

# IGNITE 2023



## A DAILY NEWSLETTER

**Editor in Chief**

**Dr. Srinivasan Alavandar  
Principal, ACT**

**Editors**

**Ms N Dhivya, AP - S&H  
Ms S Archana AP - EEE  
Mr.V Kothantapani - EEE II Year**

BE AN ACTIONeer, Aspire To BE the BEST

### IQAC SEMINAR SERIES



The Internal Quality Assurance Cell (IQAC) and the Department of Computer Science and Engineering collaborated to conduct a seminar on “**ASSESSMENT METHODS AND EVALUATION FOR OBE**” that was held in the ACT seminar hall. The resource person for the seminar was Dr. Balaji Madhavan, Professor, Computer Science and Engineering, Agni College of Technology. The faculty members from all the departments participated in the seminar.

BE AN ACTIONER, ASPIRE TO BE THE BEST!

## DARM



The **Department Academic Review Meeting** was conducted for the Department of Electrical and Electronics Engineering on 21<sup>st</sup> December 2023. Dr. A Kalaimurugan, Professor/Head, presented the Department Academics to Dr. Srinivasan Alavandar, Principal along with concerned faculty members & Dr. T. Anand, IQAC Coordinator. The department progress, curriculum coverage, IAT results, and previous-year Anna University result analysis were all reviewed with improvement recommendations.

BE AN ACTIONeer, Aspire To BE the BEST

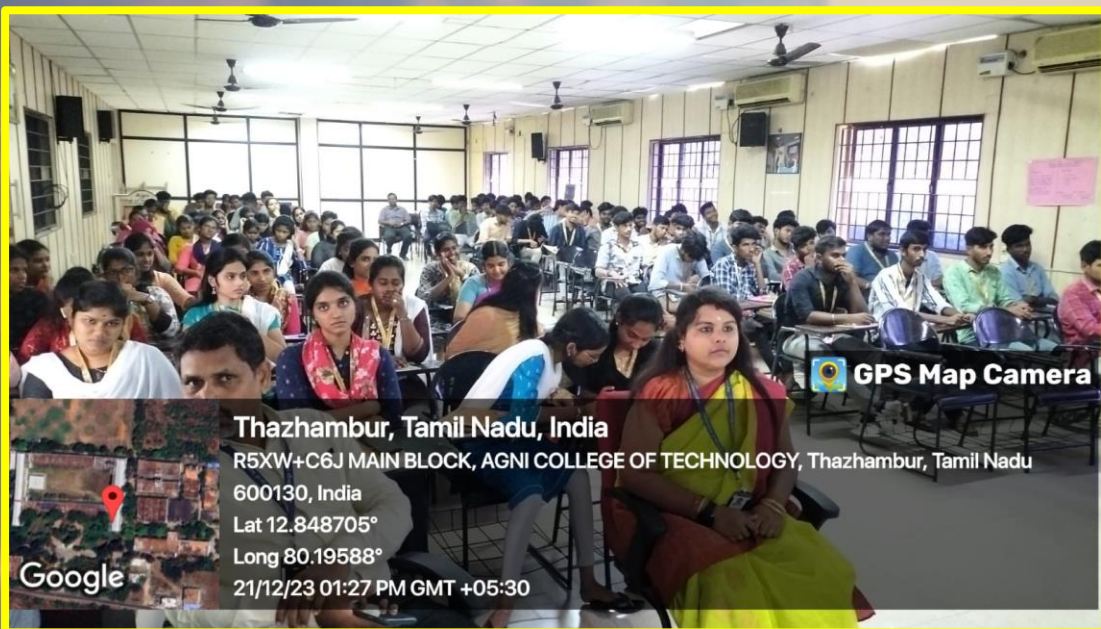
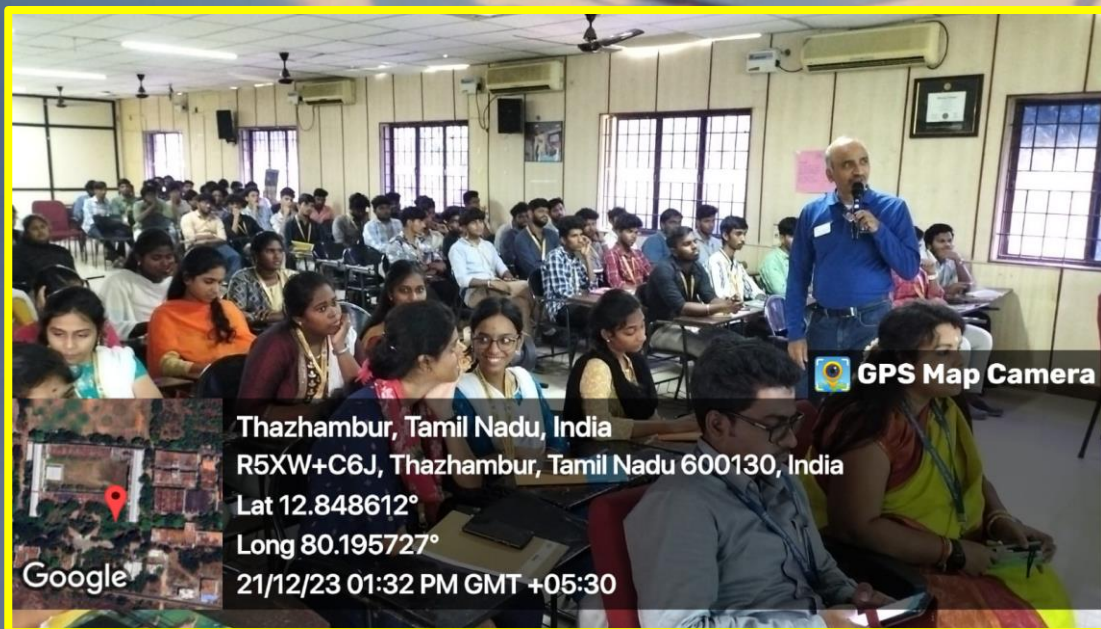
## AIDS DEPARTMENT WORKSHOP



