



METRON

VIMAL JYOTHI ENGINEERING COLLEGE
ELECTRONICS & INSTRUMENTATION ENGINEERING DEPARTMENT

VISION & MISSION OF THE DEPARTMENT

VOLUME 7 ISSUE 5

DECEMBER 2017

VISION

The department strives to enrich professionals of high competency in the arena of Instrumentation Engineering & mould them to adopt the crux of matter in the field of Automation

MISSION

To prepare the students to envisage beyond the hypothetical thinking & belong to a new era of acquisition & application of Instrumentation Technology to meet the requisition of the changing world

INSIDE THIS ISSUE

- Conical tank system
- Events at the department
- Faculty Achievements
- Student achievements

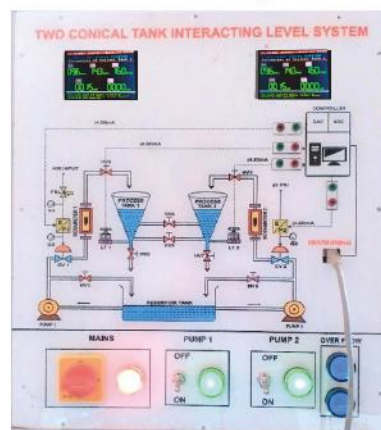
“A good scientist is a person with original ideas. A good engineer is a person who makes a design that works with as few ideas as possible. There are no prima donnas in engineering.”
— Freeman Dyson

CONICAL TANK INTERACTING SYSTEM WITH RATIO CONTROLLER: AN IN-HOUSE BUILT EXPERIMENTAL SET UP IN PCI LAB

A new experimental set is being built with the coordinated efforts of the students and the faculty of the department for testing and controlling a nonlinear conical interacting process, funded by the college. This facility is implemented using an indigenous



method by incorporating the existing facilities like level process station and flow process station into the new system thereby reducing cost. Students of the department Mr. Akhil K.J, Mr. Jerin Lal, Mr. Shelton Shibu and Mr. Rajath. P under the guidance of Mr. Clint Augustine, Assistant Professor of EIE department started building the set up as part of their mini project and successfully completed the first trial run of the system. The students also utilized the knowledge and support of Dr. Glan Devadhas, Mr. Shinu M M and other faculties of the department for the completion of the project. Mechanical setup mainly consists of two stainless steel conical tanks which gives nonlinearity to the system. The two conical tanks can be used both in non-interacting and interacting modes with the help of two valves placed between them.



Front Panel of process station

The conical tank system is controlled with the help of LabVIEW based software platform and NI6212 DAQ for data acquisition. A ratio control strategy was successfully tested for controlling the level of any one tank in the specified ratio. This facility can also be used as a test bench for implementing other control strategies like PID, ON-OFF, Adaptive controllers etc.

MOU with Prolific systems

MOU for placement oriented training for S8 Students of AEI has been signed with Prolific systems. With the help from prolific systems, the Department of Electronics and Instrumentation will conduct a 21 day Pre-placement training program in industrial automation. This is a PGDIA program (Post Graduate Diploma in Industrial Automation) conducted in accordance with the MOU between the department and PROLIFIC systems, kochi. Upon completion of the training, the student will learn about core technologies in industrial automation like PLCs, DCS, VFDs etc which helps the student to attend interviews in core instrumentation based companies.



Faculty Achievements

Publications

1. Dr. G Glan Devdas published paper titled "An optimal Approach for SVM based segmentation of MR Images or Brain Tumors"- JARDS- SCOPUS , VOL.9.PP 80-87

Membership in Professional Bodies

2. Dr. Sampath Kumar - IAENG - Society of artificial Intelligence, computer science, electrical, imaging and industrial engineering

Student Achievements

Placement

Vishnu Haridas and Sujil Suresh from AEI got placed in Godsmatthew Trading India Pvt. Ltd.

First prize in ROBO Expo

Students of S5 AEI, Karthik, Aditya, Nikhil, Sourav, Abhin, Rohan, Robin and Sreedas won First prize in ROBO Expo held at Royal Engineering College, Trissur.



