



# Connections

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

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DON BOSCO COLLEGE OF ENGINEERING  
Fatorda Margao Goa



## CIVIL ENGINEERING DEPARTMENT

### Workshop on Handheld GPS

Department of civil engineering organized a one day hands on training for the students of second year Civil Engineering on 07<sup>th</sup> February 2018.

Resource person was Mr. Sachin Pardeshi, Assistant Manager CSG Survey, Almil Ltd. (Mumbai).



Students were briefed about the instrument and on field training was carried in batches of 20, where the students were expected to use the instrument individually to collect data, store and navigate. 73 students from Second Year attended the training sessions.

On 08<sup>th</sup> February 2018, students of Third year Civil engineering were also briefed about GPS devices and their application through a 1hour presentation by Mr Sachin Pardeshi. Total of 79 students attended the session.

Thereafter, the faculty members from the Department of Civil Engineering were also given an extensive training to use the device and its software interface of the instrument. A total of 10 faculty members attended this training.

### Talk on NDT for the Final Year Students

A talk on Non Destructive Techniques on concrete using Schmidt's Rebound Hammer and Ultrasonic Pulse Velocity (UPV) were demonstrated to the final year Civil Engineering students on 06<sup>th</sup> March 2018 by Mr. Celestan Braganza from the office of Shekhar Panandiker & Associates, consulting Structural Engineers & Architects.

Mr. Celestan explained to the students the working process of the digital rebound hammer, a device used to measure the elastic properties or strength of concrete, mainly surface hardness and penetration resistance. He explained the underlying principle of the device which records the rebound of an elastic mass against which it strikes. He also stated that the rebound depends on the hardness of the surface. He demonstrated the method of obtaining the reading from the device and also showed how the reading from the hammer could be transferred to software for better interpretation of the data.

Later he described the Ultrasonic Pulse velocity instrument- a insitu, non-destructive test conducted to assess the homogeneity and integrity of concrete. He explained that in this test, the strength and quality of concrete or rock is assessed by measuring the velocity of an ultrasonic pulse passing through a concrete structure or natural rock formation. He also clearly showed the calibration of the instrument for the testing of concrete member by using the different methods of UPV namely-direct, indirect and semi direct. He mentioned how this test helps in detecting the presence of cracks, voids or other internal imperfections in concrete.

### Field Visit to the Bridge Construction Site Across River Zuari and River Mandovi

The Department of Civil Engineering, Don Bosco College of Engineering, Fatorda organized a field visit for the Civil Engineering Faculty on 10<sup>th</sup> February 2018 to the Zuari Bridge and Mandovi Bridge construction site as part of faculty development programme.

The Zuari Bridge is a composite bridge which connects North and South Goa, and carries the NH 66



over the tidal part of the River Zuari. The eight lane bridge serves as an expressway between Goa's two districts and it is also proposed to have an observatory or viewing tower and a small coffee shop. On visiting the Zuari site we met Mr. Shankar Palaniappan -Project Head Zuari and Mr. Rakesh-Sr. Engineer Package B of Dilip Buildcon Pvt Limited who made aware that the bridge construction is being done in 3 packages. The marine portion will be 640mtr long and is cable stayed and the total length including approaches will be 13 km which will be from Bambolim Cross to Verna. The bridge is supposed to be the second largest cable stayed bridge in India. We got to see the piling work done for the pylons and also got to see the temporary casting yard set up near Goa Velha Bypass.

In the afternoon half we visited the Mandovi bridge site where Mr. Abhiraj Chopdekar –Sr. Engineer SN Bhohe & Associates explained that the new cable stayed bridge will be constructed between the two parallel existing bridges and will have a span of 5km and would be 15 m higher than the existing bridge. He explained that the main bridge is 600m in length with two end spans of 75m and three interior spans of 150m. The main bridge superstructure consists of 21m wide externally strutted segmented concrete box girder with dual carriageway of 2 x 8.5m with 3m wide median at the centre. The box girder will be supported by stay cables which will be anchored in the pylon and stressed from box girder bottom. We also got to see how the precast bridge units were connected and glued together by jacks. A total of 12 faculty members attended the field trip.

### **Field Trip to Luis Menezes Braganza Pereira House in Chandor**

A field trip was organized for SE Civil students on 15<sup>th</sup> March 2018. The students were taken to the Luis Menezes Braganza Pereira house in Chandor, Salcete-Goa. The house is over 450 years old and has priceless artifacts from colonial era as well as excellent Portuguese architecture. It also has a chapel containing a relic of St. Francis Xavier.

The students were given a tour of the house by Mrs. Aureia Alemao Pereira Braganza and were informed



about how the house was constructed in three phases. She said the house is load bearing with walls having thickness upto even 1m in some places. The entire floor of the house rests on wooden joists which transfer their load to the walls. Students were shown the joists too which are visible from ground floor. The students were enlightened about various problems affecting the structure and what difficulties are encountered in maintaining a building like this. This field trip gave an insight to the students about the various planning aspects, construction materials and methods adopted in a load bearing structure.

A total of 47 students were present for the trip. The students were accompanied by Prof. Jeffrey Valaderes, Prof. Nadya Baracho and Prof. Madhura Naik.

### **Talk on Post Tensioning (PT)**

A talk on Post-tensioning of concrete members was delivered to the final year Civil Engineering on 07<sup>th</sup> March 2018 by Er. Shekhar Panandikar- Consultant of Shekhar Panandikar & Associates and Er. Arvind Nayak.

