A Guest Lecture
On
"Linear IC's and its Applications"

Introduction: Linear Integrated Circuits are solid state analog devices that can operate over a continuous range of input signals. A linear integrated circuit or analog chip is a set of miniature electronic analog circuits formed on a single piece of semiconductor material. Linear Integrated Circuits are widely used in amplifier circuits. This Guest Lecture covers Linear Integrated Circuits such as opamp, timer, phase locked loop and voltage regulator ICs.

Objectives:
The objective of this lecture is
- To impart the knowledge on op-amp based circuits and the application of op-Amp.
- to focuses on the IC fabrication procedure and the functional blocks and applications of special IC and packaging.
- deal with the basic concepts of operational amplifier, linear & non-linear application of OP-AMP.Along with switching applications like that of comparators, course content finds a due scope to learn IC based design of voltage regulators.
- Analyze the responses of IC based designed circuits in the area of signal conditioning, analog and digital communication.

Speaker's Details : Dr. M.Sankar Ganesh, Assistant Professor (Senior), SENSE, VIT University, Vellore

Date : 16.12.2021

Target Audience : III year ECE Students

Organised by : Department of ECE, SITAMS.

A Guest Lecture
On
5G Mobile Communication
25-10-2021

Department of Electronics and Communication Engineering organized a guest lecture on "5G MOBILE COMMUNICATION" for 4th year ECE branch students on 25.10.2021. The speaker for the session was Dr.V.JayaPrakasam, Associate Professor from Srinidhi Institute of Technology, Hyderabad. He explained the importance of 5G MOBILE COMMUNICATION. He described about cellular generation and wireless communication and its applications. The lecture was very interactive in which the students actively took part to enhance their knowledge about 5G mobile communication. Dr.K.Gopi, HoD, ECE appreciated the efforts of Dr.V.JayaPrakasam for sharing the knowledge in 5G mobile communication. This was very Effective lecture on the topic which helps for the project.

5G is the fifth-generation technology standard for broadband cellular networks, which cellular phone companies began deploying worldwide in 2019, and is the planned successor to the 4G networks which provide connectivity to most current cellphones. 5G networks are cellular networks in which the service area is divided into small geographical areas called *cells*. All 5G wireless devices in a cell are connected to the Internet and telephone network by radio waves through a local antenna in the cell. The new networks have greater bandwidth than their predecessors, giving higher download speeds, eventually up to 10 gigabits per second (Gbit/s).

A Guest Lecture
On
Analog Electronics
10-03-2022

Department of Electronics and Communication Engineering organized a guest lecture on "ANALOG ELECTRONICS" for 4th year ECE branch students on 10.03.2022. The speaker for the session was Dr.Shafeeque Ahmed, Associate Professor from B.S.A Crescent Institute of science and technology college, Chennai. He explained the importance of Analog Electronics. She described about techniques of Analog Electronics. The lecture was very interactive in which the students actively took part to enhance their knowledge about Analog Electronics. Dr.K.Gopi, HoD, ECE appreciated the efforts of Dr.Shafeeque Ahmed for sharing the knowledge of Analog Electronics. This was very Effective lecture on the Analog Electronics.

Analog electronics is the application of electronics to the control and conversion of electric analog .The first high-analog electronic devices were made using mercury-arc valves. In modern systems, the conversion is performed with semiconductor switching devices such as diodes, thyristors, and analog transistors such as the analog MOSFET and IGBT. In contrast to electronic systems concerned with the transmission and processing of signals and data, substantial amounts of electrical energy are processed in analog electronics. An AC/DC converter (rectifier) is the most typical analog electronics device found in many consumer electronic devices, e.g. television sets, personal computers, battery chargers.
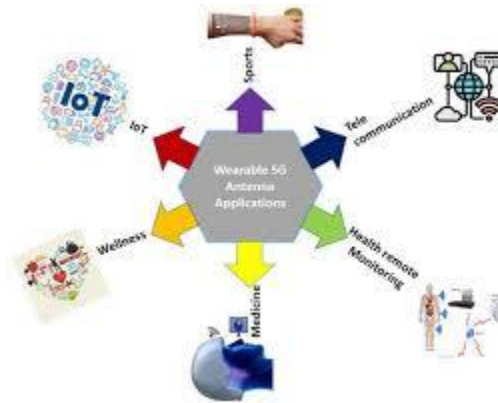
Guest Lecture
On

