



AICTE – CII Survey of Industry-Linked Technical Institutes 2020

VESIT achieved the esteemed rating in the above 30 score band [PLATINUM] among 814 institutes in India that were shortlisted by AICTE, New Delhi for a full survey this year.

List of Institutions which Participated in the Survey along with their Rating

S.No	Name of Institute	Institute Type	AICTE Region	State	Score Band	Rating
795	VIVEKANAND EDUCATION SOCIETY'S COLLEGE OF PHARMACY	Self-financing	Western	Maharashtra	Above 30	Platinum
796	VIVEKANAND EDUCATION SOCIETY'S INSTITUTE OF MANAGEMENT STUDIES AND RESEARCH	Self-financing	Western	Maharashtra	10 and below	Silver
797	VIVEKANAND EDUCATION SOCIETY'S INSTITUTE OF TECHNOLOGY	Self-financing	Western	Maharashtra	Above 30	Platinum



ACHIEVEMENTS

AICTE – CII Survey of Industry-Linked Technical Institutes 2020

Status of some nearby Engineering College

Name of the Institute	Score Band	Rating
THADOMAL SHAHANI ENGINEERING COLLEGE	10 & Below	SILVER
D. Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY	10 & Below	SILVER
ATHARVA COLLEGE OF ENGINEERING	Between 11 to 29	GOLD
TERNA PUBLIC CHARITABLE TRUST'S TERNA ENGINEERING COLLEGE	Between 11 to 29	GOLD
MCT'S RAJIV GANDHI INSTITUTE OF TECHNOLOGY, MUMBAI	Between 11 to 29	GOLD
THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY	Above 30	PLATINUM
K.J. SOMAIYA INSTITUTE OF ENGINEERING & INFORMATION TECHNOLOGY	Above 30	PLATINUM



SWADESHI MICROPROCESSOR CHALLENGE -2020

organized by the Ministry of Electronics and Information Technology, Govt. of India in collaboration with C-DAC, IIT Madras, MyGov and MakerVillage under #AatmaNirbharBharat Abhiyan.

Out of 6000 teams


Three (03) teams from VESIT were selected in Top 100 (Semi Finals)

Each Semi-finalist got a funding of Rupees 100000/- (one lakh) towards creation of start-up and project expenses.


SWADESHI MICROPROCESSOR CHALLENGE -2020

Team 1


Team 1: Calibration System for Nuclear Spectroscopy Applications



Mentor: Dr. P. P. Vaidya
H. O. D.
R&D and Dept. of Instrumentation Engineering




Prof. Asma Parveen I. Siddavatam
Assistant Professor
Dept. of Information Technology




Mr. Ajit Tukaram Patil
M.E. Student
Instrumentation and Control

Team 2


Team 2: Swadeshi Battery Management System




Mentor: Prof. Mrugendra Vasmatkar
Assistant Professor
Dept. of EXT C Engineering




Mr. Paarth Arkadi
B.E. Student
Electronics Engineering



Mr. Vaibhav Ghaisas
B.E. Student
Electronics Engineering



Mr. Amogh Gajre
B.E. Student
Electronics Engineering



Mr. Shubham Singh
B.E. Student
EXTC Engineering

Team 3


Team 3: High resolution Multichannel analyzer for nuclear spectroscopy applications



Mentor: Dr. P. P. Vaidya
H. O. D.
R&D and Dept. of Instrumentation Engineering



Mrs. Lekshmi Ajesh Kaimal
Senior Research Fellow
Dept. of Instrumentation Engineering