Er. Shekhar Panandikar introduced the concept of post tension of concrete to the students in the beginning of the session stating that Post-tensioning is a method of reinforcing (strengthening) concrete or other materials with high-strength steel strands or bars, typically referred to as tendons. He then spoke about the various places where this method could be used like office and apartment buildings, parking structures, slabs-on-ground, bridges, sports stadiums etc. He explained the various places where they have done this method greatly especially, in cases where

conventional construction that would otherwise be impossible either due to site constraints or architectural requirements. Later Er. Arvind Nayak presented a case study of an office building at Verna where they have done Post tensioning of the slabs to achieve thinner slabs with longer spans and fewer columns. He explained the full process of how they carried out this PT operation on site for the slabs. He also stated the benefits of using PT over standard reinforcing steel (rebars) like Faster Installation, Minimizes and Controls Cracking, Controls deflections, material saving etc.

## Advanced AutoCAD for TE Civil Students

AutoCAD is a 2-D and 3-D computer-aided drafting software application used in architecture, construction, and manufacturing to assist in the preparation of blueprints and other engineering plans. AutoCAD plays an important role for making efficient civil engineering drawing, hence an advanced AutoCAD training course was organized for the students of third year Civil Engineering on 09<sup>th</sup> March 2018. The resource person for the training programme was Mr. Celestan Braganza a Civil Engineer and expert in AutoCAD from Shekhar Panandiker & Associates. In this course, Mr. Celestan in his presentation explained the definition and properties of the layer command in AutoCAD. He also emphasized the importance of layers in drawing architectural and electric drawings etc. The students also got hands on practice on the layer and block command.



The basic AutoCAD course for these interested students was conducted in their earlier semester by Asst. Prof. Shruti Desai and Asst. Prof. Starina Dias, wherein the basic commands like draw, modify toolbars were taught to them. These courses are

provided to the students for their all-round development.

## Two day's Intercollegiate Technical fest - "Sankriti 2018" along with Construction Expo and Job Fair

The Civil Engineering Students Association (CESA) in association with ICI Students chapter DBCE, organized Two day's Technical Fest "SANKRITI 2018" along with a Construction Expo on 22<sup>nd</sup> and 23<sup>rd</sup> March 2018 and a Job Fair on 24<sup>th</sup> March 2018. This was the first endeavor where the Construction Expo and Job Fair were organized with the two day's Technical Fest.



The event was inaugurated by the Chief Guest Shri. Sudin Dhavalikar, (Hon. Minister of Public Works Department and Transportation) and Guest of Honour Dr. Jagannath (Desh) Prabhudessai, President of CREDAI-GOIA. Speaking on the occasion Shri. Sudin Dhavalikar advised the students that industry exposure is a must for them apart from theoretical knowledge as it strengthens their career path. He mentioned that Civil Engineering is the backbone of the state and water supply engineering is an emerging field. He also pointed out that Goa is the only state in India which supplies filtered drinking water to 95 % of its population. He concluded by appealing to the students to work dedicatedly for the society. This intercollegiate technical fest had a number of events where the students showcased their innovative ideas and skillful talents in the various events that were organized, like Concrete Mix Design, Truss design, Aakriti (AutoCAD), Battle of Words (Debate), Pixels (Photography), Brain Busters (Quiz) etc. There were also a number of fun activities like Tug of War, controlled cricket and flash events



like sell your product and screenshot in which students participated with great enthusiasm.

Along with "SANKRITI 2018", the Civil Construction Expo was organized where various leading companies displayed their products which also drew a great crowd. These companies highlighted the recent developments in the field of Civil Engineering. In all there were 18 company stalls which had their products to sell right from the foundation to lighting and interior decoration. Stalls like JSW Steels, Green Goa Realtors, ACC Cemets, AR - Mine's Industries, RMC Readymix, Hindustan Pavers, MC- Bauchemie, Syska LED, Shakti Water Tanks, Rainbow Solar Group and Deco Deals are some of the companies that participated for the expo. Speaking on expo Dr. Desh Prabhudesai said that this expo would help the students to get knowledge of new material in the field of the construction industry.

On 24<sup>th</sup> March, the valedictory function of "SANKRITI 2018" and Inaugural of the Job Fair was organised, where the Chief Guest for the function was Er. Sidhart Kuncalienkar (Chirman of EDC and Vice-Chairman of GSIDC) and Guest of Honour was Er. Chandrashekar Prabhudesai (Chairman ICI). Also



present for the function were Rev Fr. Kinley D'Cruz (Director), Rev Fr. Paul D'Souza (Rector), Dr. Neena Panandikar (Principal) and Prof. Annapurna Sakhardande (HCED). For the valedictory function the winners and runners-up students were presented with certificates and cash prizes. The overall winners of "SANKRITI 2018" were Goa College of Engineering, Farmagudi.

The job fair was organized for half a day by the Department of Civil Engineering during its annual technical event "SANKRITI 2018". The job fair was



aimed at providing awareness of the various job profiles, companies and projects being undertaken in Goa. The fair provided the participating students the opportunities to interact with companies and get suitable jobs. Upgrade LLP, Talak Constructions, J. Gaonkar & Associates, Alcon Constructions, Olavo Carvalho & Associates, Devang Constructions, IMS CAD/CAM, A R Mines, Mulyakan & Galaxy Associates, Raj Group, Indage Developers & Constructions and RMC Readymix were some of the companies that participated in the job fair. A total of 184 students from Goa, Karwar, Belgaum and Bangalore registered and attended the job fair.