Antennas for defense Applications

Department of Electronics and Communication Engineering organized a guest lecture on "Antennas for defense Applications" for 4th year ECE branch students on 13.10.2021. The speaker for the session was Mr. S. Praveen Kumar, Associate Professor from, SRM Institute of Science and Technology, Chennai. She explained the techniques for Antennas for defense Applications. He described about techniques for the and its applications. The lecture were very interactive in which the students actively took part to enhance their knowledge about Antennas for defense Applications. Dr.K.Gopi, HoD, ECE appreciated the efforts Mr. S. Praveen Kumar for sharing his knowledge on Antennas for defense ApplicationsCoding. This was very Effective lecture on the topic which helps for the project.
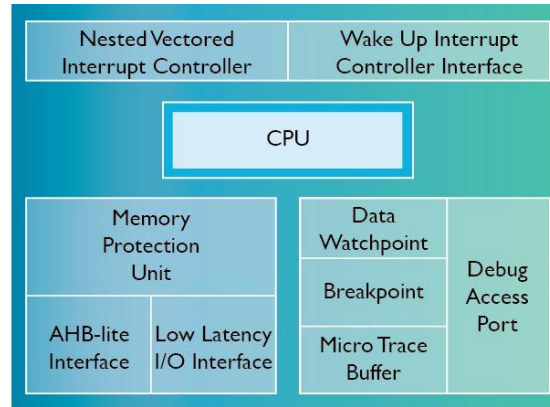
In the Navy, members of the military sometimes require wideband antennas to acquire information across a large spectrum of frequencies. Wideband antennas also measure radiation patterns. These devices can be worn on or underneath clothing, on naval crafts, and planes.

Guest Lecture
On
ARM C0RTEX-M0-MICRO CONTROLLER

Department of Electronics and Communication Engineering organized a guest lecture on "ARM C0RTEX-M0-MICRO CONTROLLER" for 2nd year ECE branch students on 29.9.2021. The speaker for the session was Mr. N.Kiran Kumar, Associate Professor from Vemu institute of technology, Chittoor. He explained the importance of ARM C0RTEX-M0-MICRO CONTROLLER. He described about Arm cortex cores and M0 Micro Controller and its applications. The lecture were very intermutual in which the students pleased to take a part to enrich their thoughts on arm cortex-m0-micro controller. Dr.K.Gopi, HoD, ECE appreciated the efforts of Mr. N.Kiran Kumar for sharing the knowledge of ARM CORTEX-M0-MICRO CONTROLLER.

The Arm Cortex-M0 is the smallest Arm processor available, with a very small silicon area, low gate count, low power and minimal code footprint. Suitable for analog and mixed signal devices, it allows microcontroller suppliers to offer 32-bit performance at 16- and 8-bit price points. It is ideal for highly embedded applications

A Guest Lecture
On
Digital Image Processing
18-01-2022

Department of Electronics and Communication Engineering organized a guest lecture on "DIGITAL IMAGE PROCESSING" for 4th year ECE branch students on 18.01.2022. The speaker for the session was Dr.Santhil lekha, Associate Professor from Islamiah college, Tamil Nadu. She explained the importance of Digital image processing. She described about techniques of digital image processing. The lecture was very interactive in which the students actively took part to enhance their knowledge about Digital image processing. Dr.K.Gopi, HoD, ECE appreciated the efforts of Dr.Santhil lekha for sharing the knowledge of Digital image processing. This was very Effective lecture on the Digital image processing.