Prof. Gopalakrishnan N
Assistant Professor
Dept. of Instrumentation Engineering

SWADESHI MICROPROCESSOR CHALLENGE -2020

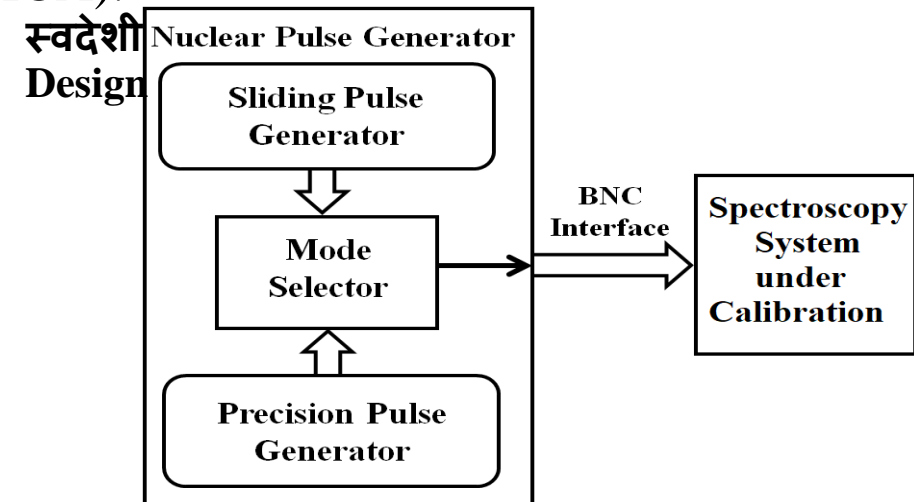
TEAM -1

Calibration System for Nuclear Spectroscopy Applications

Aim: To develop “स्वदेशी Nuclear Pulse Generator” that serves as a high-end Calibration System for Nuclear Spectroscopy Applications.

Objectives : To provide a fully operational **Sliding Pulse Generator** and **Precision Pulse Generator** and Calibration-Testing of high-resolution Nuclear Spectroscopy Analyzers such as Multichannel Analyzer (MCA).

➤ *Final Product :*
Portable workbench type Instrument with display and user control interface.





SWADESHI MICROPROCESSOR CHALLENGE -2020

TEAM -1

Calibration System for Nuclear Spectroscopy Applications

Business viability of proposed hardware Prototype

Applications: Nuclear Pulse Generator – Calibration and Testing of Nuclear Spectroscopy Systems such as Multi-Channel Analyzer (MCA), Calibration of high-quality Astrophysical Spectroscopy System, Calibrator for Analog to Digital Converter (ADC) , Precision Function Generator, Multi-featured Calibration and Test system , Generation of pulse amplitude distribution (Uniform Distribution, Gaussian Distribution etc.) for Stochastic Experiments.

The key players in global Nuclear Pulse Generator market :

- Berkeley Nucleonics Corporation (California, USA) , ORTEC (Tennessee, USA), FAST ComTec (Oberhaching, Germany)

Commercially available Nuclear Pulse Generator - Approx. \$ 6000/- (USD)

Estimated component cost स्वदेशी Nuclear Pulse Generator - Approx. Rs. 40000/- (around \$ 540/- USD)



SWADESHI MICROPROCESSOR CHALLENGE -2020

TEAM -2

Swadeshi Battery Management System

- **Functioning BMS Board:**

- 1. Functioning BMS pcb with Overcharge/discharge/current and short ckt protection, able to sense voltage,current,temperature,isolation faults, with Passive cell balancing/Active Cell Balancing
- 2. Focus on accuracy, precision and safety using Isolation and EMI filters
- **Algorithms:** SOC (State of charge) estimation, SOH (State of Health) estimation, SOL (State Of Life) estimation

- ☒ **Physical Deliverables:**

- **Hardware:** AFE (Analog Front End Board) satisfying the above mentioned criteria for 12 cell Li-Po interfaced with the shakti processor; Current Sensor; Motor and motor driver as load, esp8266 for IOT connection; ADC modules
- **Algorithms:** Calculation of SOC, and logging of data for SOH and SOL calculation



SWADESHI MICROPROCESSOR CHALLENGE -2020

TEAM -3

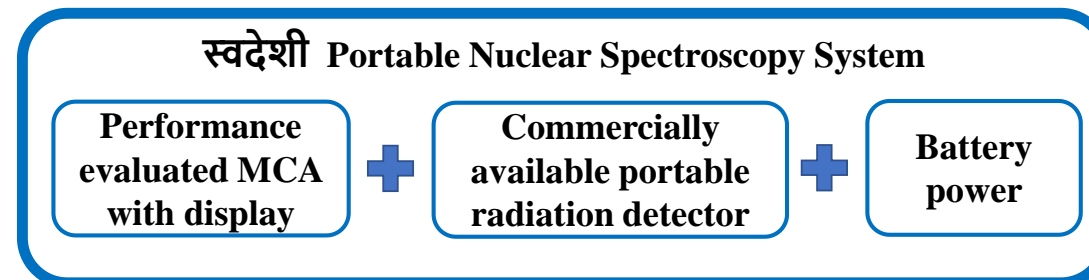
High resolution Multichannel Analyzer for nuclear spectroscopy applications

Aim: #Atmanirbhar Bharat in field of Nuclear Spectroscopy

Objectives : To develop a portable स्वदेशी high resolution Multichannel Analyzer for Nuclear Spectroscopy applications

➤ Redesigning MCA with स्वदेशी

➤ *Final Product : Battery operated MCA with portable nuclear radiation detector system and display*





SWADESHI MICROPROCESSOR CHALLENGE -2020

TEAM -3

Business viability of proposed hardware Prototype

Applications

Nuclear physics research laboratories and institutes , Departments of the Atomic Energy

Scrap yards , Naval ports , Academia, research industry, & pharmaceutical.