The faculty coordinators of SANKRITI 2018 were Prof. Jeffrey Valadares, Prof. B.R Anirudh, and Prof. Prachi Dessai. Also Prof. Satyesh Kakodkar was the faculty coordinator of Construction Expo.

### Talk on "Goa Land Development and Building Construction Regulations"

The Civil Engineering Department conducted a talk on "Goa land development and Building construction

Regulations” on 13<sup>th</sup> April, 2018. This talk was conducted as a part of academic enhancement primarily for Second year students.



Consulting Civil Engineer Vinayak Verenkar, was invited to deliver the talk. Ms. Akshata Fatarpekar welcomed the guest with a bouquet of flowers.

Er. Vinay Verenkar threw light on the basic concepts of PDA regulations. He covered various topics like number of Districts in Goa, different taluka's in each district, stages of approval to obtain development permission, different types of zones, coastal regulation zones, etc. Besides that, he spoke about the practical applications of building bye-laws according to different zones. Furthermore, Er. Verenkar informed the students about the procedure for approval of their plans for construction. His lecture was followed by a question answer session in which the students participated enthusiastically.

The talk ended with a note of appreciation by Prof. Satyesh Kakodkar. A token of gratitude was presented to Engineer Vinay Verenkar by Lizbeth (Class Representative-SE CIVIL) on behalf of the students and the faculty of Don Bosco College of Engineering.

### TE Civil Students Visit to OPA Water Treatment Plant

The Civil Engineering Department organized a field trip for the Third year Civil Engineering students to the OPA Water Treatment Plant at Khandepar, Ponda on 13<sup>th</sup> April 2018.

The Opa water works is situated in Khandepar village of Ponda taluka. This water works supplies water by force of gravity to almost 95% of the area of Ponda and Tiswadi talukas which includes areas like Panjim,

Bambolim, Taleigao, Ribandar and whole of Ponda taluka.

The OPA Water Treatment Plant is the first treatment plant in Goa that was commissioned in the year 1967. The Opa weir was constructed in 1972 to raise the water level and also store water during the dry period from March to June. The main source of Opa water works is from the river Khandepar which originates in Karnataka and flows through Dudhsagar water fall. The other tributary which joins the river is Kalem river which flows from Sanguem.

The water works has taken into consideration the demand and supply of water which has increased over the years due to increase in number of consumers. The students saw the different units of the water treatment plant which included the cascading aeration, sedimentation, filtering beds and the chlorination unit. The plant capacity is 1.6 MGD. The students were accompanied by Asst. Prof. Starina Dias and Asst. Prof. Prachi Desai.

### Topper in the Subject of Geotechnical Engineering I & II of Goa University Exams for Academic year 2016-17

Mr. Alam Maqsood was felicitated for scoring the highest marks in the Subject of Geotechnical Engineering I & II



I & II at the Goa University Examination for the Academic Year 2016-17.

He was felicitated by the Indian Geotechnical Society-Goa Chapter in association with the Civil Engineering Department of Goa Engineering college, Farmagudi on 13<sup>th</sup> April 2018.

### Dr. Shwetha Prasanna

1. Dr. Shwetha Prasanna published a paper entitled “Analysis of hydraulic properties of Indian forest soil” in a Journal of Civil Engineering and

Construction, Vol. 07, No.01, 12-18, 2018, ISSN 2051-7769. That paper was presented at the "4th Technical Congress on Resources, Environment and Engineering" (CREE 2017) held during 29-30<sup>th</sup> December 2017 in Hong Kong.

2. Dr. Shwetha Prasanna presented a paper entitled "Utilization of waste plastic shreds for stabilization of a soil" in the International Symposium on Geotechnics of Transportation Infrastructure, ISGTI-2018, held at Indian Institute of Technology, Delhi, India, during 7-8<sup>th</sup> April 2018.
3. Vibha Gawas, Ankita Amonkar, Dattaraj Kambli, Arjun Massordekar, and Dr. Shwetha Prasanna presented a paper entitled "Soil Stabilization using Sugarcane Straw Ash" in the National Conference on Challenges in Geotechnical Investigations, Analysis, Design and Construction of Foundations, held at GEC Farmagudi, Goa, India, during 13-14<sup>th</sup> April, 2018.

## MECHANICAL ENGINEERING DEPARTMENT

### Mechanical Students Excel in IGNIX 2018

The students of Second Year Mechanical Engineering secured the Second and Third place in the two day national level workshop "IGNIX" organized by Jain College of Engineering, Belagavi held on the 24<sup>th</sup> and 25<sup>th</sup> February 2018. The workshop attracted participation of budding mechanical engineering students from colleges across the country.

Adrian D'Souza, Leif Fernandes, Sherwin Dourado, Noah Gomes, Hubert Rui de Barros, Johan Godinho, Gerhard Lourenco, and Reuben Gouveia participated in the workshop. The workshop was focused on creating awareness in the participants about automobile engines assembly and disassembly. The participants were also given hands on experience on two and four wheeler engines, a session on making of a Go-Kart and also an insight about power steering system. They were divided into groups and asked to disassemble and assemble an engine. Based on the time taken to accomplish the task, winners were decided. Students were later asked questions about the various parts of the engine.