The field of digital image processing refers to processing digital images by means of digital computer. Digital image is composed of a finite number of elements, each of which has a particular location and value. These elements are called picture elements, image elements, cells and pixels. Pixel is the term used most widely to denote the elements of digital image. An image is a two-dimensional function that represents a measure of some characteristic such as brightness or color of a viewed scene. An image is a projection of a 3- D scene into a 2D projection plane

Digital image processing has very wide applications and almost all of the technical fields are impacted by DIP. Digital image processing has a broad spectrum of applications, such as Remote sensing via satellites and other Space crafts, Image transmission and storage for business applications
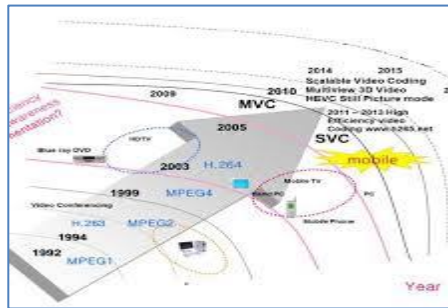
Guest Lecture
On

High Efficiency Video Coding

Department of Electronics and Communication Engineering organized a guest lecture on "High Efficiency Video Coding" for 4th year ECE branch students on 13.10.2021. The speaker for the session was Mr. E. Sivakumar, Associate Professor from, SRM Institute of Science and Technology, Chennai. She explained the techniques of High Efficiency Video Coding. He described about techniques and its applications. The lecture was very interactive in which the students actively took part to enhance their knowledge about High Efficiency Video Coding. Dr.K.Gopi, HoD, ECE appreciated the efforts Mr. E. Sivakumar for sharing his knowledge on High Efficiency Video Coding. This was very Effective lecture on the topic which helps for the project.

High Efficiency Video Coding (HEVC), also known as H.265 and MPEG-H Part 2, is a video compression standard designed as part of the MPEG-H project as a successor to the widely used Advanced Video Coding (AVC, H.264, or MPEG-4 Part 10). In comparison to AVC, HEVC offers from 25% to 50% better data compression at the same level of video quality, or substantially improved video quality at the same bit rate. It supports resolutions up to 8192×4320, including 8K UHD, and unlike the primarily 8-bit AVC,

Microwave Electronics- Future Trends
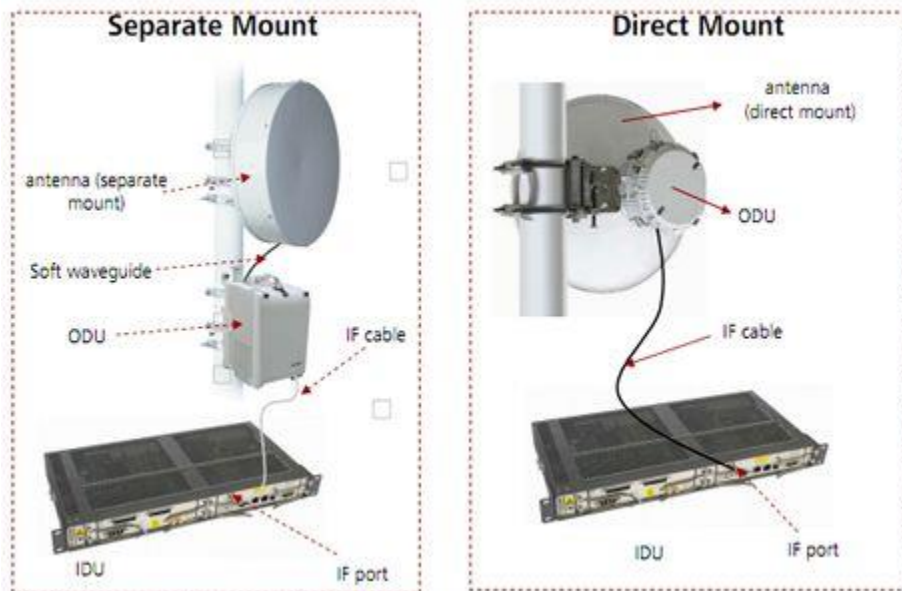
Department of Electronics and Communication Engineering organized a guest lecture on "Microwave Electronics- Future Trends" for 2th year ECE branch students on 13.10.2021. The speaker for the session was Dr. A. Ruhan Bevi, Associate Professor from, SRM Institute of Science and Technology, Chennai. She explained the importance of Microwave Electronics- Future Trends. He described about cellular generation and wireless communication and its applications. The lecture were very interactive in which the students actively took part to enhance their knowledge about Microwave Electronics- Future Trends. Dr.K.Gopi, HoD, ECE appreciated the efforts Dr. A. Ruhan Bevi for sharing the knowledge of Microwave Electronics- Future Trends. This was very Effective lecture on the topic which helps for the project.

