



*You Choose, We Do It*  
**St. JOSEPH'S COLLEGE OF ENGINEERING**  
(An Autonomous Institution)  
**St. Joseph's Group of Institutions**  
OMR, Chennai - 119



We prepare for



## DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION ENGINEERING



# NEWSLETTER – EIE -MAY 2024

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**Mrs. S. Jessie Priya**

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**Dr. Vaddi Seshagiri Rao**

M.E., M.B.A., Ph.D

Principal

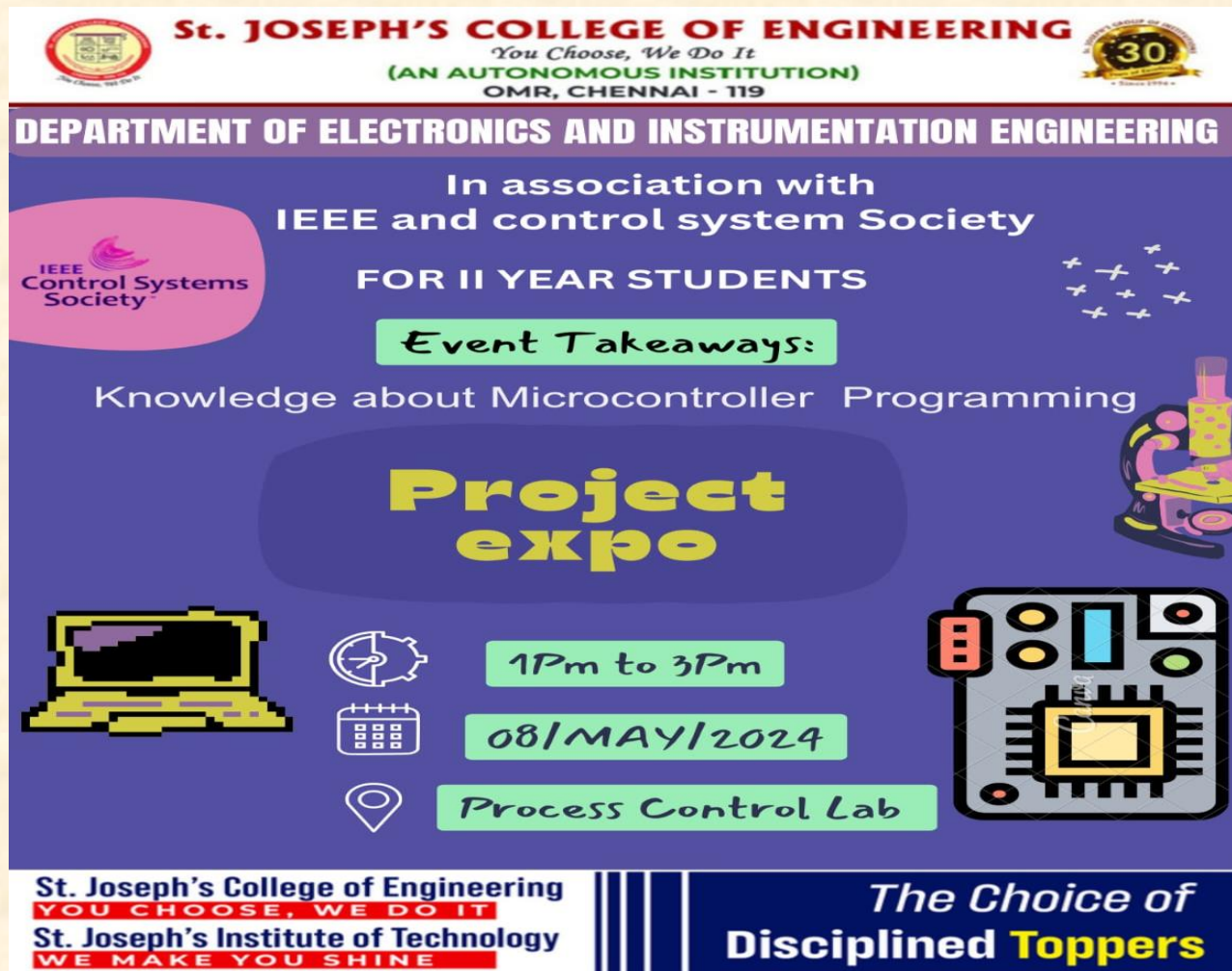
## VISION:

*To make every student of the department irrespective of his/her social, cultural background and learning abilities gets a fair chance in mastering the various fields of Electronics and Instrumentation to become a proficient individual for the empowerment of society.*

## MISSION:

- To Prepare students to understand recent technologies in Electronics and Instrumentation Engineering effectively and adapt themselves in an ever-changing environment.*
- To impart excellent computing knowledge to students by providing well equipped facilities and state of the art systems.*
- To prepare students with excellent leadership skills, management capabilities and ethical understanding for successful career.*

# PROJECT EXPO



The poster features a blue background with white and yellow text. At the top, it displays the St. Joseph's College of Engineering logo and name, along with a 30th anniversary badge. The main text is centered, mentioning the IEEE and Control Systems Society. A green box highlights 'Event Takeaways: Knowledge about Microcontroller Programming'. The title 'Project expo' is in large yellow letters. Below it, icons for a laptop, a gear, a calendar, and a location pin are used to specify the time (1Pm to 3Pm), date (08/MAY/2024), and location (Process Control Lab). On the right, there are illustrations of a microscope and a microcontroller board. The bottom of the poster includes the college's motto and the slogan 'The Choice of Disciplined Toppers'.

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**(AN AUTONOMOUS INSTITUTION)**  
OMR, CHENNAI - 119

**DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION ENGINEERING**

In association with  
**IEEE and control system Society**

**FOR II YEAR STUDENTS**

**Event Takeaways:**  
Knowledge about Microcontroller Programming

**Project expo**

**1Pm to 3Pm**

**08/MAY/2024**

**Process Control Lab**

**St. Joseph's College of Engineering**  
**YOU CHOOSE, WE DO IT**  
**St. Joseph's Institute of Technology**  
**WE MAKE YOU SHINE**

*The Choice of*  
**Disciplined Toppers**

## Introduction:

On the 8th of May, 2024, the Department of Electronics and Instrumentation Engineering, in collaboration with the Institute of Electrical and Electronics Engineers (IEEE) and the Control System Society, hosted an innovative and educational Project Expo. This event was specifically designed for second-year students to showcase their knowledge and skills in microcontroller programming. The expo took place in the state-of-the-art Process Control Lab from 1:00 PM to 3:00 PM. This report aims to provide a detailed account of the event, including the organization, execution, student participation, project evaluations, and overall impact on the student's learning experience.

## Objectives of the Project Expo

*The primary objectives of the Project Expo were to:*

1. Encourage students to apply theoretical knowledge of microcontroller programming in practical projects.
2. Provide a platform for students to exhibit their projects and receive constructive feedback from experts.
3. Foster creativity and innovation among students by challenging them to solve real-world problems.
4. Enhance teamwork and collaborative skills by involving students in group projects.
5. Connect students with professionals and experts in the field of electronics and instrumentation engineering.

## Organization and Preparation

The preparation for the Project Expo began several months in advance. The event was meticulously planned to ensure its success. The organizing committee comprised faculty members from the Department of Electronics and Instrumentation Engineering, IEEE student members, and representatives from the Control System Society.

### Key steps in the preparation included:

***Project Proposal Submission:*** Students were invited to submit project proposals focusing on microcontroller programming. Proposals were evaluated based on originality, feasibility, and technical complexity.

***Workshops and Training Sessions:*** To support students in their project development, a series of workshops and training sessions were conducted. These sessions covered various aspects of microcontroller programming, including interfacing, sensor integration, and debugging techniques.

***Logistics and Arrangements:*** The Process Control Lab was chosen as the venue due to its advanced facilities and spacious layout. Necessary equipment, such as microcontroller kits, sensors, and display boards, were arranged well in advance.