Pulse height analysis (PHA) - electronic, & optical spectral signal analyzing & instrument calibration

Cost comparison of proposed hardware prototype vis-à-vis similar solutions elsewhere.

The key players in global Multichannel Analyzer market :

AMETEK ORTEC, Amptek, Phywe Systeme, Multi Channel Systems, Berkeley Nucleonics, and XOS.

Commercially available Multichannel Analyzer - Approx. 5-7 lacs

Component cost of Portable स्वदेशी Multi-Channel Analyzer - Approx. 1.5lacs



India Innovation Challenge Design Contest (IICDC)

organized by **Department of Science and Technology (DST)** and **Texas Instruments (TI)**, anchored by **NSRCEL@IIMB**, powered by AICTE mission and supported by MyGov.

More than 18,000 teams had registered

Two (02) Projects/Teams of VESIT selected in Top 60 which qualified for the finals and **are currently trained under NSRCEL@IIMB Launchpad.**

India Innovation Challenge Design Contest (IICDC)

TEAM -1

Project Name : Multi-Functional Detachable Applications For Drones

Tema Name : Dronevolution

Mentor Name : Mrugendra M Vasmatkar

The planned applications to be implemented on drones are: All Terrain Attachment, Pollution and weather monitoring and Mapping, LIDAR Based Mapping and Military Surveillance, Fire Fighting combined with Solar Panel Cleaning, Agricultural Watering with Pesticides Spraying, Secured Delivery Attachment



TEAM -1

Project Name : Multi-Functional Detachable Applications For Drones

Tema Name : Dronevolution

Mentor Name : Mrugendra M Vasmatkar

**SILVER MEDAL WINNER
IN
15th Inter-Collegiate/Institute/Department
Avishkar Research Convention: 2020-21
UNIVERSITY OF MUMBAI**



India Innovation Challenge Design Contest (IICDC)

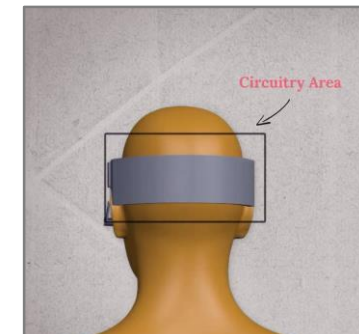
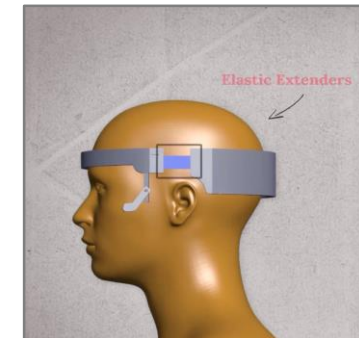
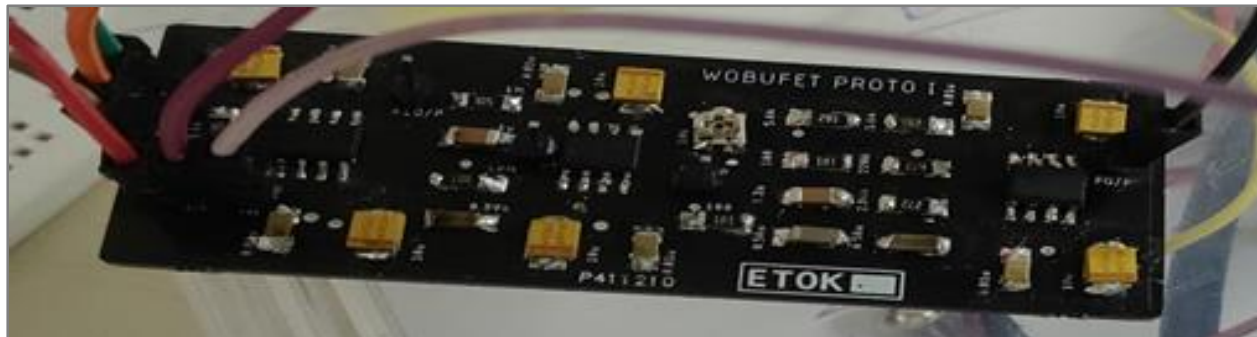
TEAM -3