Microwave Technology, a line-of-sight wireless communication, uses specialized equipment to transmit and receive radio frequency (RF) over long distances without the use of wires or cables. Specific RF allows information to be transmitted through extreme weather conditions such as rain, hail, snow, dust, or even smoke.

Guest Lecture
On
ROBOT MOTION CONTROL & COMPUTATIONAL INTELLIGENCE

Department of Electronics and Communication Engineering organized a guest lecture on "ROBOT MOTION CONTROL & COMPUTATIONAL INTELLIGENCE" for 2th year ECE branch students on 3.10.2021. The speaker for the session was Dr.V.JayaPrakasam, Associate Professor from Srinidhi institute of technology, Hyderabad. He explained the vital-Role of ROBOT MOTION CONTROL & COMPUTATIONAL INTELLIGENCE. He described about robot motion control and the computational intelligence and its applications in real life. The lecture were very interactive in which the students actively took part to enhance their knowledge about robot motion control & computational intelligence. Dr.K.Gopi, HoD, ECE appreciated the efforts of Dr.V.JayaPrakasam for sharing the knowledge of robots & computational intelligence. This was very Effective lecture on the topic which helps for the project.

Robot motion control enables articulated arms to move through the action of rotating and sliding joints, and mobile robots to move through locomotion and steering. This controlled motion enables these complex tasks with whatever end effector is appropriate on the robot and The expression computational intelligence usually refers to the ability of a computer to learn a specific task from data or experimental observation. Even though it is commonly considered a synonym of soft computing, there is still no commonly accepted definition of computational intelligence.

Guest Lecture
On
Training Program on "Tanner Tools"

Department of Electronics and Communication Engineering organized a guest lecture on "Training Program on Tanner Tools" for 1th year ECE branch students on 5.11.2021. The speaker for the session was Mr. P.Vemaiah, Associate Professor from Vemu institute of technology,Chittoor. He explained the prominent of Tanner Tools. He discussed about how to use tanner tool and build real time projects with it. The lecture were very interactive in which the students very much interested to take part to enhance their knowledge about tanner tool. Dr.K.Gopi, HoD, ECE appreciated the work of Mr. P.Vemaiah for sharing the knowledge on tanner tool. This was very amazing lecture on the topic which helps for the project.

The tanner tool rovides a complete line of software solutions that drive innovation for the design, layout and verification of analog and mixed-signal (A/MS) integrated circuits (ICs) creating breakthrough applications in areas such as power management, displays and imaging, automotive, consumer electronics, life sciences, and RF devices. A low learning curve, high interoperability, and a powerful user interface improve design team productivity and enable a low total cost of ownership (TCO). Capability and performance are matched by low support requirements and high support capability as well as an ecosystem of partners that bring advanced capabilities to A/MS designs.

Guest Lecture
On
VLSI-Design

Department of Electronics and Communication Engineering organized a guest lecture on "VLSI-Design" for 1th year ECE branch students on 15.11.2021. The speaker for the session was Mr.M.Tulasi Ram, Associate Professor from Vemu institute of technology,Chittoor. He explained the prominent of vlsi design Tools. He discussed about how to uses of vlsi design tools. The lecture were very interactive in which the students very much interested to take part to enhance their knowledge about vlsi design. Dr.K.Gopi, HoD, ECE appreciated the work of Mr. Mr.M.Tulasi Ram for sharing the knowledge on tanner tool. This was very amazing lecture on the topic which helps for the project.

VLSI affords IC designers the ability to design utilizing less space. Typically, electronic circuits incorporate a CPU, RAM, ROM, and other peripherals on a single PCBA. However, very large-scale integration (VLSI) technology affords an IC designer the ability to add all of these into one chip.