The resource persons were industrial experts and

technicians from various automobile companies such as Ford, Tata Motors, Hyundai, Honda, Bajaj, Hero Motors, etc. who explained the various parts of the engine in detail.

### Seminar on Robotics at School of Symbiosis, Shiroda

MecHeads, Mechanical students club formed under MESH conducted a Seminar on "Introduction to Robotics" for the students of Shivgram Education Society's School of Symbiosis, Shiroda on 3<sup>rd</sup> March 2018. This club is formed to organize community development programs and also assist the department in training students in the areas like Robotics, Automation, Computer Aided Drafting and Modeling. The seminar was organized by the ex-student association under the leadership of Mr. Kishan Mangeshkar a 2<sup>nd</sup> year Civil Engineering student from DBCE. The resource persons were Mr. Mohammad Faraz Khan, Mr. Harshad Kavalekar, Mr. Yatish Danageri and Mr. Rohan Naik Borker, all students from third year Mechanical Engineering and they were mentored by Prof. Ishan Kossambe.

The seminar mainly focused on encouraging school children in the field of robotics and automation. The students were introduced to different types of robots and their applications. Mr. Faraz and Mr. Yatish familiarized the student's about different parts and equipment required to build robots. Live demonstration of bots like line follower, obstacle detection & accelerometer gyro control were shown to the students.

During the valedictory function the Headmaster of the school, Mr. Benjamin Rocha congratulated the team for taking the initiative and organizing the workshop. He also motivated the school students to take up this field.

### One Day Workshop on "Industrial Safety"

The Department of Mechanical Engineering organized a one day workshop on "Industrial Safety" in association with DBCE Student's Chapter of Institution of Engineers (India) and ONGC, Goa (IPSHEM) for Second Year students of Mechanical Engineering on 24<sup>th</sup> March 2018. In all 62 students and



4 lab assistants attended the workshop.

In the inaugural function, the Principal -Dr. Neena Panandikar, appreciated the Mechanical Department for consistently organizing Workshops and expert talks which address the gaps in the curriculum. She also highlighted the importance of following proper safety protocols in the industry. Director- Rev Fr. Kinley D'Cruz, recalled how in the past safety procedures and First Aid in any industry were given utmost importance but over time have been neglected especially in India .He pointed out that in foreign countries like Australia knowledge of safety precautions is given prime importance in selecting a candidate for jobs in Industry. He added that before working on any job in industry life should be kept safe first. Prof. Ajit Salunke, HOD- Mechanical and Dr. H.K. Amarnath, Professor were also present.

Mr. Suhas Naik, Recognised OSH Auditor , delivered sessions on "Basic Industrial Safety" and "Machinery Guarding". He started his session by highlighting the negligence towards safety in India. He explained in detail the various hazards that are present in Mechanical Industries like Physical, Electrical, Fire and explosives etc. through illustrations, photos and videos. He then explained the damage that can be caused due to these hazards and also the safety



measures to be followed to prevent accidents. He ended his sessions by talking about the different types of guards installed around the machinery in industries to provide safe working conditions for the operators. The next session was delivered by Dr. Jovito Lopez, Recognised Medical Practitioner on "Introduction to First Aid and CPR". He spoke about the WHO survey which cited that heart attacks will be the most common cause of death by 2020.

He talked about the golden hour to save a life of a person who suffers from a heart attack. He explained about the Cardiac Massage, Automated External Defibrillator and other emergency measures in case of heart attacks. He gave a live demonstration to the students on how to conduct a "AVPU" Test for emergency first aid.

The third session was conducted by Mr. J.K. Singh , Manager, Fire Services , ONGC , Goa (IPSHEM) on Fire Prevention and Protection. He talked about the fire safety precautions to be followed in high rise buildings. He explained the various classes of fire, fire tetrahedron and fire extinguishers. He discussed in detail the use of the appropriate fire extinguisher for the Classes of fire. This was followed by a live demo on fire fighting conducted by ONGC for the students. The coordinators for the workshop were Prof. Swapnil Ramani and Prof. Sanjeel Naik

### **Talk on Go – Kart Design and Development – Journey Through Pictures**

The Department of Mechanical Engineering organized a talk on "Go – Kart Design and Development – Journey through Pictures" in association with DBCE collegiate club of SAE India, Western Section. The talk was delivered to the Second Year students of Mechanical Engineering on 28<sup>th</sup> April 2018 by Mr. Anant Shirodkar, Head of Eazydiner Business in Goa.

Mr. Anant, who holds a Bachelor's Degree in Mechanical Engineering, explained various aspects of participating in Go – Kart competitions. He shed light on design of chassis, use of cross members and their importance, the engine and fuel tank specifications. His kart used Ackerman steering mechanism which

helped in easy maneuverability. He also showcased the various innovations that their team incorporated into kart designing like electronic gear shifting, adjustable steering variables, brake biasing etc. He stressed that the overall weight of the car has effect on dynamics of the vehicle.

He expressed the importance of safety in the event. Apart from the riding gears, Mr. Shirodkar apprised about safety features like seat belt ignition interlock system, kill switches, the function of catch can etc. He briefed the students about the guidelines the vehicle, drivers and the team should abide for the competition. Mr. Anant described various winning strategies and encouraged students to participate in such events as they attract placement opportunities for the participants. He also elucidated on availing sponsorship for building the go - kart to requirements.

