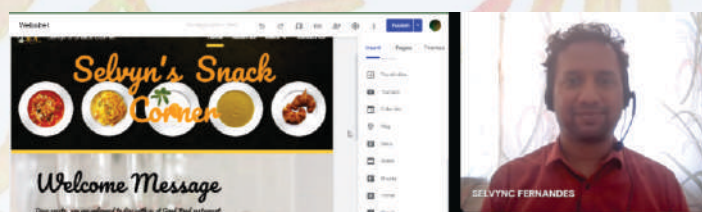
Prof. Jeffrey presented on 'Ground Penetrating Radar'. He explained the working of a ground penetrating radar (GPR). He gave a brief review of its applications in transportation engineering, archeological surveys, sub-structural investigations and other utilities such as underground cables and cavities.

R&D Knowledge Sharing Session "Build your own Website with Google"

The Department of Electronics and Telecommunication organized its monthly Knowledge Sharing Session, under the R&D cell on 14th January 2022 in the online mode through Goggle meet. The Knowledge Sharing Session initiative is conducted with a purpose to update Faculty members with the latest trends in Technology and Research.

The session was engaged by Prof. Selvyn Fernandes, on the topic, "Build your own Website with Google".

Prof. Selvyn started the hands on session to create a Website, which he named as "Selvyn's Snack Corner". He started with explaining the difference between a Static and Dynamic Website, and then went on to start a Website from Scratch. He told how the website was identified by a unique uniform resource locator (URL). He further showed how to add Headers, Footers and Navigation panes, Themes, Layouts and change Fonts to the website. He then focused on the Site content creation and keep related



information together by nesting pages, which appear as a subtopic of another page.

Prof. Selvyn also taught how to insert Logos, Favicon, Carousel and announcement banners on the website. He showed how to preview a new site before you publish it, and when you're ready, how to publish it only to your organization or to the world. Lastly he spoke about Google Analytics which allows users to identify trends and patterns in how visitors engage with their websites. He explained how setting up google analytics with google sites can enable data collection, analysis, monitoring, visualization, reporting and integration with other applications.

Everybody had great fun creating their own website. It was a fun filled, interesting and knowledgeable activity.

The event was encouraged by R&D Chair Dr. Varsha Turkar and coordinated by Prof. Flavia Leitao. The session was very informative & received good feedback from the audience.

R&D lecture on “Wireless Power Transmission” **Department of Science & Humanities**

Department of Science and Humanities held its monthly Knowledge Sharing Session, under R&D cell on January 8, through google meet. The session was engaged by Ms. Linda Albuquerque e Almeida

In her session, Ms. Linda explained the concept of wireless power transmission without using any type of the electrical conductor or wires. In her presentation the different methods of wireless transmission was discussed such as resonant inductive coupling, resonant capacity coupling, microwave, laser etc. The related history of wireless power transmission system and also the related developmental changes were discussed. She quoted that very soon WPT will be used everywhere and we will be free from all the mess of wires.

She highlighted the basic design, the merits and demerits, and the applications of wireless power transmission

The session was coordinated by Mrs. Gladys Da Silva with the encouragement from Head of Department – Dr. Kala Nayak and was well attended by all staff.

FiiRE (Forum for Innovation Incubation Research and Entrepreneurship)

November:

Forum for Innovation Incubation Research and Entrepreneurship (FiiRE) is selected by Department of Science and Technology, Government of India to implement two more flagship projects, NIDHI-PRAYAS AND NIDHI-EIR.

NIDHI-PRAYAS (Promoting and Accelerating Young and Aspiring Innovators and Startups, is a program launched as a concept that allows pre-incubation initiative, specifically which supports young innovators turn their ideas into proofs-of-concept. This scheme allows innovators to try their ideas without fear of failure, allowing them to reach a stage where the innovators/entrepreneurs have a ready product and the maximum grant support of rupees 10 lakh per project is provided through the program.

NIDHI - Entrepreneurs-in-Residence (EIR) programme is a fellowship programme introduced under NIDHI to inspire the best talents to be entrepreneurs, to minimise the risk involved in pursuing start-ups, and to partially set off their opportunity costs of high paying jobs. The NIDHI-EIR programme provides tremendous opportunities for innovative entrepreneurs to expand their networks and get critical feedback from industry experts on their ventures in order to promote their entrepreneurial career goals and aspirations. The support to the individual is upto rupees 30,000 per month for a year.

1. A Sarpanch meet was organised on the 13th of November 2021, to spread awareness, and knowledge about FiiRE and the work that FiiRE has been involved in and also about the different schemes that are available in Goa for innovation and R&D.

2. Vice Chancellor of Goa University, Professor Harilal Bhaskara Menon visited FiiRE on the 25th November 2021, and interacted with DBCE and FiiRE staff. He toured the facilities of FiiRE and was updated about the services and support provided by FiiRE to promote innovation and entrepreneurship in Goa.
3. Entrepreneurship and innovation being the focus at FiiRE, the students of Bachelors of Business Administration (BBA) from S. S. Dempo College of Commerce & Economics, Bambolim, Goa visited the facilities on 28th November 2021. The students interacted with the startups at FiiRE during the visit.

December:

1. 11th of December 2021 was marked by the visit of Dr Anita Gupta, Head & Advisor, NSTEBD, Department of Science and Technology, Government of India. Dr. Gupta interacted with the startups at the centre and appreciated the startups and FiiRE for the various initiatives taken to support the progress of startup ecosystem in the region.



2. Smt Usha Ramesh, General Manager NABARD and the team from NABARD, Goa visited FiiRE on December 2021. They interacted with the various startups at FiiRE to understand more about their companies and the work they do. Smt Usha offered support from NABARD to the startups particularly those related to food processing to scale.
3. On the 10th of December 2021, with Christmas around the corner and with the Holiday Spirit, FiiRE celebrated Christmas with its incubatees. With an aim to bring our incubatees into the Christmas spirit and an interactive mood, the facilities at FiiRE were decorated to represent the season.

4. On the 21st of December 2021, we inaugurated FiiREWork, the co-working wing of FiiRE incubator at Don Bosco College, Panjim. The facility was inaugurated at the auspicious hands of Mr. Jose Manuel de Noronha, Chairman, Goa Public Service Commission, and Chairman Goa State Innovation Council.



January:

1. The new year 2022 started with the event “Transfer of Technology”. 5 ideas were presented during the event attended by 26 participants including investors, co-founders and startups.
2. Shri Maraian B. Noronha, Chairman and President, TurboCam, visited the facilities at FiiRE.
3. The Oil and Natural Gas Corporation Limited (ONGC) Leadership, including Shri. Sanjeev Singhal, Executive director, Head of institute, Shri. Sanjay Kumar, General Manager (Fire Service), Shri. Puneet Khanna, Dy. Gen. Manager (Fire Services) and Shri. Sanjay Narvekar, Sr. HR Executive visited FiiRE.

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