FLASH

Electronics & Telecommunication Engineering
Departmental Newsletter

Volume 03, Issue 02, Jan- June 2019

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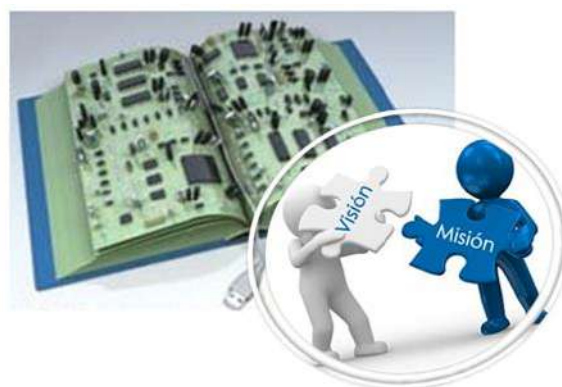 - ▪ Workshops/ Seminars / Expert Talks Attended
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VISION

To evolve into a Holistic Learning Hub that moulds technologically proficient engineers in the field of Electronics and Telecommunication; enhancing the global industry and society with Integrity, Ethics and Professionalism as envisaged by Don Bosco.

MISSION

- • To impart education abreast with the advances in technology and transform students into globally accepted professionals
- • To foster networking with all stakeholders for promoting technical innovation, research and entrepreneurship
- • To encourage extra-curricular activities and instil high levels of work ethics and responsibility for a better society

DEPARTMENTAL DETAILS

The Department has well qualified and experienced faculty in the areas of Electronics & Communication, VLSI, Embedded, Signal Processing, Automation and ControlEngineering. The Department offers Bachelors of Electronics & Telecommunication Engineering programme, with total number of 60 seats in the 1st year and 12 seats for lateral entry into the second year.

The department has been organizing various programs to enhance the Industry -Institute interaction through field visit and workshops.Every year students of Third year and Final Year are exposed to Industry through internship programme of 1 month duration for industry experience.

Department has 11 fully functional Laboratories as listed below, along with the different Software.

- ➢ **LABORATORIES**
  - ▪ Electronics Engineering
  - ▪ Power Electronics and Control Systems
  - ▪ Devices and Circuits
  - ▪ Communication Engineering
  - ▪ Microprocessor
  - ▪ Electrical Engineering
  - ▪ Electrical Technology
  - ▪ Digital Systems and Electronic Instrumentation
  - ▪ Signal Processing Lab
  - ▪ Advanced Communication Lab
  - ▪ Embedded Lab

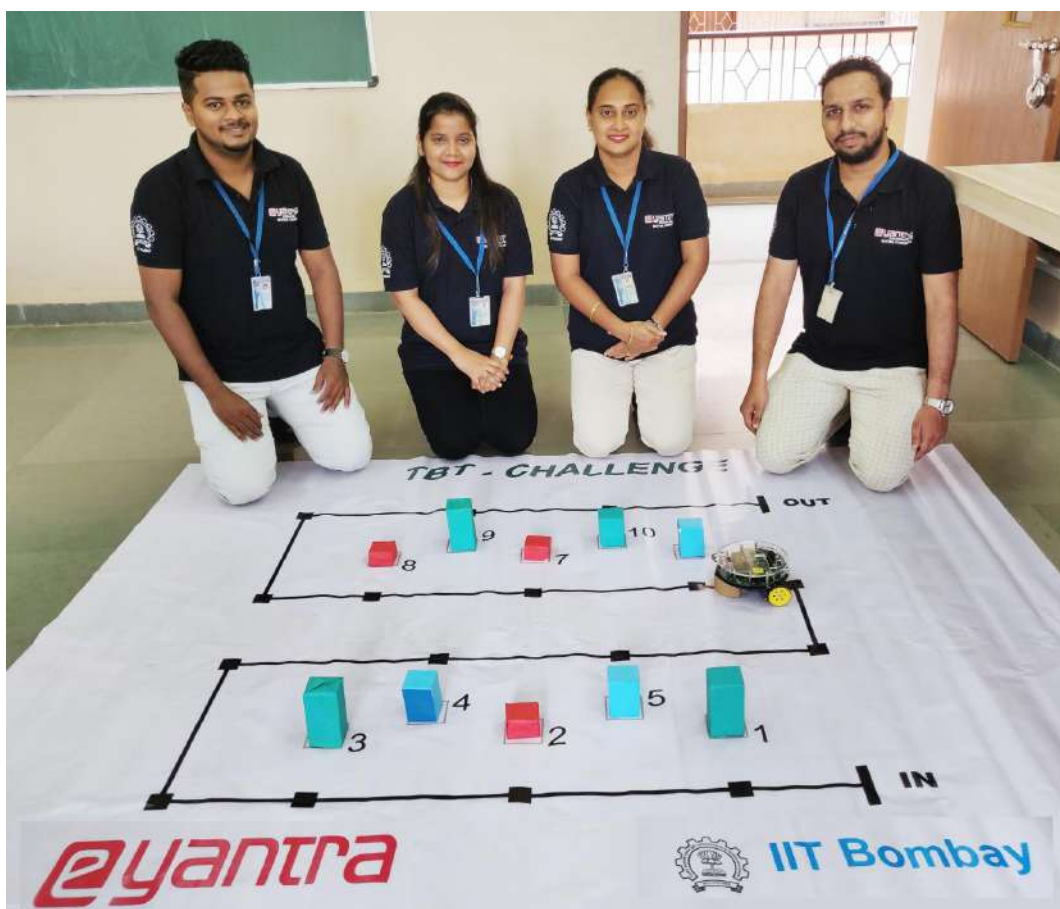| SOFTWARES	KITS
MATLAB	8051 Kits
Xilinx 14 Version	ARM Kits
OSCAD	PIC kits
MAGIC	PLC kit
LabVIEW	LAN Trainer Kit
OCTAVE	OFC Kits
POlSARPro	PSoC ARM Cortex kits

