**DEPARTMENT ACHIEVEMENTS (2021-2022)**

The students of Robotics and Automation Department had organized a project expo at Mithram School and Rehabilitation Centre as a part of Science Week Celebration on March 5th 2022. Automatic hand sanitisers developed by the students were also handed over to Mithram authorities by Dr Deepa Elizabeth George (Head of the Department and IEEE Toc H SB Counsellor), Asst Prof Dhanya R (IEEE WIE Coordinator) and Mr Sreesankar (IEEE Toc H SB Chair)



Toc H has MoU with **Shrishti Robotics Technologies Pvt. Ltd.** & **EyeROV Technologies Pvt. Ltd. Kochi** for Industry-academia collaborations, internships and industrial training for students. Srishti Robotics is one of the leading companies in Kochi offering training in Robotics, Embedded systems and IoT. EyeROV is a fast-growing marine robotics company, providing products and solutions in the field of underwater domain to various Defence and Research organizations.



**Tie up institute-ATAL Tinkering Lab, Fathima Central School, Piravom**
We are happy to announce that Toc H is now the tie-up institute for setting up the ATAL Tinkering Lab at Fathima Central School, Piravom. The lab was inaugurated on Oct 23, 2021, by Anoop Jacob MLA in presence of other dignitaries, and the event was felicitated by Dr. Deepa Elizabeth George, HOD Dept of Electronics.

Department of Electronics at Toc H will be the mentor department for the lab. The Skill Planning and Acquisition (SPAN) Cell of the department will be providing training sessions to students. The key areas of training are embedded systems and Robotics.

## STUDENT ACHIEVEMENTS

Students of second-year B.Tech Robotics and Automation, Department of Electronics, bagged first and third positions in the **Student Project Expo** conducted by **IEEE RAS Kerala Chapter** in **All Kerala Robotics and Automation Society Conclave '22** (**AKRASC** 22') on March 6th, 2022.

**Winning Projects**

**1. CNC Plotter:**

**Team members**: Rajesh. V, Justin Paul Cherian

CNC Pen Plotter is a project built to draw complex line drawings as per the G-code. Universal G-code Sender (UCS) is the software used to get the location of the pen in the XY plane. Inscape is the software used to convert an image into G-code. The converted G-code of the image is uploaded into UGS which operates the CNC Pen Plotter as per the code to draw the image.



2. **Wheeled Robot:**

**Team Members**: Adarsh V. s, Jedin Jebi Mathew, Joseph Mathew Thuruthiyil

This project blends IoT with Robotics and uses a wheeled robot. The robot picks and places an object from one location to another using a command from the mobile application. The wheeled robot used here has five Degrees of Freedom(DOF). The applications of the project include lifting and moving heavy objects thereby increasing productivity, improving safety and efficiency, saving time, and making it easy to monitor and control processes.



The team 'EMERANS' comprising **of Muhammed Rishan, Thimna Raphel, Jyotsna K G,Ganga S R and Amal Roshan** of **batch RA 2019-'23** were the winners of "LIFEATHON Season 2 – Connecting students with Start-ups" organized by IEDC Christ College of Engineering and Kerala Startup Mission.
They got selected out of the 84 entries from 32 colleges and their solution for the problem statement "Baby Monitoring System for Cradle" will be funded by Shristi Robotics.

Faculty Supervisors-**Dr. Deepa Elizabeth George**, HOD, Department of Electronics and **Dr. Georgina Binoy Joseph**, Associate Professor, Department of Electronics.



**WINNERS OF LIFEATHON SEASON 2**
"BABY MONITORING SYSTEM FOR CRADLE"

| Muhammed Rishan S4 RA | Thimna Raphel S4 RA | Jyotsna K G S4 RA | Ganga S R S4 RA | Amal Roshan S4 RA |

Dr. Deepa Elizabeth George
HOD, DoE

Dr. Georgina Binoy Joseph

**TUNNEL RAT: UBA funded socially relevant project**
'Tunnel-Rat' (Pipe-Bot) -The gutter cleaning robot can accurately monitor the obstacles in the drains and also clean them up easily. The project is an initiative under the Department of Electronics – 'Impact Lab'. It was funded by the Ministry of Human Resource Development under its 'Unnath Bharat Abhiyan' scheme.Final year students- **Chinnu P B, Parvathy Kannan, Sreenivas Kammath and Cliffin Jose (Batch 2017-'21 )** have developed this

project under the guidance of **Assistant Professors Dhanya R, Swathy Satheesh and Shiyon. P. Johnson**. This socially relevant project has already grabbed the attention of the public and is ready to be implemented in Chottanikara panchayat.

College Principal Dr. Preethi Thekketh, Toc H Public School Society President Dr. Alex Mathew, Director Board members Er. C.S. Varghese, Mr.K.K.Mathew, Head of the Department Dr.Deepa Elizabeth George handed over this project to the Chottinakara Gram Panchayat on September 20th in a ceremony held at Ramanujam hall, Toc H Institute of Science and Technology .Panchayat President Mr. M.R. Rajesh received this project along with Panchayat Development Board Chairman Mr. K.K. Siju.

**Jayakrishnan P U** of **RA Batch 2019-'23** has won the EMOJI Contest conducted by TinkerHub, Kochi on October 2021.

**Gautam Sunil, Anfil Shajo** and **Hafiz Shefeekh** of **ECE Batch 2020-'24** has secured 2nd position in the ROBORACE competition (Gesture controlled robot) organized by KMEA Engineering College in association with IEEE and e-yantra Robotics lab on October 1st, 2021
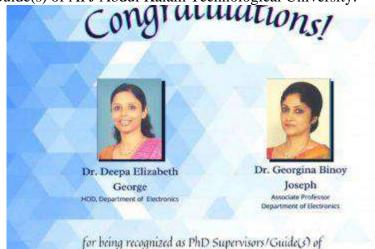




**Justin Joe** of **RA Batch 2020-'24** won the ENIGMA competition conducted by IEEE SB IIT Kottayam, on August 20th, 2021, as part of Inter Student Branch cluster competition organized by IEEE Kochi Hub.

**Anfil Shajo** and **Gautham sunil** of **RA Batch 2020-'24** bagged First prize for All Kerala B.Tech Project Competition organized by AISAT college on August 7th ,2021. They received a cash prize of Rs.10000.



## FACULTY ACHIEVEMENTS

**Dr. Deepa Elizabeth George**, HOD, Department of Electronics and **Dr. Georgina Binoy Joseph**, Associate Professor, Department of Electronics has been recognized as PhD supervisors / Guide(s) of APJ Abdul Kalam Technological University.



Department congratulates **Dr. Georgina Binoy Joseph**, Associate Professor, Department of Electronics, for being one among the 20 winners of the Ideathon conducted by ARM STMicroelectronics, AICTE ATAL on 26th August 2021.





Department congratulates **Dr. Deepa Elizabeth George**, HOD, Department of Electronics, for getting elevated to the grade of IEEE Senior member. IEEE Senior Membership is an honor bestowed only to those who have made significant contributions to the profession.