II-year students of the Artificial Intelligence and Data Science Department have attended a one-day workshop on the topic titled **“CREATIVE CODING WITH JAVASCRIPT”** on **December 21, 2023**. The resource person for the workshop was **Dr. Jey Veerasamy**, Professor in the Computer Science Department of the University of Texas at Dallas. The students were benefited by the website ["editor.p5js.org,"](https://editor.p5js.org) which provides a supportive environment for students to learn and experiment with creative coding using p5.js.

BE AN ACTioneer, Aspire To BE the BEST

### GALLERY



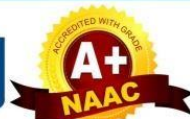
BE AN ACTIONEER, ASPIRE TO BE THE BEST



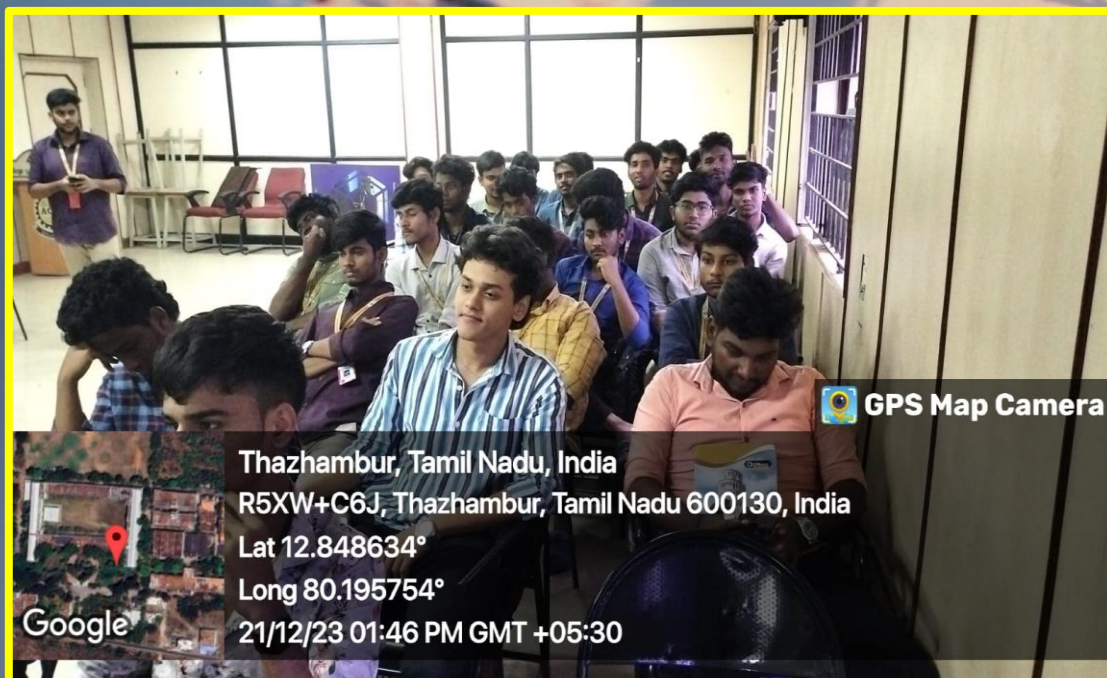
# Agni College of Technology

(An AUTONOMOUS Institution)

Accredited by NBA, NAAC with A+ Grade, Estd.2001. Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai  
 OMR, Chennai ☎ 044 4997 2900 ☎ 94450 54081 ☎ 81221 24081 | www.act.edu.in



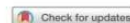
## GALLERY



BE AN ACTIONEER, ASPIRE TO BE THE BEST

FACULTY ACHIEVEMENT

*Electric Power Components and Systems*, 0(0): 1–14, 2023  
© 2023 Taylor & Francis Group, LLC  
ISSN: 1532-5008 print / 1532-5016 online  
DOI: 10.1080/15325008.2023.2280921



## Hysteresis-Based Multi-Level Inverter Integrated Sliding Mode Controller for Optical Materials in PV Solar Grids

Muralidaran G.,<sup>1</sup> Anandha Kumar G.,<sup>2</sup> and Kalaimurugan A.<sup>3</sup>

<sup>1</sup>Saveetha Institute of Medical and Technical Sciences, Chennai, India

<sup>2</sup>EEE Department, Saveetha Institute of Medical and Technical Sciences, Chennai, India

<sup>3</sup>EEE Department, Agni College of Technology, Chennai, India

### CONTENTS

1. Introduction
  2. Literature Survey
  3. Proposed System
  4. Experimental Results and Discussion
  5. Conclusion
- References

**Abstract**—One of the renewable energy resources is Photovoltaic systems, which can be interconnected to any grid system. Most PV-grid systems frequently meet the Total Harmonic Distortion (THD) problem during the power flow, degrading the power transmission performance in the PV-Grid through interferences. Despite the high demand and supply variations, conventional techniques and devices cannot balance the THD. Thus, several earlier research techniques have focused on balancing the THD to improve the power transmission in the PV-Grid. A few recent researchers have stated that multi-level inverters reduce THD. Hence, this paper aims to propose a Hysteresis Modulated Multi-level (HMM) inverter integrated with a Sliding Mode (SM) controller for optical devices and materials. The HMM inverter reduces the THD, and the SM controller reduces the nonlinearity of the power flow. The proposed MM inverter-based SM controller-based optical devices can provide more efficient and fast communication in the PV grid. The experiment is carried out by creating a Simulink model in MATLAB software, and the results are verified in a PV-Grid system regarding voltage, current, and SSs. The results indicate that the proposed HMM inverter integrated SM controller effectively controls and regulates the PV-Grid systems' power transmission.

Dr. A. Kalaimurugan, Head of the Department of Electrical and Electronics Engineering, has published a research article titled “Hyteresis-Based Multi-Level Inverter Integrated Sliding Mode Controller for Optical Materials in PV Solar Grids” in the *Electric Power Components and Systems Journal* (Taylor and Francis), with impact factor 1.276.