Lab Set-up Initiative: e-Yantra Robotics Lab

e-Yantra is a project hosted by IIT Bombay (IITB) to spread education in Embedded systems and Robotics in colleges across India and sponsored by MHRD through NMEICT.

DBCE was a local centre for a 2-Dayworkshop, organized by IITB e-Yantra team on "Introduction to Robotics" for training around 60 teachers from various colleges across India, on the 11th and 12th of January 2019.After the completion of the workshop, DBCE signed a "Letter of Consent" to set up a Robotics lab in the institute, which was an initiative taken by Dr. Varsha Turkar, Professor and HOD of ETC department.

A team of four faculty members: Prof. Flavia Leitao (Team Leader), Prof. Yeshudas Muttu, Prof. Mathilda Colaco & Prof. Deron Rodrigues (Team members) from the Electronics & Telecommunication department of DBCE, were chosen to be the e-Yantra team of DBCE.

The e-Yantra, DBCE team underwent rigorous Task based Training (TBT), over a period of three/four months, working on different task.

Out of the 70 plus colleges that participated for the TBT, only 17 teams completed the Task Based Training within the target date, and DBCE, e-Yantra faculty member steam topped the list with a **Class A Award** securing 98.89%.

IEEE Student's Branch

The Don Bosco College of Engineering, Fatorda, Goa established an IEEE student branch consisting of 74 students with the help of Prof. Yeshudas Muttu as the IEEE Branch Counselor, and Dr. Varsha Turkar as the IEEE Branch Adviser.

The inaugural ceremony was held on 1st February 2019 in the Seminar Hall of the college. The Chief Guest for the function was Mr. Shashank Krishna; Director & CEO of Katmal Info Technology, Padma Shri 2019 Nominee (Science and Engineering field) and the Guest of honor was Dr. B. Satyanarayana, IEEE Bombay section Secretary and Scientific Officer (H), TIFR, Mumbai.

Prof. Yeshudas Muttu introduced the gathering to the world's largest technical professional organization, IEEE: Institute of Electrical & Electronics Engineers, stating its importance with growing technology, about its various facilities and support to the aspiring minds followed by a short note on Student Branch formation.

The Branch Officers appointed are Mr. Sherwin Colaco as the Chairperson, Mr. Rohan Bukkam as the Vice Chair, Mr. Rajat Metry as the Treasurer, Mr. Shivam Bale as Joint Treasurer, Ms. Juella De Oliveira as the Secretary and Mr. Raj Kubal as the Joint Secretary of IEEE student branch of DBCE. Later, the oath was taken by the Executive Committee of IEEE Student Branch, DBCE.

Student's Satellite Club – Parikrama

The Don Bosco College of Engineering, Fatorda, Goa established a Students Satellite Club named "Parikrama" under the guidance of Dr. Varsha Turkar& Prof. Mohini Naik as Principal Investigators and Prof. Sweta Morajkar& Prof. Ramnath Prabhu as Co – Principal Investigators. The inaugural ceremony was held on 1st February 2019 in the Seminar Hall of the college.

The Chief Guest for the function was Mr. Shashank Krishna; Director & CEO of Katmal Info Technology, Padma Shri 2019 Nominee (Science and Engineering field) and the Guest of honor was Dr. B. Satyanarayana, IEEE Bombay section Secretary and Scientific Officer (H), TIFR, Mumbai.