Project Name : EOG Drowsiness Detection System

Team Name : Wobuffet

Faculty mentor - Ms. Sangeetha Prasanna Ram

A wearable device that will continuously monitor for instances of drivers being drowsy and if such a scenario occurs, alert them and/or trigger some safety mechanisms in the vehicle.





TOYCATHON 2021

Toycathon 2021 is a unique opportunity for Students, Teachers, Start-ups and Toy experts/professionals in India to submit their innovative toys/games concepts and win large numbers of prizes worth Rs. 50 lakhs.

Ideas from VESIT have been shortlisted for the Grand Finale of Toycathon 2021.

- **Team: Path Finder** Electronics and Telecommunication Department

Mentor : Mrs. Ashwini Sawant

Title: To help identify children of age 8-13 years how different crops look like.

- **Team : Code Linguistic**, Computer Engineering department

Mentors: Mrs. Priya R L, Mrs. Mannat Doultani

Title: Ethnicity of India: Diversity in culinary practices.विवेक्याम Bharat

- **Team : Saarthi**, Electronics and Telecommunication Department

Mentor: Mr. Mrugendra Vasmatkar

Title : Rediscovering India!!



UNNAT BHARAT ABHIYAN

**Submission of Four (4) proposals for Unnat bharat abhiyan
Estimated costing of each proposal was Rs.1,00,000.**

**Currently VESIT received Rs.50,000,- as a sanctioned fund on 01/06/2021 for the
proposal "**Surya Sakshamta: Pragati Ka Sulabh Marg**". Three(03) proposals are
still in process.**

Title of the project: Surya Sakshamta:

Village : Ambiste Kh, Tahsil- Vada, Dist- Palghar, Maharashtra, India.

VESIT-IIC Receives 4.5 Star Rating

Institute Innovation Council(IIC) VESIT in an instance of absolute prestige has been awarded a 4.5 Golden Star Rating for the academic year 2019-20.



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PROJECT SWECHCHA

Project Swechcha is a “Public-Private-User Participatory Model” proposed for monitoring of Operation and Maintenance of Public Toilets.

The CSR- Financial Partner is **Star Union Dai-ichi Life Insurance Co. Ltd. (SUD Life)** who proposed to provide financial assistance of **Rupees 24 lakhs** for the **project VESIT-IT Swechcha**.

Phase-1: Data gathering (User, CT and PT) in the Physical form and verification of the same.

Phase-2: Digitization of the data/Feeding the data to the system

Phase-3: Training for the stakeholders

Phase-4: Data Analytics, report generation, hand-holding and support

PROJECT SWECHCHA



Mr Gnana William: Chief Internal Auditor of SUD, Trustee of SUD Life Foundation,

Mr Abhay Tiwari: Chief Actuary and Joint President of SUD Life

Mr Rakesh Kumar: Company Secretary of SUD and Managing Trustee of SUD Life

Mr Rajesh Mourya: Manager, CSR, SUD Life

Mr Anand Jagtap, Ex MCGM - OSD Slum Sanitation Program,



EducationWorld India Private Engineering Institutes Rankings 2020-21 Survey

**SURVEY WAS CONDUCTED BY THE DELHI-BASED CENTRE FOR
FORECASTING AND RESEARCH PVT. LTD (C FORE), ONE OF THE
COUNTRY'S PREMIER MARKET RESEARCH AND PUBLIC OPINION
POLLING COMPANIES.**

V.E.S. Institute of Technology (VESIT) has earned the

RANK 1 in Maharashtra State

Rank		Maharashtra	Total score (2300)
India 2020	State 2020		
23	1	Vivekanand Education Society's Institute of Technology, Mumbai	1767
26	2	Bharatiya Vidya Bhavan's Sardar Patel College of Engineering, Mumbai	1757
27	3	Symbiosis International (Deemed University), Pune	1753
28	4	KJ Somaiya College of Engineering, Mumbai	1745
29	5	Laxminarayan Institute of Technology (LIT), Nagpur	1739
29	5	DJ Sanghvi College of Engineering, Mumbai	1739





