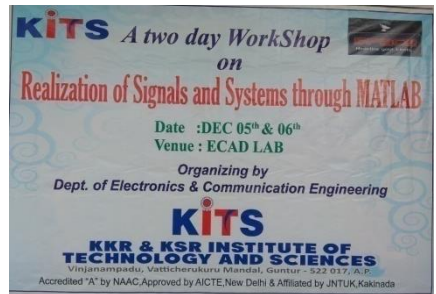


ece news SYNCOM

A Voice Of Electronics And Communication Engineering

KKR&KSR INSTITUTE OF TECHNOLOGY & SCIENCES | ECE DEPARTMENT | 2017

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Editors: Dr. M.Siva Ganga Prasad HOD-ECE & Mr. M.Sudhir
Advisory Board : Prof. C. Satyanarayana, Mr. T.Bala Krishna
Mr. P.Ashok Babu & Mr. A.Sarath
Student Coordinators : Mr.K.Balaji ,Ms.V.Naga Ramya
Ms.B.Sai Anjani & Mr.G.Saketh

ECE Program Educational Objectives

- To produce graduates who would have developed a strong background in basic science and mathematics and ability to use these tools in their chosen fields of specialization.
- To produce graduates who have the ability to demonstrate technical competence in the fields of electronics and communication engineering and develop solutions to the problems.
- To produce graduates who would attain professional competence through life-long learning such as advanced degrees, professional registration, and other professional activities.
- To produce graduates who function effectively in a multi-disciplinary environment and individually, within a global, societal, and environmental context.
- To produce graduates who would be able to take individual responsibility and to work as a part of a team towards the fulfillment of both individual and organizational goals.

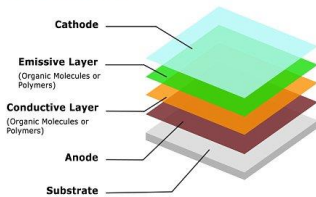
Department Vision

Developing highly Qualitative, Technically Competent and Socially Responsible Engineers.

Department Mission

To provide quality education in the domain of Electronics and Communication Engineering through

- Enriched curriculum for addressing the needs of Industry.
- Effective teaching learning processes through congenial environment.
- Gaining contemporary knowledge through research, development, curricular, co and extra-curricular.

*Faculty Article:***OLED, or Organic Light Emitting Diodes****OLED structure**

OLED, or Organic Light Emitting Diodes, are an offshoot of existing conventional LED technology. LEDs are semiconducting light sources that function through electroluminescence—that is, they produce photons (aka light) by plopping electrons into little electron holes within the device's emissive layer. Basically, electricity goes in and light comes out thanks to a semi-conductive material, rather than a white-hot metal filament like an old-school light bulb.

An OLED panel is typically composed of four primary layers: The substrate, which acts as the structural framework; the anode, which draws electrons; the cathode, which provides electrons; and the organic layer between. That organic layer is further divided into a conducting layer—which provides the "electron holes" that the electrons flowing through layer can snap into, shedding energy in the process—and an emissive layer where the light is actually produced. And if you want to start messing with producing actual color, it's just a matter of adding red-, green-, and blue-tinted plastic layers to the substrate.

OLEDs work in a similar way to conventional diodes and LEDs, but instead of using layers of n-type and p-type semiconductors, they use organic molecules to produce their electrons and holes. A simple OLED is made up of six different layers. On the top and bottom there are layers of protective glass or plastic. The top layer is called the seal and the bottom layer the substrate. In between those layers, there's a negative terminal and a positive terminal. Finally, in between the anode and cathode are two layers made from organic molecules called the emissive layer (where the light is produced, which is next to the cathode) and the conductive layer (next to the anode).

The LEDs in today's LED televisions are actually used only to provide a white back light, which then shines through a rapidly-refreshing LCD shutter array which tints the emanating light. OLEDs, on the other hand, operate as both light source and color array simultaneously. This may not sound like a big difference, but does offer a wide range of benefits including:

- **Lower power consumption**
- **Better picture quality**
- **Better durability and lighter weight**
- **The price is only going down from here**

By
E.V.Narayana, Asst. Prof.