The function commenced with the unveiling of the logo of Students Satellite Club designed by Mr. Siddesh Nayak, followed by lighting of the traditional lamp.

Prof. Mohini Naik then gave a brief introduction of Student Satellite Club to be installed and informed the gathering about the journey that includes the club member's rigorous selection procedures and criteria. Out of 83 candidates, a total of 15 student members were selected with Mr. Musab Shaikh, Mr. Everard Leitao and Ms. Krupashri Koli as the Project managers of the club. The Chief Guest, Mr. Shashank Krishna inaugurated Student's Satellite Club and handed over the badges to all the members of the club.

STUDENT'S CORNER

Workshops/Seminars/In-house Trainings

CERTIFIED COURSE ON "EMBEDDED SYSTEMS &IoT"

As a part of the Internship training, the Electronics and Telecommunication department of DON BOSCO College of Engineering in collaboration with Eduvance conducted 2 weeks certified course on "Embedded Systems &IoT", for the T.E and B.E students of ETC from the 2nd to 12th of Jan 2019. A total of 52 students attended the workshop that was certified from Microchip and AMD through Eduvance.

The training basically concentrated on how to interface the different peripherals like sensors and how to transmit and receive data using the Arduino platforms.The two resource persons were Mr. Dilip Balasubramanium and Mr. Nikunj Thakkar.

The students had hands-on sessions on how to interface LEDs, switches and toggle LED's, LCD to displaycharacters. The PWM features and programs using PWM to control the brightness of the LED was taken up next, followed by how to interface different sensors like Temperature, LDR, PIR. Programs based on nRfL01 and WiFi module ESP8266 were introduced to students whichwould help them how one can communicate with the cloud.

In the end, GRADE ME assessment was conducted for the students, which could help them with placements.

The coordinators for the Workshop were Dr. Varsha Turkar and Prof. Flavia Leitao.

WORKSHOP ON "RESUME WRITING AND DIGITAL RESUME"

IEEE Student Branch, DBCE organizedtheir first event on "Resume Writing and Digital Resume" Workshop at Don Bosco College of Engineering on Saturday, January 05, 2019 from 9.30 a.m. to 4.00 p.m.The Resource person for the workshop was Prof. Avila Naik, Assistant Training & Placement Officer, DBCE. It was ably supported and guided by IEEE Student Branch Counselor, Prof. Yeshudas Muttu& IEEE Student Branch Adviser, Dr. Varsha Turkar.

The session started off with explaining the importance of building Resume and the difference between Curriculum Vitae and Resume were put forth with minute details, followed bythedo's and don'ts in a Resume.

WORKSHOP ON "WOMEN EMPOWERING WOMEN"

IEEE GRSS has sponsored and organized one day program on, "Women EmpoweringWomen" in collaboration with IEEE-RAIT and Women Development Cell, Ramrao Adik Institute of Technology, Nerul on 8th March 2019. The objective of this program was topromote and support women engineers, scientists, inspiring women and girls in and aroundIEEE Bombay section to follow their academic interests to a career in Science, Engineeringand Technology.This one-day program has started with inauguration ceremony wherein Dr. Sandhya Kiran, Head, Botany Department, MSU, Baroda was the chief guest. Dr. Varsha Turkar, IEEE senior member and Core committee member of GRSS Local Chapter, welcomed all the participants and share her views on objective of this program and vision of IEEE GRSS Bombay Local Chapter.

WORKSHOP ON "FIREBIRD ROBOT"

The e-Yantra Robotics Team of Electronics & Telecommunication Department of DBCE organized a Three-Day Workshop on Firebird Robot for the students of TE and BE ETC, on the 25th, 26th & 28th of June 2019.

The purpose of the Workshop was to spread education in Embedded systems and Robotics.The Workshop would also ensure better Final year projects in this area.

The students were divided into 7 teams with 4 members to work on the Firebird V Robot.The different topics covered were interfacing the Firebird Robot with the Buzzer, Boot Switch, Bar-Graph LED, LCD, Motors, IR sensors, Sharp sensors, White Line sensors and their related applications.

Day 1: 25th June 2019

The first session was taken up by Prof. Yeshudas Muttu on Introduction to Robotics that included Major Components such as Sensors, Actuators, Control system, Intelligence, Power supply, Communication, Indicating Devices of a Robot and Introduction to Firebird V ATmega 2560.

The second session by Prof. Yeshudas Muttu introduced the various Input-Output Ports and Registers in ATmega 2560 and how they can be accessed.

Subsequently, the students were given hands-on exposure in Embedded C programming for interfacing the Buzzer, Boot Switch and Bar-graph LED using the Atmel-6 Studio.