Prof. Ajit Salunke, HOD of Mechanical Engineering, presented Mr. Anant with a token of appreciation. The talk was coordinated by Asst. Prof. Raymond Joseph and Asst. Prof. Siddu Biradar.

## **ELECTRONICS AND TELECOMMUNICATIONS ENGINEERING DEPARTMENT**

### **TECHNIX-2018 Project Exhibition**

The Electronics and Telecommunications Department held a project exhibition - 'Technix 2018' on Wednesday, 25<sup>th</sup> April 2018. The exhibition saw the final year ETC students showcasing their final projects. Prof. Allan da Costa, lecturer of Electronics Department at Agnel Polytechnic and Ms. Preeti Jagadev, NIT- Goa were invited to judge the projects.



Prof. Anisha Cotta was the coordinator of the exhibition. The exhibition opened at 2pm at the hands of the judges, Prof. Michelle Araujo e Viegas (H.O.D. ETC) and Department coordinator Prof. Anisha Cotta. The exhibition was visited by many students and faculties.

A total of 14 projects were kept on display, each displaying the cumulative knowledge acquired by the respective groups during their 4 year academic life in the college. Every project was unique and creative in their own way, and it showcased an innovative idea in the field of engineering.

The projects that were displayed were; Optical Wireless Communication: A Lifi that allows for data transmission with the help of photons, Advanced Military Spy Robot and Bomb Disposal, a low cost DSLR, Brindle: a prototype for a Braille electronic book, Rescue Robot, Wireless Patient Monitoring system: to monitor patient vitals like BPM, temperature etc, IOT based monitoring system: to monitor air pollution ammonia etc, Human machine interface for wireless communication, PLC based Adulterant Monitoring system: used to check the adulteration of liquids, WheelBot: an automated navigation wheelchair, a multipurpose autonomous drone, a GPS guarded autonomous Rover.

At the close of the exhibition, the judges shared a few words of encouragement and applauded the students efforts. The judges were presented with mementos at the hands of Prof. Anisha Cotta and Prof. Michelle Araujo e Viegas, in the presence of various teaching staff and students. Prof. Anisha Cotta delivered the Vote of thanks

The first prize was bagged by the group "Optical Wireless Communication System" and the second place was bagged by the group "Brindle".

### **Bose Shannon Shockley Technical Paper Presentation**

An annual Intra class technical review paper presentation competition was organized by the Department of Electronics and Telecommunication Engineering in association with the DBEATS for third year students of Electronics and Telecommunication

Engineering, on the 28<sup>th</sup> of February, 2018. Through this event the students were provided a platform to review and present a set of seminal papers already published in reputed journals, thus getting to know about the entire idea of publishing and presenting papers.

With the objectives of promoting the culture of research & innovation among engineering students, improving the communication skills of students and generating awareness about latest development in technology, the third year ETC students were divided into groups of five members each and were asked to select a paper related to the various fields of Electronics, Communication, Signal Processing, Instrumentation etc., study it and present it.

The following papers were presented:

- 1) Performance Evaluation of H.265/MPEG-HVEC, VP9 AND H.264/MPEG-AVC Video Coding
- 2) ROS: An open-source Robotics operating system
- 3) Android application development and its security
- 4) Use of cryptography in cloud computing
- 5) Office automation using PLC System
- 6) Error control techniques and their applications
- 7) Artificial Intelligence for speech recognition
- 8) OFDM visible light wireless communication based on white LED's
- 9) Optical vehicle to vehicle communication system using LED transmitter and camera receiver
- 10) Applying FIR and IIR Digital filters over video image processing
- 11) Internet of Things (IOT) Based Weather Monitoring systems
- 12) A study of Wireless Sensor Networks for Urban Traffic Monitoring: Applications and Architectures
- 13) Human identification based on Electrocardiogram and palm print

We were glad and honored to have amongst us the judges, Mr. Karl Andrade, Assistant consultant at Tata Consultancy Services and Mrs. Avita Lotlikar, Assistant Professor at Padre Conceicao College of Engineering, Verna.

The first place was awarded to Mr. Siddhesh Nayak,

Mr Luis Gomes, Mr Chandrakant Pal, Mr. Rajat Metry and Mr. Rohit Sardessai for the paper titled " ROS: An open source Robotics operating system.

The second place was awarded to Mr. Omkar Tamboskar, Ms. Parul Chaturvedi, Ms. Lisa Carvalho, Ms. Meenu Vanpuzhavayahil for the paper titled "Optical vehicle to vehicle communication system using LED transmitter and camera receiver".

The event was indeed, beneficial to the students and they were actively involved in the Event. The event was coordinated by DBEATS Faculty coordinators, Prof. Melba D'Souza and Prof. Deron Rodrigues.

### **"Electromagnetics & its Applications using MATLAB and Simulink"**

The Electronics and Telecommunication Engineering Department in association with DBEATS organized a one day workshop for the students of Second Year Electronics and Telecommunication Engineering, titled, "Electromagnetics & its applications using MATLAB and Simulink" on 10<sup>th</sup> March 2018 .Workshop was conducted by Prof. Yeshudas Muttu and Prof. Mohini Naik. The workshop began with basics of Electromagnetics using MATLAB commands, boundary value problems, electric field intensity, interface conditions for Electric field intensity and Electric Flux Density. The session was later continued with basics of Simulink, building model using sinks, sources, linear and non – linear Simulink blocks. Students were introduced with calculus operations and need for converting given equation into integral form. Later, students were introduced to first order and second order differential equations and their linear modeling with applications on Simulink.

