IMPACT OF MOU

Electronics & Telecommunication Engineering Departmental Newsletter (July 2019- June 2020)

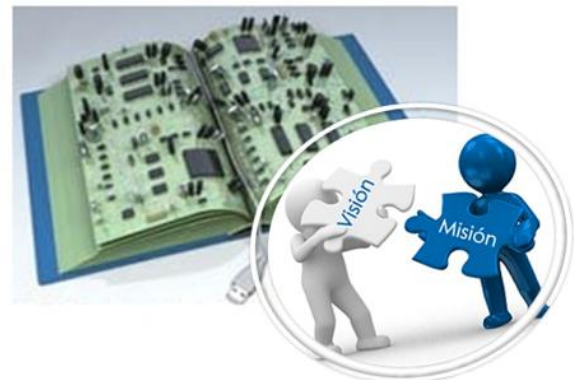## Inside this issue

➢ **MoUs Signed**

- Autotech Builds Automation, Mapusa, Goa and DBCE
- Eduvance, Educational arm of Vanmat Technologies Pvt. Ltd., Santacruz (East), Mumbai and DBCE
- Enviro Guru (OPC) Pvt. Ltd.
- InfiCorridor Solutions Private Limited
- SUN360
- Mrinq Technologies LLP

➢ **Trainings/Workshops/ FDPs/Expert Talk conducted**

- ARDUINO & IoT Workshop
- Expert talk- Use of Augmented Reality for Engineering Education
- Aerial Robotics workshop
- Drone Workshop
- Project -Mrinq Technologies LLP
- Project- Enviro Guru (OPC) Pvt. Ltd.
- Expert talk - Upcoming Trends in Renewable Energy

VISION

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

MISSION

- To impart education abreast with the fundamentals and 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 various skill enhancing activities and extra-curricular activities to instil high levels of work ethics and responsibility for a better society.

Memorandum if Understanding (MoU)

MoU with Autotech Builds Automation, Mapusa, Goa

A bipartite agreement in the form MoU was signed between Don Bosco College of Engineering, Fatorda, Goa and Autotech Builds Automation, Mapusa, Goa on 5th July 2018 in the Don Bosco Engineering College (DBCE) Campus.

Rev. Fr. Kinley D'Cruz (Director, DBCE) and Mr. Subodh Mone (Autotech, Mapusa, Goa) signed the MoU in the presence of Dr. Neena Panandikar (Principal, DBCE), Prof. Michelle Araujo (HOD, DBCE) and Prof. Flavia Leitao (Asst. Professor, DBCE).

After signing the MoU, Mr. Subodh Mone discussed the scope and objectives of the MoU, by stating that the MoU will:

- Provide Training and Internship as well as Placements at their organization or Placement Assistance at other organizations to the students of Don Bosco Engineering College.
- Conduct workshops, Training sessions, Guest lecturers and Technical model competitions at either organization as per the need and availability of the required resources.
- Conduct Field Visits at their organization or other organizations that are in collaboration with Autotech, Mapusa.

MoU with Eduvance, Vanmat Technologies Pvt. Ltd., Santacruz (East), Mumbai

Don Bosco College of Engineering, Fatorda, Goa has signed Memorandum of Understanding (MoU) with Eduvance, the educational arm of Vanmat Technologies Pvt. Ltd., Santacruz (East), Mumbai on 28th Sept. 2018.

Rev. Fr. Kinley D'Cruz (Director, DBCE) and Dr. Johnathan Joshi (CEO-Eduvance) signed the MoU in the presence of Dr. Neena Panandikar (Principal, DBCE),Dilip Balasubramanian (Training manager- Eduvance), Asst. Prof. Trima P. Fernandes e Fizardo (In-charge HOD, DBCE), Prof. Varsha Turkar and Asst. Prof. Flavia Leitao.

