Toc H INSTITUTE OF SCIENCE & TECHNOLOGY

Arakkunnam, Ernakulam. Tel: 0484 2748388, email: mail@tistcochin.edu.in, website: tistcochin.edu.in

DEPARTMENT OF ELECTRONICS, TIST

BTech ECE, BTech RA, MTech Wireless Technology

IMPaCT - Innovative Methods, Projects and Community Technologies Lab

IMPaCT Lab ACTIVITIES - 2021-2022

IMPaCT Lab conducted Ideathons, Hackathons in association with SPAN of the Department of Electronics to encourage students to identify relevant problems in society, ideate and implement technological interventions to tackle these problems. Students and Faculty are encouraged to participate in competitions conducted externally also.

INNOVICON'21

Lifeathon Season 2

All Kerala Robotics and Automation Society Conclave

Best Robotic Project - National Level Technical Project Exhibition SRISHTI-2022

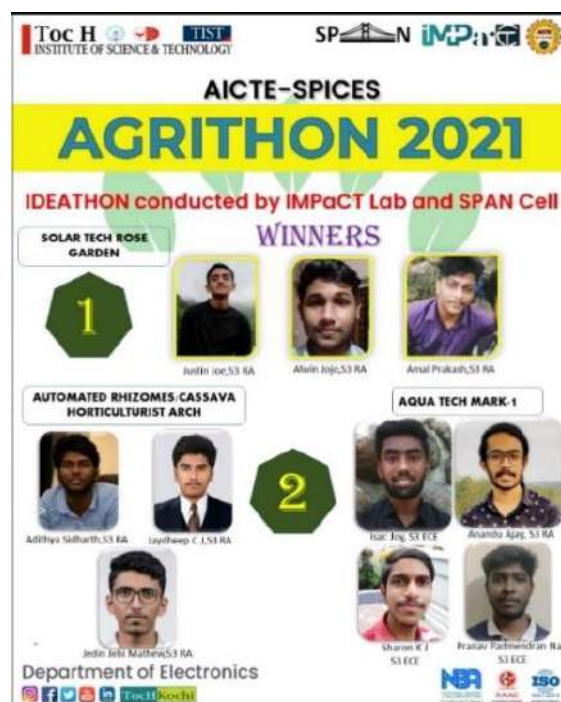**KTU – Financial Assistance to Student Projects Scheme**

Ideathon 2021 (Theme: Innovative and Socially Relevant Projects) in association with SPAN, DoE

The Well Cleaning Robot is a device to automate the hazardous and difficult task of cleaning wells.

Agrithon 2021 (Theme: Technology based solutions for current problems in Agriculture) in association with SPAN, DoE

Agriculture and maintaining food security faces the challenges of global warming, climate change, unscientific and unplanned cultivation leading to soil degradation and unviable labor costs. This Hackathon gave students an opportunity to explore these challenges and provide technological solutions to benefit this field.
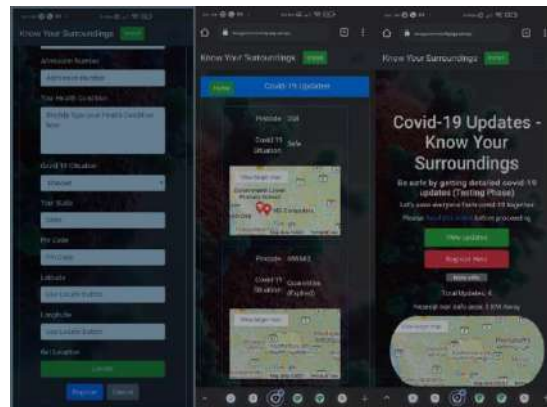

Healthcare Hackathon 2021 (Theme: Affordable Healthcare Technologies) in association with SPAN, DoE

The HeathCare Hackathon provided a platform for students to provide technology-based solutions to problems related to health and allied areas - Diagnostic, Therapeutic, Prosthetic Devices and more, at an affordable cost.

KSCSTE Funded Project - Covid Tracer – An Approach to CZ Mapping

Covid Tracer is a system which incorporates a CZ (Critical Zone) mapping technique. It includes a website to update health conditions of visitors at public places and to intimate the primary health units regarding the same. This leads to early monitoring of symptoms enabling the infected person to undergo self-quarantine on an immediate basis ensuring safety. It also aims to help people avoid travelling through areas with a high number of Covid cases by implementing CZ mapping thus reducing risk of exposure.