### **Field Trip Visit**

A field trip was arranged for the students of second year ETC on 23<sup>rd</sup> March 2018.The two places visited were as follows: NIO Goa and Letcetra Agriculture Turnkey Solutions, Karaswada, Mapusa Goa. The students were accompanied by Prof. Michelle Araujo and Prof. Trima Fernandes e Fizardo.

The day commenced with a visit at NIO. An

oceanographic short movie 'SAGAR' was screened for the students in the auditorium. This was truly a great experience for the students to learn deeply about oceans across the globe, their compositions, uses, effects and the life it supports. After a short lunch break the students visited Letcetra Agritech at Karaswada, Mapusa. Here the students got to learn how plants like lettuce, strawberries and spinach are grown under artificial environment.

The system was created such that the room was bright and lit with tube lights. To help the plants in the process of photosynthesis, the room was under temperature control too. We were surprised to know that these plants had a great demand in the market because they used no harmful chemicals but purely grown with natural organic matter. It was a great experience for all the students to learn something new, a chance to interact with the surroundings minutely and intently

## Select Projects Presentations



The Education Committee of Goa Chamber of Commerce & Industry (GCCCI) and Directorate of Technical Education (DTE) jointly organized the Second Edition of SELECT PROJECTS PRESENTATIONS by students of Engineering Colleges of Goa on Friday, 03 November 2017 at DTE - Porvorim.

Don Bosco College of Engineering, Fatorda won the THIRD PLACE amongst the 40 project groups from Goa College of Engineering, Padre Conceicao College of Engineering, Shree Rayeshwar Institute of Engineering & Information Technology and Agnel Institute of Technology and Design. 08 projects groups from the college were selected for the presentations and the details of the project group that won the third place are mentioned below:



Name of the Project: Wireless Patient Monitoring System

Project Guide: Prof. Melba D'Souza

Department: ETC

Project Group: Mr. Royston Dias  
Mr. Abhishek Pednekar  
Mr. Mahendra Gadiyar  
Mr. Nihar Bhat  
Mr. Prabodh Kolambkar

## COMPUTER ENGINEERING DEPARTMENT

### TE Computer Attend Seminar on Blender (Beyond the Syllabus)

The Department of Computer Engineering in association with C-CODES arranged a Seminar on Blender which was held in the Computer Dept Laboratory on 24<sup>th</sup> February 2018. The session was attended by 30 students of T.E Computers. The coordinators for the talk were Prof. Gaurang Patkar, Prof. Merwyn D'Souza, Prof Amey Tilve and Prof Amey Kerkar. The resource person for the lecture was Mr.Pankaj Mali who explained about Blender. Pankaj is the Alumni of Don Bosco College of Engineering Fatorda



Mr. Pankaj introduced the software Blender which is used to draw, design 2D, 3D objects and etc. He explained about the shortcut keys used for faster access and the system requirements required for blender. He explained how rendering, modelling is carried out and how the output looks. It was a good experience for all the students who attended the workshop and gained knowledge beyond the curriculum. As a token of appreciation a memento was awarded to the resource persons at the hands of Prof. Gaurang Patkar-HOD Computer department.

### **TE Computer Attend Seminar on NODE JS (Beyond the Syllabus)**

The Department of Computer Engineering in association with C-CODES arranged a Seminar on NODE JS which was held, in the Computer Dept Laboratory on 24<sup>th</sup> February 2018. The session was attended by 30 students of T.E Computers. The coordinators for the talk were Prof. Gaurang Patkar, Prof. Merwyn D'Souza, Prof Amey Tilve and Prof Siya Naik. The resource person for the lecture was Mr. Adnan Sayed Founder of ONE STOP solution who explained about Node JS. Mr. Adnan introduced and explained Node JS. He started with the basics of HTML, CSS and Javascript which are all scripting languages required for website development. All the students were explained about the languages and some hands-on sessions were carried out.

As a token of appreciation a memento was presented to the resource person at the hands of Prof. Gaurang Patkar -HOD Computer department. The session was concluded with a vote of thanks by Prof. Merwyn D'Souza, C-Codes Coordinator.



### **T.E & B.E Computer Students and Computer Dept. Faculty Attend Seminar on Computer Cryptography and Network Security**

The Computer Department in association with C-CODES (Council of Computer Engineering Students) conducted a seminar on the topic "Computer Cryptography and Network Security" on 24<sup>th</sup> March 2018 from 10.00 am to 12.00 pm. The seminar was attended by the Computer Dept Faculty, T.E & B.E Students. The coordinators for the seminar were Prof. Merwyn D'Souza and Prof. Manisha Faldessai. The idea behind having such a seminar was to guide the third year and final year students of computer engineering regarding computer cryptography and network security as well as final year project topics in this field.



Dr. Purushothama B.R, Assistant Professor in the Department of Computer Science and Engineering at National Institute of Technology, Goa was the resource person for this seminar. He completed his M.Tech from the National Institute of Technology Surathkal in the year 2009 in Computer Science and Engineering and his Ph.D. from the National Institute of Technology Warangal in 2014 on the subject Key Management and Cloud Security. He has also published papers in many international journals.