In last session for the day was taken up by Prof. Flavia Leitao on interfacing the LCD with the Firebird V Robot. The Students were briefed on the LCD operation and were then asked to interface the LCD and the Boot Switch for a given application.

Day 2: 26th June 2019

The First session by Prof. Flavia Leitao was on interfacing the Motors. The students were briefed on the Motor Driver IC L293D and the different Motions and were then given a small task of how to interface the Motors and device an application to make the Robot move in a defined direction.

The second session was taken up by Prof. Deron Rodrigues on Counters and Timers for calculating time delays. Subsequently Pulse Width Modulation (PWM) was introduced followed by hands-on program to control the Velocity of the Motors.

The last session by Prof. Deron Rodrigues was on Analog sensor interfacing using Analog to Digital conversion. The session included overview on the sensors like Sharp IR sensors, Proxity Sensor, etc, interfaced to the different channels of ATmega2560 followed by Programming.

Day 3: 28th June 2019

The day started with introduction to White Line sensors by Prof. Mathilda Colaco. The students were given in-depth understanding of the concept of the While Line Follower.

Post lunch students were given different tasks to do, such as the Speed Control of the Robot with respect to the Boot Switch and the White Line Follower.

The Students had an amazing learning experience and showed great enthusiasm executing the given challenges. They suggested that such workshops should be conducted in future that would provide learning beyond curriculum.

Skill and Knowledge Enhancement Program

"Technology and Engineering: The Mission and the Vision of IEEE"

An expert talk on "Technology and Engineering: The Mission and the Vision of IEEE", was conducted by Dr. B. Satyanarayana (PhD. IITB), Scientific Officer (H) Tata Institute of Fundamental Research, Mumbai.

Dr. B. Satyanarayana began his session with interrelation between science, technology and engineering. He pointed out main motive of IEEE is to improve quality of life by providing electricity in rural areas, e-Health Programs, Portable power, etc.

Dr. B. Satyanarayana concluded the seminar with a motivating phrase"Education can never be stopped or forced to be stopped; It's a part of life".

"Importance of Research atUndergraduate Level"

An expert talk on "Importance of Research atUndergraduate Level", was conducted byDr. Sanjay Shitole (PhD. IITB),Secretary, IEEE GRSSMumbai Chapter.

Dr. Shitole began his session with introduction to research and the ways to be creative. He also explained how research proves to be an intensive force within the researcher.

He instilled the joy to take up research work giving proper guidelines and blended the technical details required to put one's research in the form of a paper. He rightly pointed out that writing the paper is how you develop the idea in the first place.Later, in depths of paper writing was effectively covered. To conclude, he suggested few tools likeLaTex, Gnuplot, Gimp, LaTexdraw to build a paper.

"GIS and Carrier Opportunities"

An expert talk on "GIS and Carrier opportunities" was conducted by Dr. Sangita Chaudhari (Ph.D. IITB), IEEE Senior Member.

The session began with introduction to Geographical Information System (GIS), basic components of GIS and importance of GIS. Discrete objects & fields, Vector Data model, Raster model & various topologies in GIS were discussed. She also mentioned about the various software used in this field. The session was extended to explain the applications of GIS & case studies. GIS Career Opportunities were conferred so that students can get clear idea and understand the importance of this field.

"HAM Radio"

An expert talk on "HAM Radio", was conducted Dr. SaurabhMehta (Ph.D., South Korea), IEEE Bombay Section Execom member Dr. Saurabh Mehta, commenced the session by introducing to various wireless technologies.

He made his session more interesting by making the audience identify various International as well as National Celebrities who used HAM technology. Terminology used is HAM radio, known as HAM Lingo was creatively put up. Q – Codes, Phonetics, Frequency bands & various devices needed in HAM radio were discussed. He encouraged students to design their own device and be a part of HAM Fest, held every year in India.

"Use of IOT & Remote Sensing in Agriculture"

An expert talk on "Use of IOT & Remote Sensing in Agriculture" was conducted by Dr. Amiya Tripathy (Ph.D. IITB), Treasurer of IEEEGRSS Mumbai Chapter.Dr. Amiya Tripathy began with the session with basics of IOT, its evolution, applications, technologies, analytics & AI. Various applications of IOT in agriculture like hydroponics, GIS with IOT, remote sensing with GIS in agriculture and drones of future in agriculture were discussed with the help of a video.

FIELD VISITS

"National Centre Polar and Ocean Research-NCPOR"

The students of SE ETCvisited NCPOR (National Centre Polar and Ocean Research) and 3D Infinityon the 28th Feb 2019.Prof. Melba D'souza and Prof. Selwyn Fernandes accompanied the students.