BE AN ACTIONeer, Aspire To BE the BEST

## FACULTY ACHIVEMENT

17/11/2023, 14:40 PATENT eFiling

Welcome Harish Sharma [Sign out](#)

Controller General of Patents, Designs & Trade Marks  
C.P.O., Sector V, Salt Lake City, Kolkata-700091  
Tel No. 033(2283) 2367/846-48 Fax No. 033 23673888  
E-mail: [indiaipo@ipol.in](mailto:indiaipo@ipol.in)  
Web Site: [www.ipol.in](http://www.ipol.in)

 **GOVERNMENT OF INDIA**  
**INTELLECTUAL PROPERTY INDIA**  
**REGISTRATION DEPARTMENT**

**Doclet No 41150**

To  
Harish Sharma

A-2, Sect-46, Noida, Uttar Pradesh

**CHR Detail:**

| Sl. No. | App. Number         | Ref. No./Application No. | Amount Paid | C.B.R. No. | Form Name | Remarks                                                                                              |
|---------|---------------------|--------------------------|-------------|------------|-----------|------------------------------------------------------------------------------------------------------|
| 1       | E. 123246/2023/EGOL | 202331078145             | 2500        | 16141      | FORM 9    |                                                                                                      |
| 2       | 202331078145        | TEMPLE 19377/2023-EGOL   | 1000        | 16141      | FORM 1    | ENHANCED BIOELECTRICITY GENERATION IN MICROBIAL FUEL CELLS USING BISMUTH FERRITE NANOPARTICLES MIXED |

| TransactionID | Payment Mode         | Challan Identification Number | Amount Paid | Head of A/C No   |
|---------------|----------------------|-------------------------------|-------------|------------------|
| N-000257294   | Online Bank Transfer | 171120603209                  | 4100.00     | 1475001870000001 |

Total Amount : ₹ 4100.00  
Amount in Words: Rupees Four Thousand One Hundred Only  
Received from Harish Sharma the sum of ₹ 4100.00 on account of Payment of fee for above mentioned Application/Forms.  
\* This is a computer generated receipt, hence no signature required.

[Print](#)

[Home](#) [About Us](#) [Contact Us](#)



<https://iponline.ipol.in/repatentfiling/CHRReceipt/printCHRReceipt>

**FORM-5**  
THE PATENTS ACT, 1970  
(39 of 1970)  
&  
The Patents Rules, 2003  
DECLARATION AS TO INVENTORSHIP  
[See Section 10(6) and Rule 13(6)]

1. NAME OF THE APPLICANT(S)  
I/We Dr. Raj Kumar Gupta et. al., all are citizen of India, Address of one of the Applicant: Assistant Professor, Department of Physics, Sardar Vallabhbhai Patel College, Bhabua, 821101 (Vksu, Ara), Kaimur, Bihar, India.  
hereby declare that the true and first inventor(s) of the invention disclosed in the complete specification filed in pursuance of my-/ our application numbered dated 16-11-2023 is/are

2. INVENTOR(S)

| (a) NAME                     | (b) NATIONALITY | (c) ADDRESS                                                                                                                           |
|------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1. Dr. Raj Kumar Gupta       | Indian          | Assistant Professor, Department of Physics, Sardar Vallabhbhai Patel College, Bhabua, 821101 (Vksu, Ara), Kaimur, Bihar, India        |
| 2. Dr. P Anitha              | Indian          | Associate Professor, Department of Physics, SRM TRP Engineering College, Tiruchirappalli- 621105, Tamilnadu, India                    |
| 3. S Muthurajan              | Indian          | Assistant Professor, EEE Department, Agni College of Technology, Thalambur, Chennai, Pin Code- 600130, Chengalpattu, Tamilnadu, India |
| 4. Dr. K. Ganga Prasad       | Indian          | Assistant Professor, Department of Physics, Vardhaman College of Engineering, Shamshabad, 501218, Rangareddy, Telangana, India        |
| 5. Kandukuri Venkateswararao | Indian          | Assistant Professor, Department of H&S, NNRESGI, Hyderabad, 500088, Medchal Malkajgiri, Telangana, India                              |
| 6. Shishir Shukla            | Indian          | Assistant Professor, Department of Physics, Swami Shukdevanand College, Shahjahanpur, Pin Code- 242001, Uttar Pradesh, India          |
| 7. Rajnandan Singh Rajput    | Indian          | Assistant Professor, Department of Physics, Swami Shukdevanand                                                                        |

Mr. Muthurajan S , AP - Department of Electrical and Electronics Engineering, has filed a patent (Application no.202331078145) titled **“ENHANCED BIOELECTRICITY GENERATION IN MICROBIAL FUEL CELLS USING BISMUTH FERRITE NANOPARTICLES MIXED ”**under IPR Publication, India.