After signing the MoU, Mr. Dilip Subramanian discussed the scope and objectives of the MoU, by stating that the MoU will:

- Set up an "Embedded Systems Lab" at the Electronics and Telecommunication Engineering Department with hardware (PSoC-4 ARM Cortex kits) and licensed PSoC creator software donated by Cypress Semiconductors.
- Offers value added courses in collaboration with Cypress University Alliance (CUA) and courses created by Eduvance.

Prof. Flavia Leitao is identified as the SPOC (Single Point of Contact) for all Eduvance related activities.

MoU with Enviro Guru (OPC) Pvt. Ltd., InfiCorridor Solutions Private Limited, SUN360 and Mrinq Technologies LLP

There is always a talk about the gap between academia and industry. To bridge the gap, Don Bosco College of Engineering signed 23 MoUs on 15th October 2019 at the Taleigao Community hall under the auspices of the inaugural of the Centre for Excellence for Employability Enhancement (CEEE) in the presence of Hon. Chief Minister – Dr Pramod Sawant.

Out of the 23 MoUs Signed, 4 were with the Industries in the Electronic Domain, which are as follows: Enviro Guru (OPC) Pvt. Ltd., InfiCorridor Solutions Private Limited, SUN360 and Mrinq Technologies LLP.

The Objectives and scope of the MoU was to:

- To identify domains with mutual interest, and to further collaborate for capacity-building, research and development.
- To provide mentoring to selected students by the industry-counterpart in the form of internship and guidance for academic projects.
- To organise lecture series for students from industry experts.
- To aid learning process with hands-on in the form of guided mini projects.
- To enable interaction of college teaching staff with industry professionals for research and development.

Academic Year 2019-20

EDUVANCE: Certified Course on "ARDUINO & IoT"

As a part of the Internship training, the ETC department of DBCE in collaboration with Eduvance conducted a 6 day certified course on "Arduino & IoT", for the T.E students of ETC from the 8th to the 13th of July 2019. A total of 41 students attended the workshop that was certified from Microchip through Eduvance.

The Resource Persons for the workshop were Mr. Dilip Balasubramanium, Training Manager of Eduvance and Mr. Anuj Vaani, Systems Engineer of Eduvance.

The training included hands on sessions with the Arduino Uno for interfacing the LEDs, use of delays, control the LEDs using the switch, control the brightness of the LED using Pulse Width Modulation, interfacing the LCD, Moisture sensor, Temperature sensor and programming applications using serial communications, etc.

Students were also introduced to IoT concept using cloud "thingspeak". Students were taught to create their channels on thinkspeak and produce data.

Another cloud platform Node-red by IBM was also introduced and basic functioning was explained to the students who were then taught to create their account and implement various basic projects.

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

EDUVANCE: Expert talk on "Use of AR for Engineering Education"

The IETE Student Branch of Don Bosco College of Engineering, Fatorda-Goa organized an expert talk on the topic, 'Use of Augmented Reality for Engineering Education' under the IETE Goa Chapter. The talk was held on 16th October 2019. The talk was delivered by Dr. Jonathan Joshi, CEO of Eduvance. Eduvance is a premier training centre based in Mumbai which trains engineering students and faculty in various domains.
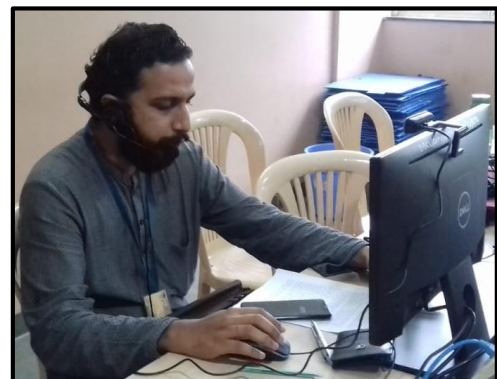

Dr. Jonathan Joshi first explained what is AR and the difference between AR and virtual reality VR. He spoke about the different modules associated in building an AR environment. Eduvance has also launched an app to teach students using Augmented Reality (AR)

The Expert talk was arranged by Dr. Varsha Turkar and IETE coordinator Dr. Shreyas Simu.