*Student Article:***IMAGE BASED DETECTION OF DEFECTED VEGETABLES**

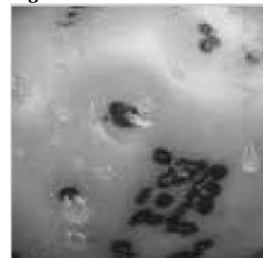
Here we explaining an automated system to detect and assess the infection in vegetable using image. The specific objectives were to detect the disease and to evaluate the disease using image. With this technique diseased/infested and healthy vegetable images were collected like tomato brinjal. The aim of this paper to study the diseases in vegetable crops through Radon transforms technique by using diseased images. The specific objectives were used to detect and evaluate the diseases based on the images. In this study we have identified disease intensity, damaged percentage of the plant parts in *Lycopersicon esculentum* (tomato), *Solanum tuberosum* L. (Potato). Which are effected by a fungal disease "early blight". The causative agent is *Alternaria alternata*. The symptoms were characterized by yellowing of leaves, stems and fruits at maturity they become brown and eventually drop from the plant.. This paper gives the essence data about asphalt defected location, assessment, order, pressure handle. Since the defected area have particular straight elements in the space area. It accepts the way that the pixels in defected area are brighter than their surroundings. The captured image is wavelet transformed asses the infected area. So detection of diseases is achieved by the two dimensional wavelet transform. Then the radon transform evaluate the defected area in the vegetable. Hence evaluation is achieved by the radon transform.

This algorithm that can automatically progress the each fault vegetable image. The major task is to find and assess the disease .Our algorithm consists of three stages (1) Capturing of Defected Vegetable Image (2) Detection using Wavelet Transform (3) Evaluation Using Radon transforms

By
T.Amani (14JR1A04D5)
S.Satyaveni (14JR1A04D1)
Y.Durga bhavani(14JR1A04F1)
P.Yamini (14JR1A04C3)



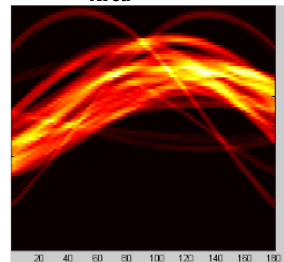
Original Vegetable **Infected**



Gray Scale image



Detection of defected Area



Evaluation of defection

Work Shop on “REALIZATION OF SIGNALS AND SYSTEMS THROUGH MATLAB”

The ECE department association “SPACE” conducted a two day National level workshop on 05th and 6th December 2017 from 8.30 AM to 3.30 PM in the ECAD Lab. The resource person for this workshop is **Mr.P.Vikram Kumar,MS(Signal Processing) IIT Chennai**. The topic of work shop is “**Realization of Signals and Systems through MATLAB**”.



Few syntaxes were carried out on the first day such as: `inread`, `imnoise`, `medfilt`, `imshow`, `dsolve` etc. He explained Graphical user internet decomponent to generate square wave. He explained a program with `simulink` library. Around 3.00 PM the first day was finished.

On second day resource person explained about real time wave record with real-time voice.

`audiowrite(filename,y,Fs)` writes a matrix of audio data, `y`, with sample rate `Fs` to a file called `filename`. The filename input also specifies the output file format. The output data type depends on the output file format and the data type of the audio data `y`.

`Audiowrite (filename,y,Fs)`
`audiowrite(filename,y,Fs,Name,Value)`.

`wavwrite` supports multi-channel WAVE data, with up to 32 bits per sample and supports writing 24- and 32-bit .wav files.

`wavwrite(y,Fs,'filename')` writes the data stored in the variable `y` to a WAVE file called `filename`.

`wavwrite(y,'filename')`
`wavwrite(y,Fs,'filename')`



With the great Patience the resource person clarifies the all the doubts elevated by the participants. He explained each and every line of the program with his experience. With the great zeal the second day closed at 3.00 PM. After the feedback from the participants certificates are distribute to all participants. After the Valedictory the program ends with National Anthem.

One Day Hands on Experience on Arduino Kit/ Board



The ECE department association "SPACE" conducted "One Day Hands on Experience on Arduino Kit/ Board" on 13th December 2017 in the E-CAD Lab. The resource person for this workshop was Mr. M.Praveen, Manager , Surya embedded Technology private Ltd.

He explained that Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs - light on a sensor, a finger on a button, or a Twitter message - and turn it into an output - activating a motor, turning on an LED, publishing something online. You can tell your board what to do by sending a set of instructions to the microcontroller on the board. To do so you use the Arduino programming language (based on Wiring), and the Arduino Software (IDE), based on Processing. You can tell your Arduino what to do by writing code in the Arduino programming language and using the Arduino development environment.