BE AN ACTIONEER, Aspire To BE the BEST

### FACULTY ACHIEVEMENT



Dr. Ishwarya M.V., Associate Professor and Head of the Department of Artificial Intelligence and Data Science, has been rewarded with the **“CERTIFICATE OF APPRECIATION”** by the **“EXCELLENCE BOOK OF RECORDS”** for her outstanding achievements and remarkable contributions. It was rewarded on **December 21, 2023.**

BE AN ACTIONeer, Aspire To BE the BEST

FACULTY PARTICIPATION



Dr. B. Dhanasakkaravarthi, Assistant Professor from the Mechanical Engineering Department has participated in the Online Faculty Development Program on "Quality Concepts and Research Issues in Engineering Applications", organized by SRM Madurai College of Engineering and Technology.

BE AN ACTIONEER, ASPIRE TO BE THE BEST

## FACULTY PARTICIPATION



Mr. C. Anand, Assistant Professor, Department of Aerospace Engineering, has participated in the six-day online faculty development program on Quality Concepts and Research Issues in Engineering Applications organized by SRM Madurai College of Engineering from December 11 to 16, 2023.

BE AN ACTIONEER, ASPIRE TO BE THE BEST

## FACULTY PARTICIPATION



Mrs.M.Mathiyarasi, Assistant Professor, Department of Aerospace Engineering, has participated in the six-day online faculty development program on Quality Concepts and Research Issues in Engineering Applications organized by SRM Madurai College of Engineering from December 11 to 16, 2023.

BE AN ACTIONEER, ASPIRE TO BE THE BEST

## STUDENT ACHIEVEMENT



Akash Sampath, 2018-2022 Batch, Department of Mechatronics Engineering, pursuing his **Master Degree in Artificial Intelligence** at **DePaul University, Chicago, USA**, has appeared for **Graduate Assessment Exams**, as a part of his graduate program curriculum, for the Introductory Course on **Tools and Techniques for Computational Analysis** on 22<sup>nd</sup> December 2023 at Agni College of Technology, proctored by Dr.R.Pandiyarajan, Head, Department of Mechatronics Engineering.

BE AN ACTIONEER, ASPIRE TO BE THE BEST

STUDENT ACHIEVEMENT



Muthu Saran, II-year student of the Department of Computer Science and Engineering, has completed an online certificate in Data Visualization using Python organized by Great Learning on December 2023.

## STUDENT PARTICIPATION



**StartupTN**

# Hackathon

on Tamil Computing

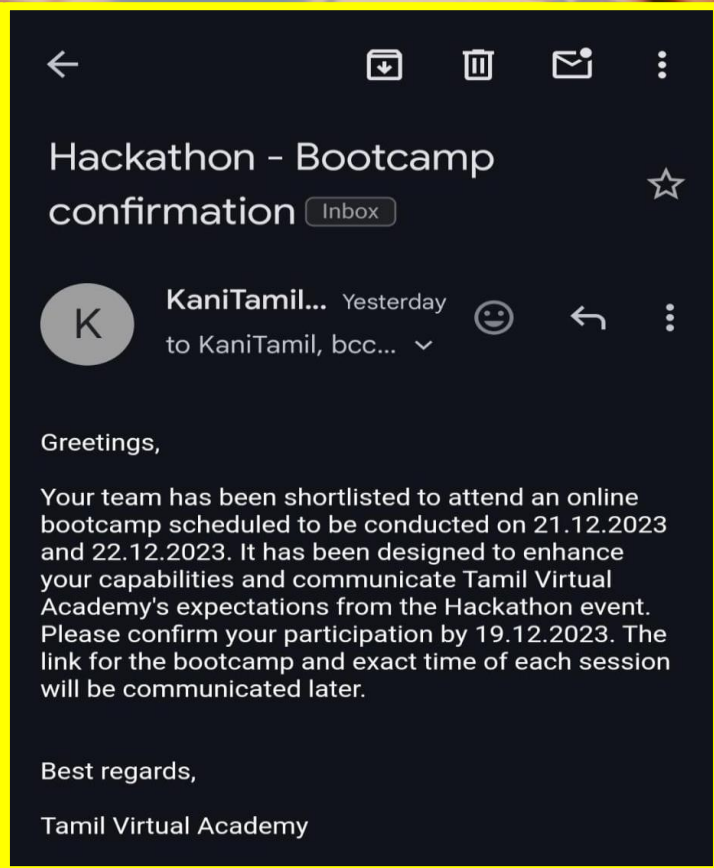
Leveraging the Immense Potential of Tamil language in the domain of Natural Language Processing