Dr. M.V. Ramesh guided the students towards the Auditorium Building that displayed various activities that were undertaken- Antarctic European Logistics,Artic and Oceanographic Research, Vesser Sagar Kanya; an ESSO (Earth System Science Organisation) and its collaboration with Indo- European Polar Science.Further, Dr. Alvarinho J Luis took up a session on Remote Sensing.

"Infinity 3D"

Post Lunch the SE ETC students visted Infinity 3D, Verna. Mr. Sanketwas the showed the students the various 3D printers- Gider 2, Creator Pro, Extruder; the various models prepared by them. He also specified the application of 3D printing in house building, fuses, cases; how the architecture designed on software results with the final product of the model.

"Bosch Packaging Tech. Division And Indian Waste Treatment Plant"

Students from the TE ETC Department visited the Bosch Packaging Technology Division, Verna followed byThe Indian Waste treatment plant, Saligao on 28th Feb 2018 and were accompanied by Pro. D.S.Vidhya, Prof. Deron Rodrigues and Prof. Kimberly Morais.

The Bosch packaging technology division dealt with production of different machinery such as the vertical packaging and horizontal packaging machines used by various companies such as Mentos, Dark Fantasy, etc.

"Indian Waste Treatment plant"

Post Lunch the students were taken to the Indian Waste Treatment plant, where they were explained how waste from the north Goan households is collected, segregated and treated before disposing it or sending it off for further processing.

"Oil and natural Gas corporation - ONGC"

The students of final year ETC visited ONGC, Betul on 6th March 2019 who were accompanied by Prof. MichelleAraujo e Viegas, Prof. Samantha Cardoso and Prof. Anisha Cotta.

MaharatnaONGC(Oil and natural Gas corporation) is the largest crude oil and natural gas company in India. It is a PSU of Government of India, under the administrative control of the Ministry of Petroleum and Natural Gas. It was founded with the sole purpose of searching for potential oil fields in the country to curb the dependency of India on other oil producing countries.

Educational Tour to "Indian Space Research Organization (ISRO)

The IEEE Student Branch of Don Bosco of Engineering, Goa organized its first Educational Tour to Bangalore from 7th February 2019 to 11th February 2019 under the guidance of IEEE Branch Counselor, Prof. Yeshudas Muttu & Advisor, Dr. VarshaTurkar. Around 65IEEE students along with 4 Faculty members,Prof. Yeshudas Muttu, Dr. VarshaTurkar, Prof. MohiniNaik& Prof. SatyeshKakodkarvisitedIndian Space Research Organization (ISRO), Hindustan Aeronautics Limited (HAL) Museum and People's Education Society (PES)University.

Technical Paper Presentation - Bose Shannon Shockley

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 9thMarch 2019. Through this event the students were provided a platform toreview 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.

We were glad and honored to have amongst us the judges, Mr. Yadnesh Sanzgiri, Technical Specialist at OPTEL Vision, Verna and Mrs. Palhavi Kerker, Assistant Professor at Goa College of Engineering, Farmagudi.

The first place was awarded to Mr. Saif Ahmed, Mr. Vaishakh Sanjeevan, Ms. Neha Shanbhag and Ms. Shriya Nayakfor the paper titled "Embedded based deaf-mute communication system."

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. Deron Rodrigues andProf. D. S. Vidhya.

Project Exhibition - Technix

The Electronics and Telecommunications Department of Don Bosco College of Engineering held a project exhibition 'Technix 2019'on Thursday, 2nd May 2019. The exhibition was intended to motivate students to apply the concepts studied in theory and exhibit it in the form of projects. The exhibits were divided into two categories: Mini project category and Academic projects category. There were 16 academic projectsand 6 mini projects.

Prof. Shailesh Khanolkar, Associate Prof. of ETC Department at Padre Conceicao College of Engg.- Verna and Mr. Dwayne Carneiro, Support Engineer- Macbrout Engineering Pvt. Ltd., were invited to judge the projects. Prof. Anisha Cotta was the coordinator of the exhibition.The exhibition was graced by the Director, Rev. Fr. Kinley D'Cruz, who appreciated the projects and the effort put in by the students and motivated them to continue the spirit of innovation.

The projects that were displayed are; Hydroponics Automation, Smart Railway Management, AutomatedAttendance System, Parking Enforcement Robot, Sanitary Napkin Vending Machine, Li-Fi Communication, Full Fledged Automated Fruit Farming to name a few.

The mini projects on display were: LED Chaser, Touchless Doorbell, Laser Security System, Temperature Controlled DC Fan, Home Automation, Traffic Light System.
Every project was unique and creative in theirown way, and it showcased an innovative idea in the field of engineering.The judges, appreciated the students for their active participation in the exhibition.

