



**SREENIVASA INSTITUTE OF TECHNOLOGY AND MANAGEMENT STUDIES
(AUTONOMOUS)**

(Approved by AICTE, New Delhi & Affiliated to JNTU Anantapur) Dr.D.K.Audikesavulu
Marg, Murukambattu Post, Chittoor – 517127

**Guest Lecture
ON
Artificial neural network**

Department of Electronics and Communication Engineering organized a guest lecture on “Artificial neural network(ANN)” for 4th year ECE branch students on 18.10.2019. The speaker for the session was Mrs.R.Sindhu, Associate Professor from Vemu institute of technology, Chittoor. He explained the importance Of Artificial neural network. She described how the problem solving works with Artificial neural network . The lecture were well-spoken in which the students actively took part to meliorated their intelligence on ANN. Dr. M.Saravanan, HoD, ECE appreciated the efforts of Mrs.R.Sindhu for sharing her knowledge on ANN. This was very successful lecture on the topic which helps for the project.

Artificial neural networks (ANNs) are biologically inspired computational networks. Among the various types of ANNs, in this chapter, we focus on multilayer perceptrons (MLPs) with backpropagation learning algorithms. MLPs, the ANNs most commonly used for a wide variety of problems, are based on a supervised procedure and comprise three layers: input, hidden, and output. We discuss various aspects of MLPs, including structure, algorithm, data preprocessing, overfitting, and sensitivity analysis. In addition, we outline the advantages and disadvantages of MLPs and recommend their usage in ecological modeling. Finally, an example demonstrating the practical application of MLP in ecological models is presented.



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**Guest Lecture
On
ELECTRONIC CIRCUITS
15-05-2020**



Department of Electronics and Communication Engineering organized a guest lecture on “ELECTRONIC CIRCUIT” for 2nd year ECE branch students on 15.05.2020. The speaker for the session was Mr.S.Prem kumar, Associate Professor from Adhi Parasakthi college of Engineering, Chennai. He explained the eminence of Electronic Circuit. He described the basic element of electronics and application and design. The lecture was very conversational in which the students actively took part to enhance their knowledge about circuits. Dr.M.Saravanan, HoD, ECE appreciated the efforts of Mr.S.Prem kumar for sharing the knowledge on Electronic Circuits. This was very effective lecture on that topic which helps for the project.

An Electronic circuit is composed of individual electronic components, such as resistors, transistors, capacitors, inductors and diodes, connected by conductive wires or traces through which electric current can flow. To be referred to as electronic, rather than electrical, generally at least one active component must be present. The combination of components and wires allows various simple and complex operations to be performed: signals can be amplified, computations can be performed, and data can be moved from one place to another.



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**Guest Lecture
ON
FIBER OPTIC COMMUNICATION IN INDUSTRIES**

Department of Electronics and Communication Engineering organized a guest lecture on “Field Programmable Gate Array and Direct Digital Synthesizer” for 3rd year ECE branch students on 10.10.2019. The speaker for the session was Mr.G.Siva Koteswar Rao, Associate Professor from Vemu Institute of Technology, Chittoor. He explained the Significance FIBER OPTIC COMMUNICATION IN INDUSTRIES. He described the Architectures and Applications of Field Programmable Gate Array and Direct Digital Synthesizer. The lecture were very conversational in which the students actively took part to enhance their knowledge about Field Programmable Gate Array and Direct Digital Synthesizer. Dr. M.Saravanan, HoD, ECE appreciated the efforts of Mr.G.Siva Koteswar Rao for exchange his ideology on Field Programmable Gate Array and Direct Digital Synthesizer. This was very productive lecture on the topic which helps for the project.

An optical fiber (or fibre in British English) is a flexible, transparent fiber made by drawing glass (silica) or plastic to a diameter slightly thicker than that of a human hair. Optical fibers are used most often as a means to transmit light between the two ends of the fiber and find wide usage in fiber-optic communications, where they permit transmission over longer distances and at higher bandwidths (data transfer rates) than electrical cables. Fibers are used instead of metal wires because signals travel along them with less loss; in addition, fibers are immune to electromagnetic interference, a problem from which metal wires suffer. Fibers are also used for illumination and imaging, and are often wrapped in bundles so they may be used to carry light into, or images out of confined spaces, as in the case of a fiberscope.