The seminar started with Dr. Purushothama B.R giving some basic knowledge about secure communication, encryption and decryption of a message and some methods of cryptography. This was followed by a question answer session Dr. Purushothama B.R also informed the students about the various topics under computer cryptography to be taken up for final year projects.

Mrs. Manisha Fal Dessai, Assistant Professor concluded the workshop with a warm vote of thanks. Mrs. Manisha especially thanked Resource person Dr. Purushothama B.R, Head of Department Mr. Gaurang Patkar & faculty members for sparing their valuable time for the seminar. She also thanked all the students who actively participated in the seminar.

## SCIENCE AND HUMANITIES

### 'SEEDS'

The final event of SEEDS was held on the 24<sup>th</sup> March 2018. The students participated in various events: Wealth out of waste, Bridge building, Photography, Gaming, on the Spur of the moment, and Business and Gaming Ideas.

In wealth out of waste the students worked on models using only the shells of nuts. Pooja Phadtare and Juella De

Oliveira-FE ETC secured the first place. The judges for the event were Prof. Melba D'souza and Prof. Chetan Gaonkar.



Vignesh

Gaude, Sharyu Pednekar, Rishikesh Naik - First year Civil were declared winners for bridge building with a total weight of 37 Kgs.

The theme for photography was 'Reflection'. Out of a total of 22 participants Vaishnav -FE Computer was declared the winner by the judges: Mr. Rolland Gomes and Mr. Alloysius Baptista.

The students of first year enthusiastically took part in gaming events. The following were the games played :Gaming Events Winners Dream League Soccer FE ETC-Prajay Naik; Mini Militia FE Computer-Shivlay Nayak, Reynold Vaz, Kaushik Parab, Free Fire FE Mechanical-Vivian Viegas, Abhijeet Naique Lincoln Viegas, Sanford Rodrigues, Clash Royale, FE Computer-Shivlay Nayak, Reynold Vaz, Chess FE ETC-

Saurabh  
Prabh  
Scrabble FE  
Computer-  
Stella Tom,  
Shania Lewis,  
Nargis Khan,  
Gauri Bhatikar  
Sudoku FE



Civil- Sahara Naik. The game of Chess was refereed by Mr. Sarvesh Rao from SE Civil.

In the meanwhile, students spontaneously participated in 'Spur of the moment' in which they had to perform tasks assigned to them on the spur of the moment. The students participated in Heads up , Charades, Q & A Relay. The students were also asked to enact an office scene and identify the various loop holes and effective qualities that a professional should give importance to in the professional world. The students presented business and gaming ideas through a power point presentation, which was judged by Mr. Sudip Faldesai and Prof. Ankit Tiwari. The best presentation for gaming and business ideas was bagged by FE computer-Eeshan, Ashutosh, Akash Barad and FE Mechanical- Everard Leitao, Vivian Viegas respectively. The following were the topics presented.

Gaming Idea  
Topic Mechanical Race the Beat  
Computer LYF (VR Game)  
Business Idea Mechanical  
Domestic waste water Treatment ETC  
Designing of Electronic Speakers  
Comp E-waste Recycling Unit  
Civil Wireless Charging of electric Vehicles.  
The day ended with a valedictory function graced by the presence of Principal-Dr. Neena Panandikar. Also present were Head of Department – Dr. Kala Nayak; Deputy Head of Department – Prof. Harison Cota and the staff of Department of Science & Humanities.



Dr. Neena Panandikar congratulated the students for their participation during SEEDS 2017-18 and encouraged them to excel in their future.

She applauded the efforts of Prof. Harison Cota and Prof. Gladys Dasilva for having scored amongst the top 247 candidates in the ICT workshop on Blended Learning conducted by IIT Mumbai.

The report of events conducted during SEEDS 2017-18 was summarized by Mr. Renvick Fernandes and Mr. Allan Luis through a power point presentation.

Certificates were distributed to the first and second place holders of: Quiz, Debate, Math Relay, Process of setting an Enterprise held previously during SEEDS 2017-18

The function ended with presenting the trophy to the First year Computers for SEEDS 2017-18.

## CULTURAL

### Republic Day 2018

The Republic Day was celebrated at Don Bosco College of Engineering, on the 26th of January 2018. It began with the esteemed Chief Guest, Er. Thomas D'Costa, unfurling the National Flag.

The Director, Fr. Kinley D' Cruz addressed the gathering with an inspirational speech. A final year computer student accompanied by a third year ETC student rendered a beautiful song.

The Principal, Dr. Neena Panandikar introduced the



Chief Guest. The Chief Guest Er. Thomas D'Costa gave a motivating speech to the audience. In his address, the chief guest spoke on how important Engineers are in this age of innovation and change. He also stated that as engineers they can make a difference to

the development of this country. A floral tribute was presented to the Chief Guest by the Rector, Fr. Paul D'Souza. The function ended with a Vote of Thanks given by a final year computer student Ms. Blossom Fernandes who also compered the function.

### Women's Day Celebration 2018



Women's Day was celebrated on 8<sup>th</sup> March 2018. It began with a very beautiful dance performance by two final year computer students in the college premises. The chief guest for the occasion was Dr Junsa Mudras a LLM degree holder currently lecturing at Don Bosco Panjim. Dr. Mudras delivered a very informative and interesting talk on "Sexual Harassment at the Work Place". She also had an interactive session with the audience.