INFICORRIDOR SOLUTIONS: Four day online programme on "Aerial Robotics: designing for beginners"

The ETC Department of DBCE under the banner of DBEATS in collaboration with InfiCorridor Solutions Pvt. Ltd., Mumbai organized an Online four day programme on 'Aerial Robotics : Designing for Beginners' using Autodesk Fusion 360. It was conducted from 16th June to 19th June 2020 from 4 to 6 pm, conducted online using Microsoft Teams platform.

The resource persons for the sessions were Mr. Yash Turkar, Mr. Christo Aluckal and Mr. Sumedh G. Deshpande, all part of the Research and Development Team at InfiCorridor Solutions, under the direction of Dr. Yogesh Agarwadkar. The workshop covered the following concepts: 1. Designing the components from scratch 2. Assembling the components to create a model 3. Basics of Design and Systems Engineering 4. Rendering and Animating the models 5. Basics of Simulation using Finite Element Analysis.

This online workshop was coordinated by Dr. Varsha Turkar and Prof. Deron Rodrigues.This event was one of the activities planned under the MoU signed between InfiCorridor Solutions Pvt. Ltd. and DBCE.

EDUVANCE: Workshop on "Drone"

The IEEE Student Branch of DBCE, in collaboration with Eduvance and Drona Aviation organized three days hands on workshop on "Drone Design and Aviation, from 7th February to 9th February 2020. Prof. Yeshudas Muttu, IEEE Branch Counselor & Prof. Flavia Leitao were the faculty coordinators for the workshop, along with Dr. Varsha Turkur, HOD of ETC Dept.

The resource person for the workshop was Mr. Prathamesh Satardekar, Senior Systems Engineer & Mr. Ashish Yadav, Junior Systems Engineer from Eduvance, Mumbai. The main objective of this workshop was to give the student a hands-on experience of the latest technologies that are used in industry, such as Drones, AR (Augmented Reality) & VR (Virtual Reality).

The participants were asked to pair up in groups of two and were provided with the necessary components to assemble a drone. The students also learnt methods to program any hardware such as In System Programming (ISP), USB port programming and wireless programming. Finally they tested the experimental programs and APIs, and also were successful in flying the drones.

This event was one of the activities planned under the MoU signed between Eduvance and DBCE.

MRINQ Project - IOT based Agricultural field monitoring and control using BLE Mesh technology (2019-20)

Brief Idea of project:

A smart agricultural system was designed by using BLE Mesh Technology and Internet of Things. The system will automatically monitor the field using sensors placed at different nodes in the field forming BLE mesh network. The sensor data from various nodes in the field is made available to the farmer using IoT and Cloud on a website, so that the farmer can monitor and control the environmental changes as required for the crops.
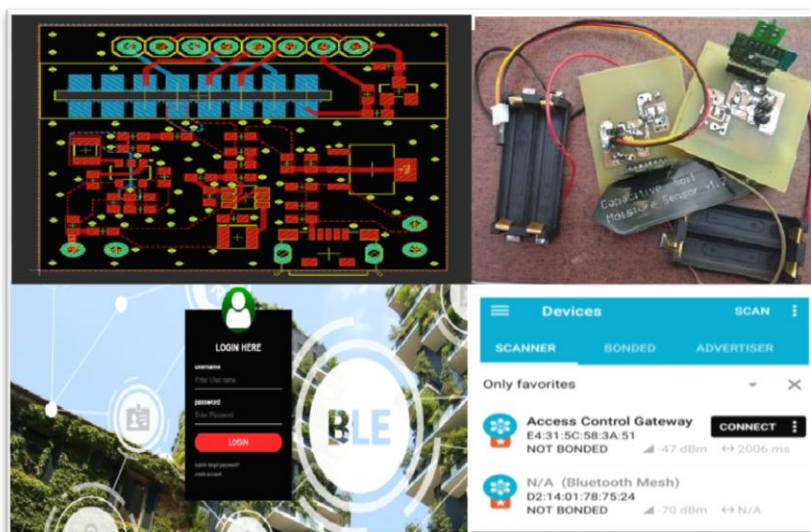