In the academic project category, the first place was bagged by theproject "Hydroponics Automation",the second place was bagged by the project titled "Automated Glaucoma Detection". In the mini project group, the "Temperature Controlled DC Fan" bagged the first place and "Home Automation" bagged the second place.

Student's Achievements & Felicitation

Second year ETC students, Raj Kubal, Juella De Oliveira, Abhishek Dhumvad,SaurabhPrabhu,Rahul Kotru, RenvickFernandes mentored by Prof.MohiniNaik, have been selected for **SIH 2019 Grand Finale** for their project "**Data Acquiring Robot**".

Second year ETC students, Nihal Sambary, Yash Rege mentored by Prof. Mathilda Colaco, have been selected for **SIH 2019 Grand Finale** for their project "**Smart Plug**"

FACULTY INITIATIVES

FACULTY DEVELOPMENT PROGRAMME (FDP) on "Introduction to Robotics"

The Department of Electronics & Telecommunication of Don Bosco College of Engineering in association with e-Yantra Lab Setup Initiative (eLSI), IIT Bombay organized a Two Day Workshop on Introduction to Robotics for the teaching faculty in Goa and other neighboring states. The inaugural function was held on 11 January 2019 at the institute.

The Overview of e-Yantra was through a live web session by Dr. Krishna Lala, Senior Project Manager, Core Team, e-Yantra. Numerous sessions were conducted on Introduction to Robotics that included Major Components such as Sensors, Actuators, Control,Buzzer interfacing, Motor Interfacing on Firebird, Robot Movements and interfacing of LCD to Firebird.

Day two sessions started with the introduction of various timers/counters and the Pulse Width Modulation technique used to control the velocity of the motor was discussed. The same technique was implemented using Fast PWM mode to control the speed of dc motors of Firebird V.

The second session included overview on ADC of ATmega 2560 and its channels, followed by ADC Programming. The third session covered Interrupts, Sources of Interrupts and Interrupt-Handling on Firebird. All the sessions were hands on session, wherein each of the team programmed the Firebird robot provided to them.

CERTIFICATIONS/ AWARDS

- Prof. Flavia Leitao, Prof. Yeshudas Muttu, Prof. Mathilda Colaco and Prof. Deron Rodrigues, was given the Class A Award securing 98.89%, for the Task Based Traning (TBT) that was conducted over a period of four months from Jan-April 2019, by e-Yantra IIT Bombay (IITB), and sponsored by MHRD through NMEICT.

- Prof. Yeshudas Muttu successfully Completed 12-week NPTEL Certification course on "Biomedical Signal Processing" with a consolidated score of 56%, conducted by IIT Madras& SWAYAM, from Jan to April 2019.

- Prof. Mohini Naik, was selected under top 25 mentors of the Atal Tinkering lab all over India, by NITI AYOG, GOVT OF INDIA. Feliciation programme is at T hub Hyderabad on 27th June 2019 at the hands of Amitabh Kant, CEO of NITI AYOG, GOVT OF INDIA.

- Dr. Varsha Turkar received travel grant from IEEE GRSS Mumbai Chapter to organize and attend one day event on "Women Empowering Women" at Ramrao Adik Institute of Technology, New Mumbai, on 8th March 2019 (Rs. 7000/-)

- Dr. Varsha Turkar received travel grant from E-Yantra Lab, IIT Bombay to attend the 2 days' workshop on 5 and 6 April 2019 (Rs. 4000/-)

- Dr. Varsha Turkar received funding received of amount Rs. 30000/- from ISRO under the research grant to travel and stay for the work related to the research project for the year 2018-19.

- Dr. Varsha Turkar is a Consultant for the project related to "Product development in Augmented Reality" at VanmatTechnologies Pvt. Ltd., March 2019. Duration: 20 hrs. Total revenue generated Rs. 56286.00/-

- Dr. Varsha Turkar reviewed one PhD thesis "Implementing a Deep Learning Approach for the PerformancePrediction in Educational Information System", Amity University, March 2019

PAPER/ JOURNAL PUBLICATIONS

➤ Dr. Varsha Turkar, "A Role and Potential of E-Krishimitra Tool in Usability Improvement of Agricultural Domain", International Journal of Computer Applications, 178(9):6-12, May 2019

➤ Dr. Varsha Turkar, "Curvelet Based Watermarking of Multispectral Images and Its Effect on Classification Accuracy", 2019 URSI Asia-Pacific Radio Science Conference (APRASC-2019), India Habitat Centre, New Delhi, March 9-15, 2019.