This event provides better view on programming aspects of Arduino Microcontrollers. Thus it offers various Real Time projects to implement using Arduino Microcontroller by programming in C Language Programming. The following programs carried out

- LED program
- 7 segment display program
- LCD program
- Running of motor in clock wise
- Running of motor anti clock wise.
- Moving Motor towards left or right



After the feedback from the participants, The Vote of Thanks was delivered by the Dr. Siva Ganga Prasad, HOD ECE dept. On behalf of the department of Electronics and Communication Engineering, He extended his gratitude to the College Management and Principal.

J-Gate Awareness Program

“The more you read the more things you will know.

The more you learn the more places you will go”



On 16th December 2017 at 11.00 AM all faculty of Electronics and communication Engineering attend for the orientation Program conducted by the department of Library & Information Center on “J-Gate Services” by the Mr. M.S. Srinivas , Training Manager, J-Gate.

In this Session ***Mr. M.S. Srinivas*** explained about the following things

1. What is J-Gate?

J-Gate is an electronic gateway to global e-journal literature. Launched in 2001 by Informatics India Limited, J-Gate provides seamless access to millions of journal articles available online offered by 13,243 Publishers.

- a. Table of Contents (TOC)- For 49,063 e-journals.
- b. Database - A comprehensive searchable database with 55,034,552 articles, with 10,000+ articles added every day.

2. J-Gate Features and Benefits

- Truly e-journal portal
- As an e-journal portal, J-Gate presently hosts content from 49,063 e-journals.
- Captures and indexes articles from more than 24,838 open-access e-journals and maintains links to them.
- Provides links to over 11,018,380 open-access articles.
- Presently links to e-journals from 13,243 publishers.
- This useful feature enables a J-Gate subscriber to check the availability of journals in local libraries.
- Customization features
- Constant updating
- Comprehensive journal classification
- Easy-to-use search functionalities

Hands On workshop Embedded Systems fundamentals for basic Microcontroller 8051 and Arduino

The ECE department and EEE department in association with Andhra Pradesh State Skill Development Corporation conducted a three day event “Hands On workshop Embedded Systems fundamentals for basic Microcontroller 8051 and Arduino” on 14th December 2017 to 16th December 2017 in the E-CAD Lab. This program is targeted to Electronics students with some knowledge on Embedded Systems Concepts and Microcontrollers.

Day 01 (14th December 2017)

Mr.G. Chandra Shekar Babu ,Mr.Sk.Zubear, C.Vijay Kumar, J.Siva Nagaraju and U.Samanth are Resource persons for the work shop. Exactly at 10.00 AM the workshop is started by is APSSDC members with the explanation of Embedded system. Total 150 students participate in the workshop. They explained how Arduino is better compared to Micro Controller.

On first day few programs are implemented with the Keil software like LED display , Blinking of LEDs, Seven segment display etc.....

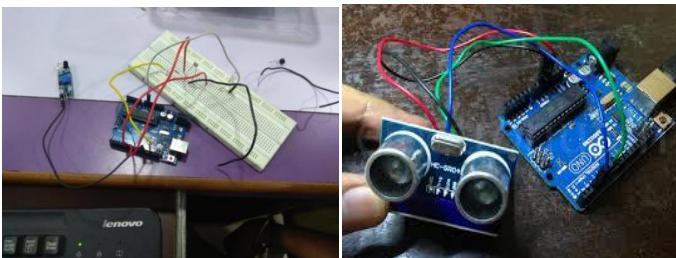
Day 02 (15th December 2017)

The resource person said “Arduino is an open source computer hardware and software company, project, and user community that designs and manufactures single-board microcontrollers and microcontroller kits for building digital devices and interactive objects that can sense and control objects in the physical world”

On the second the following contents are discussed with hands on experience

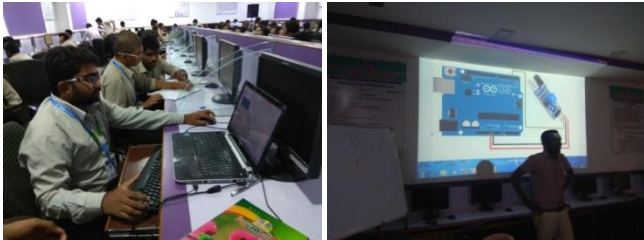
- Arduino Programming
- Introduction to Digital Pins & Inputs- LED Based Projects.
- Interfacing of switches with Arduino
- LCD Based Projects
- Motor Based Projects

Day 03 (16th December 2017)



On the third day the APSSDC members more concentrated on sensor based projects. They explained the Interfacing of Sensors in real time. The third day provides better view on programming aspects of Arduino Microcontrollers. Students actively Participated in this session.