***Judging Panel:*** A panel of judges comprising industry experts, IEEE representatives, and faculty members was formed to evaluate the projects. Criteria for evaluation included innovation, technical execution, presentation, and potential real-world application.

## **The Day of the Expo:**

On the day of the expo, the Process Control Lab was abuzz with excitement and anticipation. The event kicked off at 1:00 PM with an opening address by the Head of the Department, who emphasized the importance of hands-on experience in engineering education. This was followed by a brief overview of the event's objectives and schedule.

## **Student Projects and Presentations:**

A total of 20 projects were showcased at the expo, each demonstrating the students' proficiency in microcontroller programming and their ability to tackle engineering challenges. Below are summaries of some notable projects:

### **1. Automated Plant Watering System:**

***Description:*** This project involved creating an automated watering system that uses soil moisture sensors to detect the need for watering and activates a water pump accordingly. The system also featured an LCD display to show soil moisture levels.

***Technical Details:*** The project utilized an Arduino microcontroller, soil moisture sensors, a relay module, and a water pump. The students programmed the Arduino to read sensor data and control the pump based on predefined moisture thresholds.

### **2. Smart Home Security System:**

***Description:*** The smart security system aimed to enhance home security by integrating motion detectors, door sensors, and a GSM module to send alerts to the homeowner's mobile phone.

***Technical Details:*** The system used an ESP8266 microcontroller for wireless connectivity, PIR motion sensors, magnetic door sensors, and a GSM module. The microcontroller was programmed to send SMS alerts when any unauthorized entry was detected.

### **3. Temperature and Humidity Monitoring System:**

***Description:*** This project focused on monitoring environmental conditions using temperature and humidity sensors. The data was displayed on an LCD screen and could be logged for further analysis.

***Technical Details:*** An Arduino Uno microcontroller, DHT11 temperature and humidity sensor, and an LCD display were used. The students wrote code to read sensor data and update the display in real-time.

### **4. Obstacle Avoidance Robot:**

***Description:*** The team developed a robot capable of navigating its environment autonomously by avoiding obstacles using ultrasonic sensors.

**Technical Details:** The robot was built using an Arduino Nano, ultrasonic sensors, and DC motors with an H-bridge motor driver. The programming involved implementing an algorithm for obstacle detection and navigation.

## Evaluation and Feedback

The judges spent considerable time at each project booth, engaging with the students and examining the technical aspects of their work. Each team presented their project, explained the problem they aimed to solve, demonstrated their solution, and answered questions from the judges.

**The evaluation criteria included:**

- **Innovation and Creativity:** How unique and innovative was the project idea?
- **Technical Execution:** How well was the project implemented? Were there any technical challenges, and how were they overcome?
- **Presentation:** How effectively did the team present their project and explain their work?
- **Practical Application:** Does the project have potential real-world applications or implications?

**After thorough deliberation, the judges selected the top three projects:**

1. **First Place:** obstacle Avoidance Robot
2. **Second Place:** Automated Plant Watering System.
3. **Third Place:** Smart Home Security System.