ARIIA

ATAL RANKING OF INSTITUTIONS
ON INNOVATION ACHIEVEMENTS

VIVEKANAND EDUCATION SOCIETY (VES)
Stood 26th - 50th in ARIIA 2019 UNDER
SELF-FINANCE/ PRIVATE INSTITUTIONS
CATEGORY: BAND B

SMART INDIA HACKATHON 2020

College level Scrutiny round : Total 146 teams(112 software and 34 hardware)

Shortlisted Teams for Internal Hackathon:

1. 38 Software Teams
2. 10 Hardware Teams

Nominated Teams for SIH 2020, after Internal Hackathon:

1. 9 Software Teams
2. 10 Hardware Teams

The industry experts were invited to judge the Internal Hackathon. Finally, total 9 Software teams and 6 Hardware teams were nominated for SIH 2020.

Shortlisted Teams by SIH 2020 for Grand Finale:

1. 4 Software Teams
2. 1 Hardware Team





Shortlisted Software Team Details:

Team Name	Team Leader	PS ID	Problem Statement Title
A2M	Ankush Shetty/TE/CMPN/8652206451	DS164	Development of App to capture the field patrolling track of frontline staff in their forest beat jurisdiction
Brute Force	Gayatri Patil/TE/CMPN/9029932782	MS338	Converting handwritten documents as scanned images or photos (in any format) to legible text documents using AI extracting important and critical information into the database.
Spark	Stevart Lobo	BK226	Design of alarm management and analytics
SPARX	Khushboo Chandnani/BE/INFT/9511738058	DK180	job recommender system

Shortlisted Hardware Team Details:

Team Name	Team Leader	PS ID	Problem Statement Title
ASCII_13	Shubham Singh/TE/EXTC/9511804676	PN313	TRACKING and Control of Hot METAL TRANSPORTATION TRUCKS



WINNER Team 1: SPARX

Team Leader: Khushboo Chandnani /BE/INFT

Team Mentor -

1. Mr. Amit Singh
2. Mr. Sridhar Patnaik

Problem statement - Job Recommender System

Description: Job recommender system. To design a software application for assessing the abilities of a student with respect to employability.

Ministry/organization - Government of Puducherry

Nodal Centre - Veltech, Chennai

Date and time - 1st, 2nd and 3rd August - 8:30 am to 9:00 pm

Prize Amount: 1,00,000/-



Ministry / Organization Name : Govt. of Puducherry

Problem Statement Title: Job Recommender System (sDK180)

Problem Description

Team Name - SPARK

Team Leader Name - Khushboo Chandnani

HireConnect
Advocating happy careers

Students Problem

Several factors that prevents the students to reach their zenith and harness their skills

- Socio-economic background of the student
- Peer influence or addiction to phones and social media
- Parents pressure to join a course.
- Lack of strong foundation or prevalence of Learning Disability.

Curriculum Problem

Traditional Approach to find out the capability of student and assign them jobs is inefficient

- The current metrics of CGPA, certificates are not enough to accurately assess the capability of a student.
- many students are sacked from the company after one or two years because they are not happy with the performance

Core Problem

Every individual has an inherent ability. If only these are harnessed

- The proposed software should identify the skill set and assess the capacity of a student. It should recommend able candidates against a requirement from the





WINNER Team 2: Digital Fortress

Team Leader: Gayatri Patil /TE/CMPN

Team Mentors:

1. Dr. Mrs. Anjali Yeole
2. Mrs. Mannat Doultani

Problem Statement:

Converting handwritten documents as scanned images or photos (in any format) to legible text documents using AI extracting important and critical information into the database.

Ministry/Organization: Government of Madhya Pradesh

Nodal Center: Galgotias University, Greater Noida

Date and Time: 1st, 2nd, and 3rd August 2020. (Everyday 8:30 am to 9:00 pm)