➤ Dr. Varsha Turkar, "Land Cover Change Detection for Fully Polarimetric SAR images", 2019 URSI Asia-Pacific Radio Science Conference (APRASC-2019), India Habitat Centre, New Delhi, March 9-15, 2019.

➤ Prof. D.S Vidhya, "An Efficient Approach towards formal Verification of Mixed Signals using feed Forward Network", 2019 8th CSOC 2019 Advances in Intelligent system and Computing,Volume 984, Springer, ISBN -2019978-3-030-19806-0, April 26th, 2019.

➤ Prof. Michelle Araujo, "Image Transmission Using VLC", IJSRD - International Journal for Scientific Research & Development| Vol. 7, Issue 04, June 2019 | ISSN (online): 2321-0613.

➤ Prof. Michelle Araujo, "Li-Fi Communication", IJSTE - International Journal of Science Technology & Engineering | Volume 5 | Issue 12 | June 2019.

➤ Prof. Michelle Araujo, "Automatic Student Attendance System", IJSRD - International Journal for Scientific Research & Development| Vol. 7, Issue 04, June 2019 | ISSN (online): 2321-0613.

➤ Prof. Michelle Araujo, "Different Approaches of Face Recognition", International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181, Vol. 8 Issue 06, June-2019.

➤ Prof. D.S Vidhya and Prof. Deron Rodrigues,, "Automatic Operation of Railway Gates", International Journal of Research in Engineering, Science and Management, ISSN: 2581-5792, Volume 2, Issue 6, June 2019.

➤ Prof. Samantha Cardoso, "License Plate Recognition and Reading Robot Using Image Processing", International Journal of Scientific Research in Engineering and Management (IJSREM) Volume: 03 Issue: 06 | June -2019.

➤ Prof. Samantha Cardoso, "Detection of 'No Parking' Signboards using Template Matching", IJSRD - International Journal for Scientific Research & Development| Vol. 7, Issue 04, June 2019 | ISSN (online): 2321-0613.

➤ Prof. Samantha Cardoso, "Fundamentals Of Image Processing In Matlab", International Journal of Scientific Development and Research (IJSDR) www.ijsdr.org June 2019 | Volume 4, Issue 6.

➤ Prof. Samantha Cardoso, "Analysis and Diagnosis of Glaucoma", IJSRD - International Journal for Scientific Research & Development| Vol. 7, Issue 04, June 2019 | ISSN (online): 2321-0613.

WORKSHOPS/SEMINARS/EXPERT TALKS ATTENDED

- Prof. Michelle Araujo, Prof. Trima P. Fernandes e Fizardo, Deron Rodrigues, Prof. Flavia Leitao, Prof. Mathilda Colaco, Prof. Yeshudas Muttu, Prof. Shreyashri Desurkar, attended a 1-day FDP on**"Introduction to Robotics"** organized by IITB e-Yantra team on the 11th and 12th of January 2019.

- Dr. Varsha Turkar, Prof. D. S Vidhya, Prof. Deron Rodrigues, Prof. Flavia Leitao & Prof. Mohini N Naik attended a blended mode workshop on "**Moodle Learning Management System**"at Don Bosco College of Engineering, organized by the Teaching Learning Centre (ICT) at IIT Bombayand funded by the (PMMMNMTT), MHRD, Govt. of India on 15 March 2019.

- Prof. Michelle Araujo, Prof. D. S Vidhya, Prof. Melba D'Souza, Prof. FlaviaLeitao, Prof. Selvyn Fernandes attended a two-day workshop on "**PCB Design using TINA**" organized by Forum for Innovation Incubation Research and Entrepreneurship (FIIRE), from 12th to 13th April 2019.

- Prof. Yeshudas Muttu successfully completed a 12-week NPTEL Certification course on "**Biomedical Signal Processing**" with a consolidated score of 56%, conducted by IIT Madras& SWAYAM, from Jan to April 2019.

- Dr. Varsha Turkar attended the sixth **"e-Yantra Symposium (eYS-2019)"** organized by e-Yantra, IIT Bombay, at IIT Bombay (5 and 6 April 2019)

COMMUNITY OUTREACH

- **Atal Tinkering lab**

  Atal Tinkering lab, Gov. of India initiative to train and educate young minds. ATL Community Day was celebrated on 13 April 2019 at St. Xavier'shigher secondary school at Mapusa. ATL Mentor of change Prof. Mohini Naik was invited as Guest of Honour for ATL Community Day 2019.

- **Unnat Bharat Abhiyan (UBA)**

Don Bosco College of Engineering under Unnat Bharat Abhiyan Scheme organized Poster Making Competition for students of Government High School, Balli Goa under

senior(Standard VIII-X) and junior category (Standard V-VII) on Women's Day: 8th March 2019. Prof. Yeshudas Muttu is the department co-coordinator for UBA.