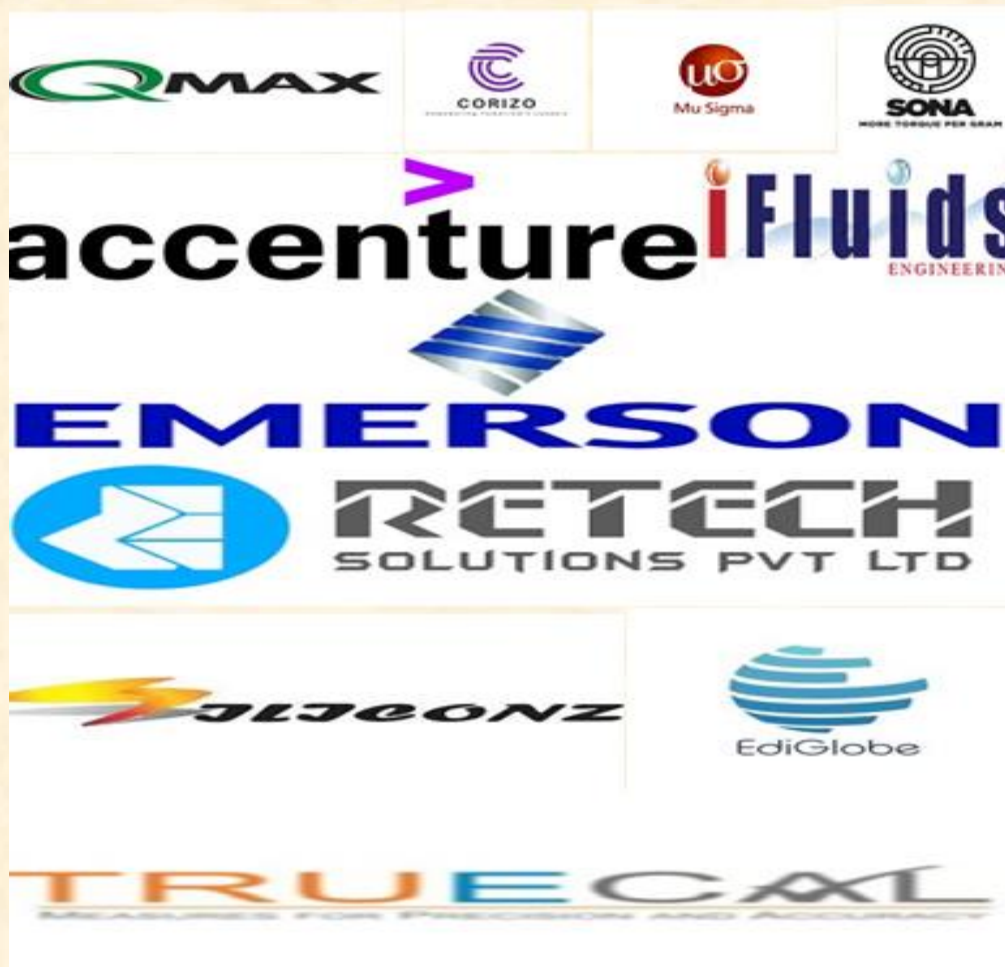
The Project Expo was a resounding success, achieving its objectives of promoting practical learning, innovation, and teamwork among second-year students. The event provided students with invaluable experience in project development, problem-solving, and technical presentation.



## STUDENT ACHIEVEMENTS

### PLACEMENTS

With a rich history of innovation and excellence, St. Joseph's has been offering a dynamic environment for students seeking to excel in various core domains such as 5G, Electric and Hybrid vehicles, Robotics, 3D printing, Embedded systems and IoT along with software domains. We are proud to announce that 17 among 33(eligible) students got placed in various companies. The list is as follows.



S. No	Name of the Students	Name of the company
1	ARSHAD HABIB	Corizo Edutech
2	HARISHNARAYAN V	Corizo Edutech
3	S KAMALESH	Corizo Edutech, MuSigma
4	GOKUL SANKAR S S	Accenture
5	KISHORE K	SONA COMSTAR
6	DEVIKA S A	iFluids
7	BLESSO JUDDIN B	KODISNET
8	HEMANTHKUMAR R	QMax
9	K. KEERTHANA	EMERSON
10	MANOJ KUMAR T	Siliconz embedded
11	S KARPAGAVALLI	ReTEch Solutions
12	BHARATHWAJ.S	True value calibration
13	VISHWANTH M	ReTEch Solutions
14	ARAVAZHI T A	ReTEch Solutions
15	Y MAHIN	ReTEch Solutions
16	KAVIYA DHARSHINI A	EDIGLOBE
17	GURUSANKAR T	Siliconz embedded





## NPTEL ONLINE CERTIFICATIONS

We are delighted to announce that the following students of II YR EIE have successfully completed various NPTEL certification courses in this academic year 2023-2024. Among 6 students, all 6 of them are Elite Certified.