Prize Amount: 1,00,000/-

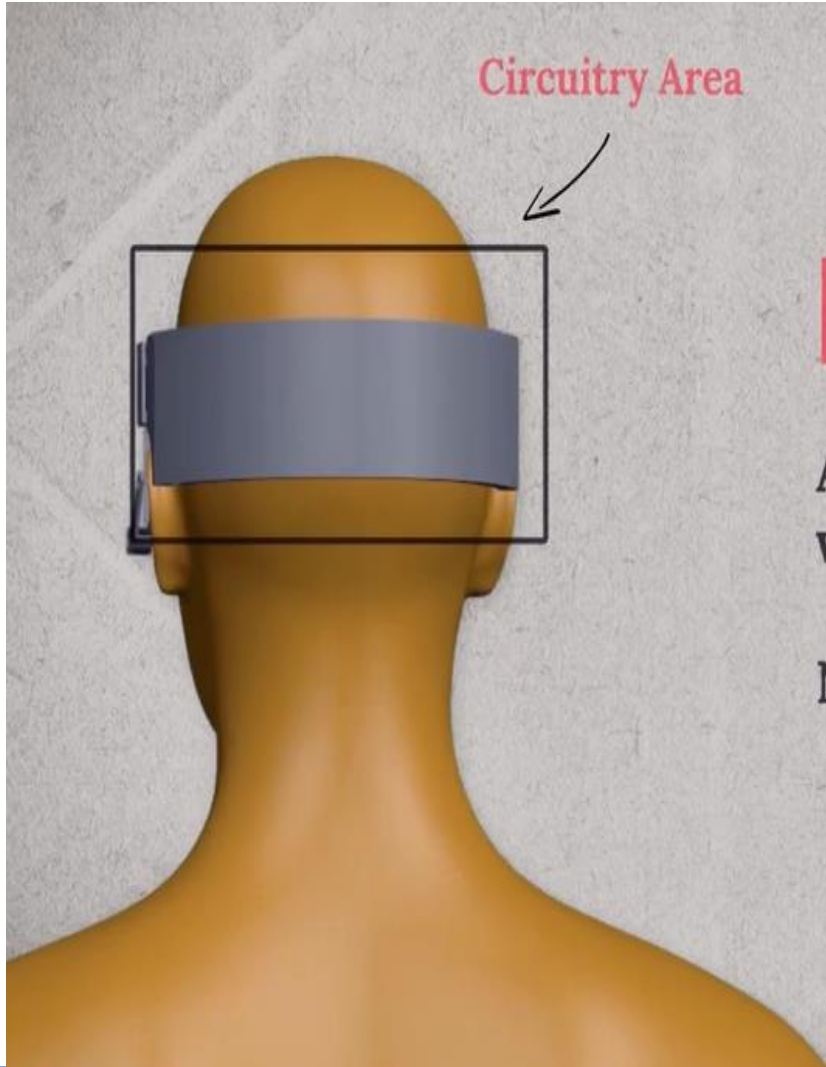


ACHIEVEMENTS



ACHIEVEMENTS

HEADBAND DEVELOPMENT




Circuitry Area

Dependable.

A completely-onboard drowsiness alerting wearable using Electrooculography.

No additional accessories required.

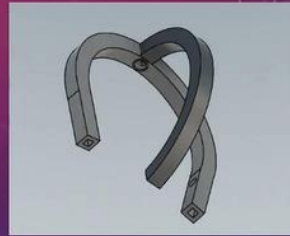


HOW CAN DROWSINESS BE DETECTED?

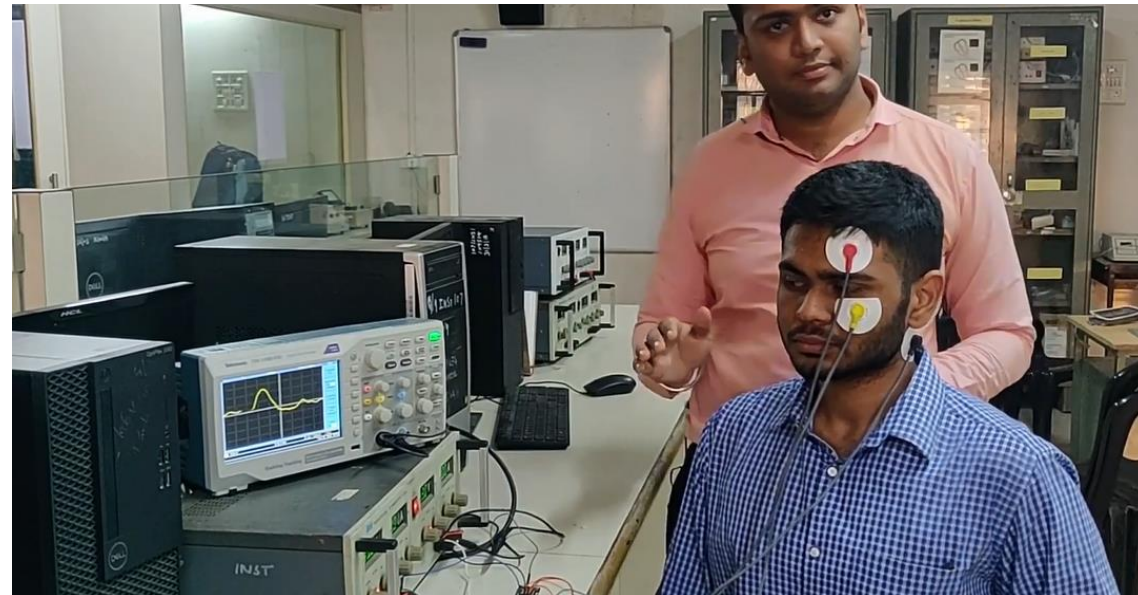
- EOG patterns can be used to detect and classify various eye movements.
- Drowsy people tend to exhibit blinks of prolonged duration(Prolonged Blinks/PB)
- EOG can hence, be used to measure and study PBs and thereby, drowsiness.