**To Know More & Apply**

<https://www.kanitamil.in/#/hackathon>

**Last Date to Apply: November 25, 2023**

For all Startup related queries: 155343 | [www.startuptn.in](http://www.startuptn.in) | Follow us: [Facebook](https://www.facebook.com/startuptn) [Instagram](https://www.instagram.com/startuptn) [LinkedIn](https://www.linkedin.com/company/startuptn) /TheStartupTN



Hackathon - Bootcamp confirmation Inbox

KaniTamil... Yesterday  
to KaniTamil, bcc...

Greetings,

Your team has been shortlisted to attend an online bootcamp scheduled to be conducted on 21.12.2023 and 22.12.2023. It has been designed to enhance your capabilities and communicate Tamil Virtual Academy's expectations from the Hackathon event. Please confirm your participation by 19.12.2023. The link for the bootcamp and exact time of each session will be communicated later.

Best regards,

Tamil Virtual Academy

W. Karunakaran, Gowtham Raj S, Dhanush Chakaravarthy R, Balamanikandan M, Darmick K R, Dharshini C from the Department of Computer Science and Engineering, have participated in KANITAMIL hackathon organized by Startup TN, which was held on 12.12.23 and have been shortlisted for the pre- final round of the event.

BE AN ACTIONEER, ASPIRE TO BE THE BEST



# Agni College of Technology

(An AUTONOMOUS Institution)

Accredited by NBA, NAAC with A+ Grade, Estd.2001. Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai  
OMR, Chennai ☎ 044 4997 2900 ☎ 94450 54081 ☎ 81221 24081 | [www.act.edu.in](http://www.act.edu.in)



STUDENT PARTICIPATION

**SIMATS ENGINEERING**  
ENGINEER TO EXCEL

Approved By AICTE | IET-UK Accreditation





**CERTIFICATE  
OF MERIT**

This certificate is presented to

Mr / Ms **Esther selvamani. M**



Organizer/Coordinator/Participated(**Winner/Runner**) in **PAPER PRESENTATION**

event of **One Day National Level Technical Symposium TECTRIX-2023** which held at  
18-10-2023, organized by Department of Information Security, Institute of Computer Science  
and Engineering, SIMATS Engineering, SIMATS, Chennai