- ➤ **Seminar on "Skills for Learning & Robotics"**

As a part of National Skills Qualification Framework (NSQF) under Ministry of Skill Development and Entrepreneurship, Government High School, Advoi, Sattari – Goa organized a seminar on "Skills for Learning & Robotics" in association with IEEE Student branch of Don Bosco College of Engineering, Fatorda – Goa on 1st March 2019. The lecture was delivered by Prof. Yeshudas Muttu, IEEE Branch Counselor and Mr. Renvick Fernandes, IEEE Student Member.

- ➤ **Robotics Workshop**

Don Bosco College of Engineering organized a Summer Course for students of class X, XI and XII from 13th to 18th May 2019. Prof. Flavia Leitao organized a half day Robotics Workshop on 17th May for these children to give them a basic idea and exposure to the world of Robotics.

Prof. Flavia Leitao briefed the students on the different types of Robots and their related applications.

They were also shown videos and demos of the different projects carried out by the students

> ## Quiz Competition – Boomerang 1.0

Department of Mathematics, St. Joseph Vaz College, Cortalim – Goa organized a Quiz Competition on Mathematics in Technology titled "Boomerang 1.0" in association with IEEE Student branch of Don Bosco College of Engineering, Fatorda – Goa on 4th April 2019. Prof. Yeshudas Muttu, Assistant Professor & IEEE Branch Counselor at Don Bosco College of Engineering, was the quiz master for the competition, who was assisted by Mr. Renvick Fernandes as a scorekeeper, an IEEE student of Don Bosco College of Engineering.

TRAINING & PLACEMENT

The ETC Engineering Department maintains a vibrant industry-academia relationship and the suggestions of the experts are taken as tools for its continuous improvement. The third year and final year students undergo a 2-week Internship Program under the guidance of experience professionals. This is to bridge the gap between education and Industry.

Several graduated students of the college are now occupying highly responsible positions in various reputed and prestigious organizations including Sankalp Semiconductors Pvt Ltd, Citrix, Visteon Technical & Services Centre Pvt. Ltd and Birla Furukawa Fiber Optics Pvt Ltd.

E-CELL

Entrepreneurship awareness camp

Don Bosco College of Engineering in association with Goa State Innovation Council organized a three-day entrepreneurship awareness camp at Rosary College of Commerce and Arts.

The faculty coordinator of the camp, Prof. Mathilda Colaço spoke of the objectives of the camp. Session 1 was conducted by Founder and CEO of Brush Flicks, Ms. Farheen Sayed who spoke on the topic "How to convert and idea into an Enterprise" while in the afternoon session Mr.

Ramchandra Salgaonkar, founder of a virtual marketing agency called Marketing Warriors, spoke on the topic "Identification of opportunities for entrepreneurs, Charms of becoming an entrepreneur, Creativity and problem solving exercise".

The other speakers Mr. Rajesh Ganokar (Project Officer at Goa State Innovation Council), spoke on the topic "Marketing Fundamentals for new business". Adv. ShaliniMenezes(qualified patent agent, Corporate and IP lawyer) delivered a session on the topic "Commercialization of IPR".Ms. Poonam Shirsat (Founder, Amon Ra's Academy of Broadcasting) who spoke on the topic "Creative and Business Communication Skills, Soft Skills development" and finally Mr. SudipFaldesai(Project Officer at Goa State Innovation Council) spoke on "Government Support Schemes for Entrepreneurs".

UPCOMING EVENTS

- One-week Certified Course on "Arduino and IoT" for the TE ETC students from 8th Jan to 12th Jan 2019
- One day workshop on "Ground station development workshop" for the SE ETC students on 6th July 2019
- One day workshop on "Tracking of Satellites" for the SE ETC students on 13th July 2019
- One day workshop on "Development of 5G antenna" for the TE ETC students and "Latex/Lyx" for the BE ETC students on 10^{th}Aug 2019
- One day workshop on "MATLAB" for the SE ETC students on 10^{th}Aug, 14th Sept, 12th Oct. 2019
- One day workshop on "Circuit Designing" for the SE ETC students on 24^{th}Aug. 2019
- One day workshop on "Machine Learning" for the TE ETC students on 24^{th}Aug. 2019
- Students Technical Event "TECHNOVA" by the ETC students on 27th& 28th Sept. 2019
- One day workshop on "Simulation and Analysis of Control System using MATLAB" for the TE ETC students and one day workshop on "PCB design and fabrication" for the BE ETC students on 12^{th}Oct. 2019.
- "Visit to Orphanage", IEEE Humanitarian Activity by IEEE Students on 19^{th}Oct. 2019