

**Mar Baselios College of Engineering and Technology (Autonomous)**  
**ASSISTIVE TECHNOLOGY GROUP REPORT**

**July 2015 - June 2020**

**1. Visit to NISH AT devices Display**

Assistive technology Assessment Camp and devices Display was carried out by NISH on 6<sup>th</sup> February 2020. 15 students from MBCET accompanied by faculty members Ms. Joemole Joseph and Ms.P.P Hema attended the programme.



**2. Visit to Kanthari, Vellayani**

Five Students from ECE and Nature club members visited Kanthari on 21<sup>st</sup> December 2019 and met Ms. Sabriye Tenberken. They also discussed about

the project "Assistive Technology for Blind Swimmers " They were accompanied by faculty Ms. Lani Rachel Mathew.



### **3. Project Presentation at NISH**

The various projects related to Assistive technology was presented in NISH on 26<sup>th</sup> November 2019. The students got valuable suggestions from the faculties of NISH. 17 students from MBCET were accompanied by faculty members : Dr. Shalu George, Ms. Manju Sreekumar, Ms. Joemole Joseph, Ms. Lani Rachel Mathew, Ms. P.P. Hema. Dr. Akila S. and Ms. Manju S. shared their views on the project design.



**Project 1: Location Tracking for Blind Swimmers**

Guide: Ms. Hema P. P.

Students: Ms. Aparna Padman, Ms. Jisha D. Saiju, Ms. Prabitha Prasad, Ms. Sheethu Gopal

**Project 2: Electrolaryngeal Speech Enhancement**

Guide: Ms. Lani Rachel Mathew

Students: Ms. B. S. Shreelekshmi, Ms. Jubily V Reji, Ms. Nandana R, Ms. Nissie Mary Johnson

**Project 3: Smart Glove**

Guide: Ms. Manju Sreekumar

Students: Ms. Anakha L. V., Ms. Lavina Vijay, Ms. Parvathy Ajayan, Ms. Souparnika V. M.

**Project 4: Tongue Motion Detector Wheelchair**

Guide: Dr. Shalu George K.

Students: Ms. Adithya S. Kumar, Ms. Anulekshmi A. S., Ms. Aparna K. P. Srikanth, Ms. Bhavana Suresh

**4. Accolades of Students from Assistive technology Group**

- **Deepthi G.A, Athul Raj A. , Gokul G.S.,Navaneeth Krishnan** secured second prize for the topic “Track Follower for Blind Long Jumpers” in Idea presentation event hosted by NEXUZ on 11<sup>th</sup> and 12<sup>th</sup> October 2019 at MBCET.
- **Vishnu P Kumar** won the first prize for the project “Chess Board for the blind” in the project presentation event hosted by NEXUZ on 11<sup>th</sup> and 12<sup>th</sup> October 2019 at MBCET.





## **5. MoU signed between MBCET and NISH**

**Date: 15th February 2019**



## **6. CASHI (Connected Announcement System for Hearing Impaired) project successfully installed in a computer lab at NISH**

**Date: 25th January 2019**

Connected Announcement System for Hearing Impaired (CASHI): Funding (Rs. 9000/-) for LED boards for one classroom released from NISH.

Students: Pranav Peter, Joel Raju (S5 EC1)

Faculty in charge: Ms. Hema P. P., Lani Rachel Mathew



## **7. Final Demo of Speech Analyzer: 27th March 2018**

Students: Krishnendu Lalaji, Pooja G. S., Rahul Krishnan K. S. (S8 EC2)

Results presented at Empower 2018 (25 – 27 October 2018) – Conference on Assistive Technology organized by IIT Delhi

## **8. Internship at NISH: July 2017**

Our first MBCET interns at NISH: Ms. Greeshma Susan John and Mr. Neeraj S. (S7 EEE) and Ms. Amitha Baby (S7 ECE)

## **9. Oct 14, 2017: NISH Day 2017**

Staff who attended: Ms. Jomole Joseph, Ms. Lani Rachel Mathew

**10. November 10, 2017: Meeting at NISH** with staff and students of S7 and S5 ECE and EEE to discuss projects and interact with deaf students

## **11. Project Demonstrations:**

### **Vocal Tract Resonance Measurement**

Student members (S7 ECE): Nilu Anna George, Rohit S., S. Selva Ganam, Vamsee Krishnan S.

Faculty: Lani Rachel Mathew

April 11, 2017: Research Proposal submitted

Vocal Tract Resonance Measurement Demo: May 12, 2017



## **Fundamental Frequency Estimation using Praat**

Student members (S7 ECE): Krishnendu Lalaji, Pooja G. S., Rahul Krishnan K. S.

Faculty: Lani Rachel Mathew

April 11, 2017: Research Proposal submitted

Fundamental Frequency Estimation Demo: September 18, 2017



### **12. May 4, 2017: Meeting at NISH from MBCET**

#### **Members from NISH**

Dr. Samuel N. Mathew, Executive Director, NISH, Dr. K. G. Satheesh Kumar, Director, Centre for Assistive Technology and Innovation (CATI), Dr. Akila Surendran, Senior Engineer (CATI)

#### **Members from MBCET**

Dr. T. M. George, Principal, MBCET, Dr. M. J. Jayashree, HoD, ECE, Ms. Lani Rachel Mathew, Asst. Prof., ECE, Ms. Jomole Joseph, Asst. Prof., EEE, Ms. Anne Dixon, Asst. Prof., CSE

### **13. January 12, 2017: Talk on 'Technological advances in neuroscience, hearing and voice'**

Dr. Suja Kunnath and Ms. Manju S.

STTP on Image and Speech Processing with Practical Applications (ISPPA'17), MBCET

**14. August 2015 – Dec 2016:** Joint study of use of digital signal processing in Voice evaluation, Internal Research proposal

**15. July 24, 2015 – First meeting at NISH**

Dr. Suja Kunnath, Head, Dept. of Neurodevelopmental Sciences, NISH

Ms. Manju Subrahmanyam, Head, Clinical Coordinator, NISH

Ms. Lani Rachel Mathew, Asst. Prof, ECE, MBCET

**16. First communication with NISH:** Dr. K. N. Pavithran, the first Executive Director of NISH, contacted by Dr. Sakuntala S. Pillai, former Dean (R&D), MBCET in July 2015, introduced us to Dr. Suja Kunnath of NISH.