Prototype 1



Prototype 2



Computer Controlled High Resolution Validation System for Hardware Research

By

Mrs. Nilima Warke

Guide: Dr. P. P. Vaidya

Co-Guide: Dr. (Mrs.) J. M. Nair

- Selected as the **“Best Innovative Idea and Design”** by Nehru Science Center team
- Presented for **Incubation Round** at University of Mumbai

Input Block: Wave form generator with variable amplitude and frequency

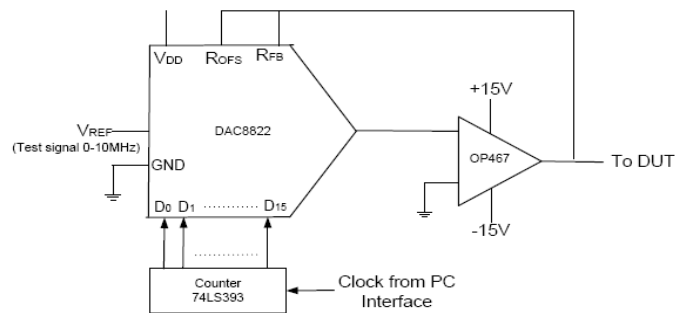
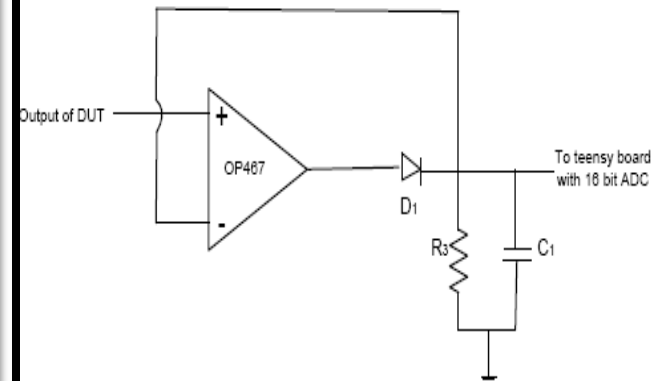


Fig 2: Circuit diagram of Input block of validation system

Output Block: High resolution ADC with PC interfacing



Block Diagram Of Validation System Developed for the Research Work

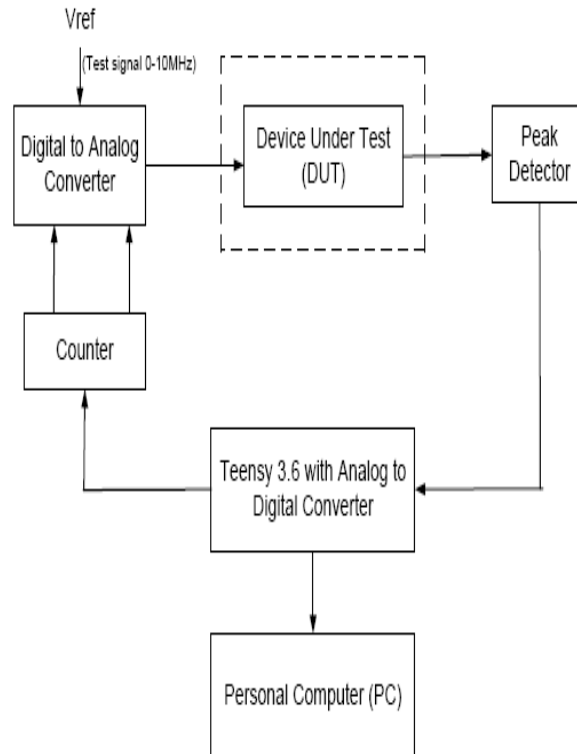


Fig 1:Block diagram of validation system for the developed research work

Advantages of Innovative Validation System

- High resolution (16 bit)
- Wide bandwidth (0-10MHz)
- Amplitude range (100 microvolts to 10V)
- Programmable (resolution as per user requirement)
- Upgradable
- Fast
- Free of Manual errors
- Low cost (10% of existing System)