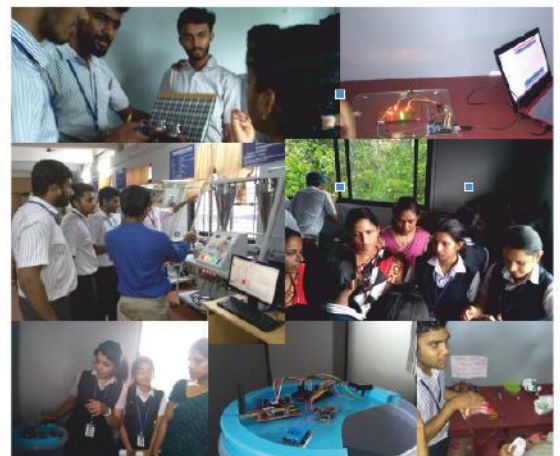
Extra Curricular Activities

S1 AEI student, Abhishek S participated in university sports meet.

Class Committee Meeting

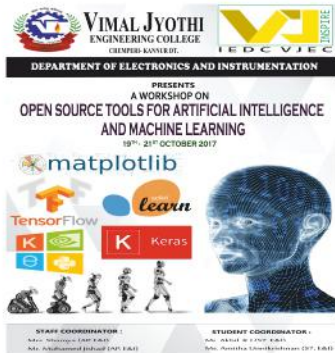
3rd class committee meeting for S5 AEI has been conducted on 27-11-2017.

Mini project Presentation by Students



Workshops

- ✓ "Workshop on open source tools for artificial Intelligence" for S7 AEI students, Organized by Shamy A & Muhamed Jishad.



- ✓ "Workshop on MATLAB for Knowledge based control system design" for S5 AEI students, Organized by Muhammad Jishad , Dr. G Glan Devdas, Sudharsana Vijayan & Muhamed Jishad



- ✓ "Workshop on Data Acquisition using LABVIEW" Organised by Shamy A & Clint Augustine.



Training attended by faculty

1. Ms. Reema Mathew attended FDP on "Deep Learning for Image And Text Analysis" at SSN College, Chennai (13-25/11/2017).
2. Ms. Shalet K S, Ms Sudharsana Vijayan, Mr. Muhammed Jishad T K, Mr. Sampath Kumar V, Mr. Clint Augustine, Mr. Shinu M M attended 3 Days Fdp On Recent Advances In Robotics & Automation (28-30/11/2017).
3. Mr. Sampath Kumar attended 12 days FDP on Entrepreneurship Developer, KCT Coimbatore
4. Ms Shamy A, Ms. Reshma K V, Ms. Divya K attended 5 days hands on training workshop in next generation wireless system at GEC , Kannur (27/11/2017-01/12/2017).

POs and PSOs of Department

POs

Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering application to the solution of complex engineering problems.

Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conditions using first principles of mathematics, natural sciences & engineering sciences.

Design/ Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health & safety and the cultural, societal and environmental considerations.

Conduct Investigations of Complex Problems: Use research based knowledge and research methods including design of experiments, analysis & interpretation of data, and synthesis of the information to provide valid conclusions.

Modern Tool Usage: Create, select & apply appropriate techniques, resources & modern engineering & IT tools including prediction & modeling to complex engineering activities with an understanding of the limitations.

The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal & cultural issues & the consequent responsibilities relevant to the professional engineering practice.

Environment and Sustainability: Understand the impact of the professional engineering solutions in societal & environmental contexts and demonstrate the knowledge of and need for sustainable development.

Ethics: Apply ethical principles & commit to professional ethics and responsibilities and norms of the engineering practice.

Individual and Team Work: Function effectively as an individual and as a member or leader in diverse teams and in multi disciplinary settings.

Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.

Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one own work, as a member and leader in a team, to manage projects and in multi disciplinary environments.

Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PSOs

Students will have the ability to explore the design, installation & operation of the basic instrumentation systems used in industrial environments.

Students will have a strong foundation in mathematical, scientific & engineering fundamentals necessary to formulate, solve & analyze instrumentation problems related to industry & research.



EDITORIAL BOARD

Staff in charge	: Mr. Muhamed Jishad
Staff editor	: Ms. Achala Prasad
Student editor	: Mr. Rahul K