ROBORACE competition (Gesture controlled robot)

Gautam Sunil, Anfil Shajo and Hafiz Shefeekh – RA (2020-24 batch)

COMPETITIONS

S. NO.	DATE	PROGRAM	CONDUCTED BY	PRIZE
External Competitions				
1	16.8.2021	INNOVICON'21	IEDC, AISAT	1st Prize: Gautham Sunil, Anfil Shajo
2	25.8.2021	IDEAthon	STMicroelectronics, ARM Education, ATAL AICTE	IDEAthon Winner – Dr. Georgina Binoy Joseph
3	1.10.2021	OBORACE competition (Gesture controlled robot)	KMEA in association with IEEE and e-yantra Robotics lab	2nd Prize - Gautam Sunil, Anfil Shajo and Hafiz Shefeekh
4	23.10.2021	Lifeathon Season 2	IEDC, CCE	1st Prize Team Emarans Students: Muhammed Rishan PC, Ganga S R, Jyotsna K G, Thimna Raphel, Amal Roshan, S5 RA Faculty Mentors: Dr. Deepa Elizabeth George, Dr. Georgina Binoy Joseph
5	6.3.2022	All Kerala Robotics and Automation Society Conclave	IEEE Kerala RAS Chapter	1st Prize: Rajesh V, Justin Paul Cherian, S3 RA
				3rd Prize: Adarsh VS, Jedin Jebi Mathew, Joseph Mathew Thuruthiyil
6	26.4.2022	Best Robotic Project	National Level Technical Project Exhibition - SRISHTI-2022	1st Prize: Anfil Shajo, Justin Paul (S3 RA) & Rizwan M. Shiras (S2 RA)

S. NO.	DATE	PROGRAM	BATCH	NUMBER OF STUDENTS	PRIZE
		Competitions @ TIST			
1	18.10.2021	Ideathon 2021 (Theme: Innovative and Socially Relevant Projects) in association with AICTE SPICES for SPAN	S7 ECE	35	1st Prize: Well-X- Well Cleaning Robot - Doel P James, Mary Shiya Shaji, Susan Thomas, Suraj S, S7 ECE Faculty Mentors: Asst. Prof. Rekha George, Asst. Prof. Anitha K Mohan
2	6.12.2021	Agrithon 2021 (Theme: Technology based solutions for current problems in Agriculture) in association with AICTE SPICES for SPAN	S3 ECE S3 RA	28 46	1st Prize: Solar Tech Rose Garden - Justin Joe, Alwin Jojo, Amal Prakash, S3 RA 2nd Prize: Automated Rhizomes/Cassava Horticulturist ARCH - Adithya Sidharth, Jaydheep C J, Jedin Jebi Mathew, S3 RA 2nd Prize: AQUA TECH MARK-1 - Pranav Padmendran Nair, Isac Joy, Sharon K J, S3 ECE, Anandu Ajay, S3 RA
3	6.12.2021	Healthcare Hackathon 2021 (Theme: Affordable Healthcare Technologies) in association with IMPaCT Lab, DoE	S5 ECE S5 RA	34 59	1st Prize: Wrist band to save people from sleep paralysis - Ancelin Saleel T K, Quentin P Shaji, Rithwik K A, Neena P S, S5 RA 1st Prize: Mobility Device for Blind - Abhijith S Dev, Amal Roshan K, Aminath Hyra, Sonu Jaleel, S5 RA 2nd Prize: Amb-Info - Adwaith S, T S Devanarayanan, Ayester Denny, Vishnu Shaji, S5 ECE 2nd Prize: Patient Monitoring System Using IoMT -Thimna Raphel, Jyotsna K G, Ganga S R, Muhammed Rishan P C, S5 RA

IMPaCT Lab Projects for External Funding

S. No.	PROJECT TITLE	AGENCY	STUDENTS	FACULTY
1	Covid Tracer – An Approach to CZ Mapping	KSCSTE	Santhosh T.R., Shilpa Sassi, Eldho Paulose, Aswin Sibi, S3 ECE	Asst. Prof. Dhanya R, Asst. Prof. Swathy Satheesh
2	Smart Mirror	KTU – Financial Assistance to Student projects Scheme	Akshara Sajeevan Ann Mary Abraham Aswathy Meria Peter Honeymol M Jose	Assoc. Prof. Dr. Georgina Binoy Joseph, Asst. Prof. Sreelekshmi S
3	ACCI-LERT System	KTU – Financial Assistance to Student Projects Scheme	Anagha Biju Betty George KP Manjulika Sneha Baby.KX	Asst. Prof. Girish P, Asst. Prof. Sajitha K S

IMPaCT Lab Patents Filed

S. No.	PROJECT TITLE	DATE & PATENT OFFICE	Faculty
1	A Portable and Rapid Malaria Detecting Device	24.01.2022, South African Patent Office	Dr. Georgina Binoy Joseph, Dr. Deepa Elizabeth George, Neethu George, Deepa Mary Varghese, Dhanya Rajeswari
2	A System to Clean Waste from Tunnels	10.3.2022, Indian Patent Office	Dr. Deepa Elizabeth George, Dhanya Rajeswari, Swathy Satheesh, Shiyon. P Johnson, Dr. Georgina Binoy Joseph

Dr. Georgina Binoy Joseph

Faculty Coordinator