*M.LITHISHWAR*  
Convenor

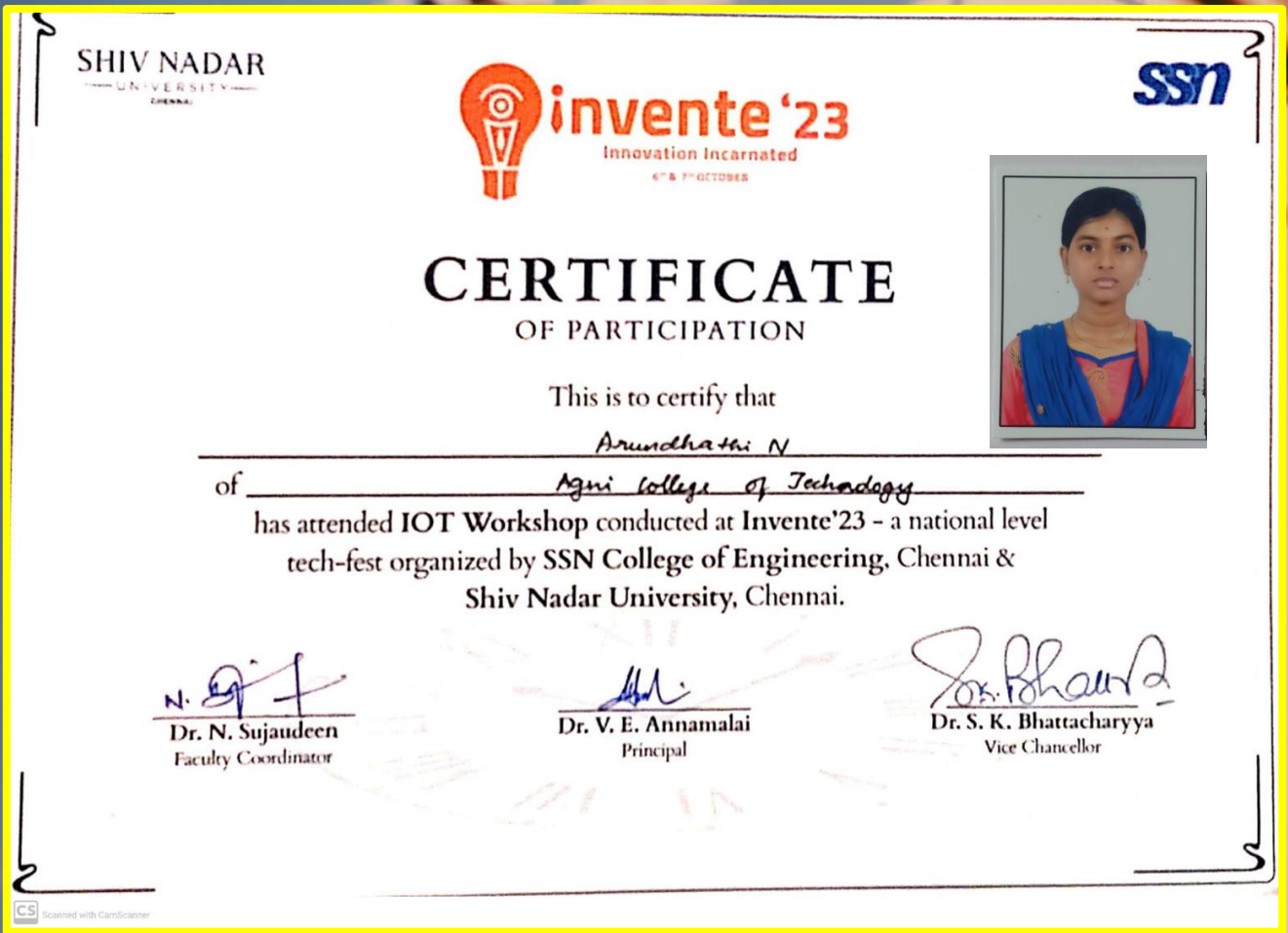


*B. Ramesh*  
Principal  
Dr. B. Ramesh

Esther Selvamani M., II-year student, Department of Biomedical Engineering has participated in **"PAPER PRESENTATION "**event of One Day National Level Technical Symposium TECTRIX-2023 on 18th Octoer, organized by Department of Information Security, Institute of Computer Science and Engineering, SIMATS Engineering, SIMATS Chennai.

BE AN ACTioneer, Aspire To BE the BEST

STUDENT PARTICIPATION



Arundhathi N, III-year student, Department of Biomedical Engineering has participated in **“IOT WORKSHOP”** conducted at Invente’23- a nation level tech-fest organized by SSN College of Engineering, Chennai & Shiv Nadar University, Chennai.

STUDENT PARTICIPATION



Vidhya Sri R, II year student, Department of Biomedical Engineering has participated in “Glider Making Competition” organized by the Department of Aerospace Engineering, Agni College of Technology, on 18th October 2023.

FACULTY REPOSITORY



Archana S, AP – Department of Electrical and Electronics Engineering, has sketched “ **The dance of graphite unveils a moment frozen in time – a little girl’s gaze meeting the fragile beauty of a butterfly**”.