S.No	Name of the Student	Year	Name of the Subject
1	JAYAPRIYA T	II EIE	The Joy of computing Using Python
2	SMITH NEWTON	II EIE	Data Science for Engineers
3	DHARSHINI SHIVANI B	II EIE	Introduction to Internet of Things
4	DHEEPIGHA G	II EIE	Introduction to Internet of Things

One of our students, Surya Kumar R has been selected for internship at IIT Kharagpur. The internship period is for 2 months from May 22 to July 22, 2024. The student is also entitled to receive a salary of 6 K per month.

**NATIONAL PROGRAMME ON  
TECHNOLOGY ENHANCED LEARNING**  
A JOINT VENTURE BY INDIAN INSTITUTES OF TECHNOLOGY & INDIAN INSTITUTE OF SCIENCE



**Coordinators**

**Prof. Andrew Thangaraj**  
Dept. of Electrical Engg,  
IIT Madras

**Prof. Vignesh Muthuvijayan**  
Dept. of Biotechnology,  
IIT Madras

**Prof. Ramkrishna Pasumarthy**  
Dept. of Electrical Engg,  
IIT Madras

**Prof. Niket Kaisare**  
Dept. of Chemical Engg,  
IIT Madras

**Date:** 03-Apr-2024

**Dear SURYA KUMAR R**

We are pleased to inform you that you have been selected for the NPTEL Summer Internship 2024 as per the following details:

1. Name of the Professor(s) : Sudip Misra
2. Course offering Institute : IIT Kharagpur
3. Mode of internship : In-person
4. Place of internship : IIT Kharagpur
5. Duration of internship : 8 Weeks
6. Start date : 01-May-2024
7. End date : 26-Jun-2024

Kindly get in touch with the Professor for necessary guidance.

## GRADUATION DAY

Graduation day is a culmination of years of hard work and dedication for students, marking the end of one chapter of their lives and the beginning of another. It's a day filled with a mix of emotions – excitement, nostalgia, pride, and perhaps a bit of apprehension about the future. The day typically starts with graduates gathering in their caps and gowns, buzzing with anticipation as they prepare to walk across the stage and receive their diplomas. Family and friends fill the venue, eager to celebrate this milestone with their loved ones.

St. Joseph's 25<sup>th</sup> Graduation day was held on May 18, 2024 for the batch 2018-2022. The ceremony itself is often a blend of formal speeches, inspiring messages, and moments of reflection. Speakers were Dr. M. Ravichandran, Secretary ministry of Earth Sciences, New Delhi graced the occasion. He asked the student community to empower themselves in bringing up the sustainability goals in wind, water and energy. Each graduate's name is called, and they walk proudly across the stage to receive their diploma, cheered on by their peers and loved ones.

From the department of EIE 103 students were graduated. We feel proud to state the following students have secured first five positions in the university examinations conducted from 2018-022.

Rank	Register No	Name of the Student	CGPA
1 <sup>st</sup>	3123318107071	POURNA DEVI A K	9.42
2 <sup>nd</sup>	3123318107068	PAVITHRA T	9.03
3 <sup>rd</sup>	312318107051	LUBNA NAVREEN M	8.89
4 <sup>th</sup>	312318107038	KEERTHI MALNI R C	8.84
5 <sup>th</sup>	312318107079	REVATHY D	8.81

Amidst the pomp and circumstance, there's a sense of closure and accomplishment. Graduates reflect on the challenges they've overcome, the friendships they've forged, and the knowledge they've gained throughout their academic journey. It's a time to recognize their achievements and acknowledge the support of those who have helped them along the way.

After the ceremony, graduates often celebrate with friends and family, taking photos, reminiscing about their time in college, and looking ahead to the future. It's a moment of transition, as they prepare to embark on new adventures, whether that involves further education, entering the workforce, or pursuing other goals and dreams.

Overall, graduation day is a significant milestone that symbolizes the culmination of years of hard work and the beginning of a new chapter filled with endless possibilities. It's a day to celebrate accomplishments, embrace the future, and cherish the memories created along the way.