Sankalp Semiconductor Hackathon on “IoT Based Solutions for Indian EcoSystem”

The team from VESIT made a Pollution Monitoring Drone and were selected as one of the top 10 nationwide teams in the Sankalp Hackathon.

The event had 130 teams participating from 35 colleges all across India



They designed a pollution monitoring drone that would click pictures of places and link it to an android app. The drone consisted of a detachable monitoring element that was capable of monitoring the pollution of certain areas and keeping a record.

Schneider Electric Hackware 2019 Innovation Challenge

The Schneider Electric Hackware 2019 Innovation Challenge, held from 18th to 21st September, was an open innovation platform with a 72-hour hackathon built around the three themes, Decarbonization, Decentralization, and Digitization of EcoStruxure

Vaibhav Singh Rajput (D14A), Kalpesh Bhole (D12B) and Raghav Potdar (D12B) from VESIT made it to the top 6 finalists of the grand event. A total of 29 teams were selected from all over the country, through an elaborate selection process by the esteemed jury for the final round of the Hackware Challenge.





ACHIEVEMENTS

Buoyanci Innovation Challenge

It is a competition for health-care projects and prototypes.

Stevart Lobo and team mentored by Prof. Priya R.L. worked on the winning project of 'Disease Prediction and Treatment Suggestions. They used a classification model and dataset for about three lakh patients. The system could detect about 600 diseases depending on 5000 symptoms with 85% accuracy and could suggest the most suitable treatment based on the dataset. When asked about the advantages of their model, Aditya Mane, one of the members of the winning team said, "The system was designed of make health services available to everyone 24/7. The system also included doctors' feedback for serious diseases."

Atharva Potdar and team mentored by Prof. Pooja Shetty stood the runners-up in the challenge for their project demonstration of 'Skin Cancer Detection'. The team used a Resnet34 model and a dataset comprising of 10,000 dermoscopic images to get an accuracy of 93%. The model predicted a type of skin disease based on the image of the mole and further classified it as cancerous and noncancerous. The application was specifically made to assist dermatologists for cross-checking the observations.



“Transfer Window” - IIM-Indore

Out of approximately 300 teams and later 8 teams, all belonging to management backgrounds, **Yajnesh Shetty** and **Adith Nair** of VESIT, Third year Electronics and Telecommunication Department managed to bag the first prize.

The challenge for the contestants was to survive an online elimination round, this round was extensively based on various football tactics employed by players. After elimination, a total of 8 teams were selected. In the final round the participants had to build a team of 11 players with a maximum limit of 15 for buying players. Marking was simple. Whoever had the best average of both the chemistry and the overall rating wins. The rating were based on FUT ratings.

Quiz-a-Thon, an Inter-college Quiz competition by The Times of India

over 500 students from all over Mumbai. **Ananya (D14A), Adith Nair (D14B) and Avinash Tripathy (D9B)** from VESIT secured the Third place in this competitive battle of wits where a total of 170 teams participated. Mihir Mishra, an Indian television actor, was the Chief Guest for the 'Quiza-thon'





ACHIEVEMENTS

SAKEC intercollegiate Quiz

Two teams who were sent to represent our college. One comprising of **Rohan Ghosalkar** and **Arnav Bagchi** from **D7C** and the other comprising of **Adith Nair** from **D14B**, **C.V.Ananya** from **D14A** and **Avinash Tripathy** from **D9B**.

Teams from all over Mumbai participated in this event, of which six qualified for the on-stage event after the written preliminary rounds.

Both the teams qualified in the first round, and later went on to win the prizes. Adith's team secured the First position while Rohan's team came in second.



Annual Debate Competition by Jamnalal Bajaj Institute of Management Studies

**Adith Nair and CV Ananya
secured the runners up
position in this round. They
received a cash prize**