Members of our staff sang a song and a staff member recited a poem. Games and dance filled the room with laughter and excitement.

The function ended with a vote of thanks by our Counselling Psychologist Grebrian Alemao, followed by refreshments.

### Procyon 2018

Procyon is an inter-class cultural two day fiesta, wherein students of 16 different classes showcase their talents in various cultural activities on a common platform. The Inaugural Function commenced with the welcoming of the guests. The Director, Rev. Kinley D'Cruz, in his address recollected the beginnings of "fun days" which were initiated to showcase the talents of students who were always bubbling with energy. Rev. Kinley D'Cruz hoped that the right spirit would prevail. He urged the gathering to encourage, respect, acknowledge and cheer for all the participants and not merely the winners. The Director hoped that the Best Team



would win and prayed that it would be a Great Event. The Chief Guest, Mr. Rajendra Talak, in his address encouraged the students to participate in all the activities and to put in their very best. He emphasized on getting the job done and that success would follow naturally.

Mr. Rajendra Talak emphasized on the need of pursuing ones talents along with studies for which one needs to manage time effectively. The Chief Guest also highlighted on the need of making a contribution to the society & to the country. He said that it is a matter of perception: "50% of the people do nothing, 30% of the people do things for themselves, while only 20% of the people do something for others." He stated that in life various opportunities will arise and then one has to accept them to do something for others. Finally, when you have given back, it gives you satisfaction which is more valuable than money.

Soon after, colourful balloons were released by the Chief Guest and the Guest of Honour and PROCYON 2018 was declared open. As a token of appreciation the Director, Rev. Kinley D'Cruz, presented a memento to the Chief Guest, Mr. Rajendra Talak, while the Principal, Dr. Neena Panadikar, presented a memento to the Guest of Honour, Mr. Andre D'Souza. The inaugural function came to a close with the vote of thanks being proposed by the General Secretary, Samuel Crasto, followed by an excellent performance by the Guest of Honour, Mr. Andre D'Souza.

This year several activities like Rhythm of Tradition, Battle of Bands, Step Up, Flag Painting, Master Chef, Nukkad Natak, Snapper, Paint My Nails, Musical Video, The Voice, Natkule, Rock the Ramp, Face Painting, Wealth out of Waste, Rang De ,Movie Making were held in the college campus. This year all

the department events had two professors who took part along with their students.

The winners of Procyon 2018, TE Computers and the Runners Up S.E. Computers, were declared on the Annual cultural day at the hands of our Chief Guest Ameya Abhyankar and our Director Rev. Fr. Kinley D'Cruz.

## Annual Day 2018

Don Bosco College of Engineering, Fatorda, Goa celebrated its Seventh Annual Day and Prize Distribution Ceremony at Ravindra Bhavan on 16 March 2018. The Annual Day is a platform to appreciate and acknowledge the young budding engineers for their academic achievements and to showcase their talents in the field of Music, Dance and Theater.



The Director, Rev. Fr. Kinley D'Cruz welcomed the gathering and congratulated the hard work put in that celebrates the spirit of Don Bosco College of Engineering. The Provincial Fr. Felix Fernandes addressed the gathering and appreciated the remarkable growth of the Institute - Don Bosco College of Engineering. The Rector, Rev. Fr. Paul D'Souza was present on the dais along with the other dignitaries.

The Principal, Dr. Neena Panandikar highlighted the incredible progress made by the college in a short span of seven years. The Heads of Department presented the annual report of their respective departments, The Registrar, Dr. Kala Nayak announced to the gathering the performance of the



meritorious students who were felicitated. Training & Placement report along with NSS report was presented by the respective officers. The students were awarded certificates for various sports competitions. The college magazine 'Beacon' was released at the hands of the dignitaries.

Speaking on the occasion, the Chief Guest, Mr. Ameya Abhyankar, IAS (2007), Secretary, Goa Public Service Commission encouraged the students to be architects of nation building by striving for excellence. He urged the students to concentrate on technology development as they can be the future of technological transformation.

The other dignitaries who spoke on the occasion were Guest of Honour, Revati Majumdar, CEO, Goa Electronics Ltd. who requested the students to create a niche for themselves and to make the most of their degree education. She advised the students to strive for excellence while not being afraid of failure. She also stressed on inculcating patience as an important value that one must possess. It is important to build and nurture friendship and family as they are important aspects of life.

The students, Mr. Darren D'Silva (BE Mechanical) and Ms. Blossom Fernandes (BE Computers) compered the function. The formal inaugural session was followed by a cultural programme presented by the students and staff members. The function ended on a glorious note with students of SE Computers and



TE Computers winning the PROCYON Awards. Prof. Deron Rodrigues proposed the vote of thanks

## Seminar on Higher Education in USA and Canada

Don Bosco College of Engineering organized a Seminar on Higher Studies in USA and Canada for the BE and TE Undergraduate Engineering students on Friday, 19 January 2018. The focus of the seminar was on information on Master's Programs and their eligibility, the Work Culture in USA and Canada and the current market trends in USA and Canada.

The students who were interested in higher studies abroad attended the seminar. The session was conducted by Mr. Anand Karkun, Sr. Director, Operations for Swift Educational Consulting Group and his team. The talk was interesting and the students gained information on the opportunities abroad and the entire application process involved for the same. Students also asked several questions at the end of the session.



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