- The following Projects are implemented using Arduino
- Interfacing of sensors with Arduino- LDR,
- Interfacing of sensors with Arduino- Humidity sensor,
- Interfacing of sensors with Arduino- IR sensor,
- Interfacing of sensors with Arduino- Ultrasonic sensor
- Interfacing of RGB LED with Bluetooth



With the great patience all the APSSDC members explained each and every line of programs. They explained the programs and implementation parallel. So many students got the attention to implement the interfacing of sensors with Arduino. Many Students said “I like the Work shop” due to the inspiration. They expressed thanks to the management of APSSDC and KITS College who permitted them to participate in the workshop. After the examination the workshop ended with National Anthem.

Faculty Achievements:

Mrs. P.Sarala, Asst. Prof Published a paper on “**Ergodic Channel Capacity of Multiple Input and output System**” in International Journal of Advanced Research in Science and Engineering, Volume No. 06, Issue No. 11 , November 2017. It is UGC approved Journal with **impact factor 2.83**. ISSN (o):2319-8354, ISSN (P): 2319-8346



Student activities:

Congratulations!



Addepalli Sravika (14JR1A0401) And Tippanaboina Keerthi (14JR1A04D6) got selected in the **Snovasys** campus drive. We are wishing you the very best for the future.

Snovasys



Manne Mounica (14JR1A0481) got selected in BHEA Company campus drive. We wish to appreciate your dedication and commitment to perform with excellence in campus drive of BHEA. You have proven your abilities and talents. Heartfelt obligation to you and keep your spirits.

BHEA



G.Sai Divya Madhuri(16JR1A0425) and L.Nikhil (16JR1A0492) Participate in the State Level Soft Skills Competition on 19th December 2017 conducted by Dept. Of English, Jagarlamudi Kuppaswamy Chowdary College, Guntur, and won the **"FIRST PRIZE"** in DUMB Charades/ Walk and



Talk two minuets Competition among the 125 teams.



N.Chandra Gopi (16JR1A0439) and R.Vankata Nikhil (16JR1A04E4) Participate in the State Level Soft Skills Competition on 19th December 2017 conducted by Dept. Of English, Jagarlamudi Kuppaswamy Chowdary College, Guntur, and won the **"THIRD PRIZE"** in DUMB Charades/ Walk and








Talk two minuets Competition among the 125 teams.

III-I Results:

The Department of Electronics and communication Engineering Heartily congratulated all the students of III year students for fabulous performance in the fifth semester Exams. Let this be considered as a source of inspiration to the entire students of the department and an impetus to excellence.






Toppers of III-I Results:

NO	REGDNO	NAME	%	PHOTO
1	15JR1A0423	CH.YASASWINI	86.55	
2	15JR1A04D8	SHILPA MARY .S	86.18	
3	15JR1A04C6	PRANAMIKA .D	84.97	
4	15JR1A0420	CH.TEJASWI	84.85	
5	15JR1A0475	L Y N V DIVYA SUPRIYA	84.48	

IV-I Results:

Make it a habit to bring success and prosperity to kindle branch of ECE, we heartily congratulate the toppers of senior year students for magnificent performance in seventh semester Exams. We encourage you to continue the same tempo in the Final semester.

Toppers of IV-I Results :

SNO	REGDNO	NAME	%	PHOTO
1	14JR1A0481	MANNE MOUNICA	78.93	
2	14JR1A0429	ETHARA BALA VYSHNAVI	77.73	
3	14JR1A0432	GUDE SIRISHA	76.27	
4	14JR1A04C5	SARIPUDI TRIVENI	76.27	
5	14JR1A0403	ALLADI CHANDANA	76.13	

National Mathematics Day 2017

In India, the National Mathematics Day is observed on December 22 every year. It is celebrated in order to honor the birth anniversary of the famous mathematician **Sir Srinivasa Ramanujan**. He was the world famous mathematician who made remarkable contributions in different fields and branches of the subject mathematics. The Indian mathematical genius Srinivasa Ramanujan was born on 22 December 1887 and died on 26 April 1920.



“Replying to G. H. Hardy’s suggestion that the number of a taxi (1729) was “dull”: No, it is a very interesting number; it is the smallest number expressible as a sum of two cubes in two different ways, the two ways being $1^3 + 12^3$ and $9^3 + 10^3$ ”



The Declaration was made by Dr. Manmohan Singh, **Ex-Prime Minister of India**, during the inaugural ceremony of the celebrations to mark the 125th birth anniversary of Srinivasa Ramanujan held at the Madras University Centenary Auditorium on 26 February 2012. Dr Manmohan Singh also announced that the year 2012 would be celebrated as the National Mathematics Year.