Project Members:

- Ms. Neha Shanbagh
- Mr. Sairaj Tamboskar
- Mr. Vishant Gaonkar
- Mr. Raviraj Bhagat

Internal Project Guides:

- Prof. Deron Rodrigues
- Prof. Flavia Leitao

External Project Guides:

- Mr. Malcolm D'Souza (Chief Technology officer & Co-Founder, MRINQ)

Enviro Guru Project - Air Pollution Detection and Prediction (2019-20)

Brief Idea of project:

The project aims to monitor the pollutants emitted from an industry/factory and predict the future dispersion of these pollutants and output these results in the form of reports for industries/factories.
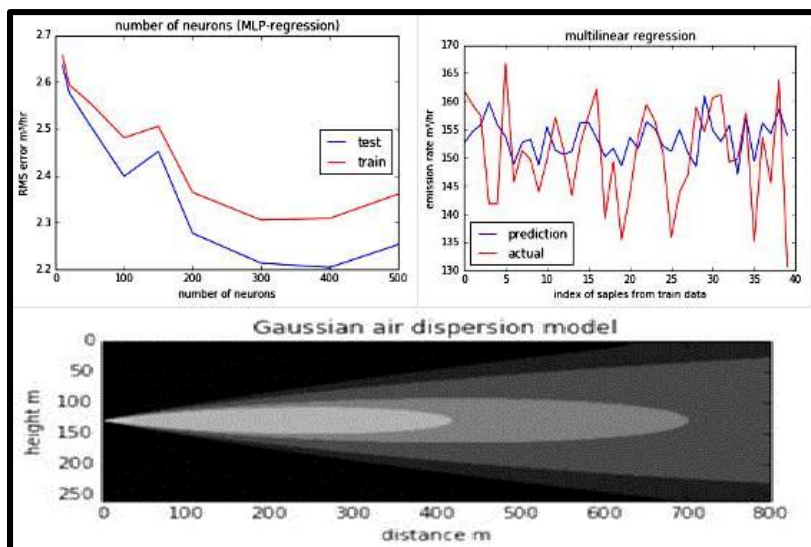

Project Members:

- Mr. Rohit Martires
- Ms. Swizel Monteiro
- Ms. Vrunda Asolkar
- Mr. Vaylon Fernandes

Internal Project Guides:

- Dr. Shreyas Simu
- Dr. Varsha Turkar
-

External Project Guides:

- Mr. Vassant Salgaonkar (Founder- Enviro Guru (OPC) Pvt. Ltd, FiiRE)

Applications:

- To predict the air pollution and its dispersion
- Helps industries and concerned department to take preventive measures

Expert talk on "Upcoming Trends in Renewable Energy"

Department of Electronics and Telecommunication Don Bosco College of Engineering in association with Sun360 conducted a talk on "Upcoming Trends in Renewable Energy" on 24th October 2019. The students from T.E ETC attended the event. The resource person for the talk was Mr. Anshul Mahale, Senior Engineer at Sun 360. He introduced the session on renewable energy and harvesting of renewable energy by highlighting various applications in day to day life. He spoke extensively on solar panels and the positive impact that the use of solar panels can have on the environment. He enlightened the students about the various projects taken up by Sun 360 and the amount of work in the field.

He familiarized the students with numerous projects that they could undertake in the domain of renewable energy and its application in day to day life. He also motivated them to work in the domain of renewable energy and save the environment. At the end of the session, he encouraged the students to ask questions which he answered elaborately.

The event was coordinated by Mrs. Anisha Cotta. The talk was very informative and appreciated by the audience.