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**Guest Lecture
ON
Field Programmable Gate Array and Direct Digital
Synthesizer**

Department of Electronics and Communication Engineering organized a guest lecture on “Field Programmable Gate Array and Direct Digital Synthesizer” for 3rd year ECE branch students on 12.8.2019. The speaker for the session was MR. G. RAGHAVENDRA, Associate Professor from Mother Theresa Institute of Engineering and Technology, palamaner. He explained the Significance Of Field Programmable Gate Array and Direct Digital Synthesizer. He described the Architectures and Applications of Field Programmable Gate Array and Direct Digital Synthesizer. The lecture were very conversational in which the students actively took part to enhance their knowledge about Field Programmable Gate Array and Direct Digital Synthesizer. Dr. M.Saravanan, HoD, ECE appreciated the efforts of MR. G. RAGHAVENDRA for exchange his ideology on Field Programmable Gate Array and Direct Digital Synthesizer. This was very productive lecture on the topic which helps for the project.

The Field Programmable Gate Arrays (FPGAs) are semiconductor devices that are based around a matrix of configurable logic blocks (CLBs) connected via programmable interconnects. FPGAs can be reprogrammed to desired application or functionality requirements after manufacturing and Direct Digital Synthesis is used to generate precise analog waveforms that can quickly change frequencies. It's used in test equipment, spread spectrum techniques and to enable frequency sweeps.



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**Guest Lecture
ON**

**PROBLEM SOLVING TECHNIQUES IN IMAGE
PROCESSING USING FUZZY LOGIC**

Department of Electronics and Communication Engineering organized a guest lecture on “PROBLEM SOLVING TECHNIQUES IN IMAGE PROCESSING USING FUZZY LOGIC” for 3rd year ECE branch students on 18.10.2019. The speaker for the session was Mrs.N.Prakash Babu, Associate Professor from Vemu institute of technology, Chittoor. He explained the importance Of Techniques In Image Processing Using Fuzzy Logic. She described how the problem solving techniques in image processing using fuzzy logic works. The lecture were well-spoken in which the students actively took part to meliorated their intelligence on Fuzzy logic . Dr. M.Saravanan, HoD, ECE appreciated the efforts of Mrs.N.Prakash Babu for sharing her knowledge on IOT. This was very successful lecture on the topic which helps for the project.

Fuzzy logic is a technique for representing and manipulating uncertain information. In the more traditional propositional logic, each fact or proposition, such as 'it will rain tomorrow,' must be either true or false. Yet much of the information that people use about the world involves some degree of uncertainty.





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**A Guest Lecture
ON
INTERNET OF THINGS
22-10-2019**



Department of Electronics and Communication Engineering organized a guest lecture on “INTERNET OF THINGS” for 3rd year ECE branch students on 22.10.2019. The speaker for the session was Dr.S.Nagarajan, Associate Professor from Bharath University, Chennai. He explained the Significance Of Internet of Things. He described the Protocols, Architectures and Applications of IOT. The lecture was very conversational in which the students actively took part to enhance their knowledge about IOT. Dr. M.Saravanan, HoD, ECE appreciated the efforts of Dr.S.Nagarajan for sharing the knowledge on IOT. This was very fruitful lecture on the topic which helps for the project.

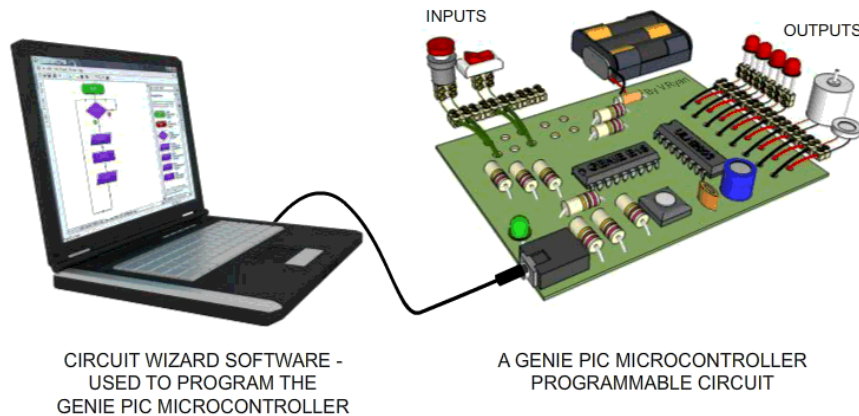
Internet of things (IoT) describes physical objects (or groups of such objects) with sensors, processing ability, software, and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks. There are a number of concerns about the risks in the growth of IoT technologies and products, especially in the areas of privacy and security.



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**Guest Lecture
On
PIC MicroController**



Department of Electronics and Communication Engineering organized a guest lecture on “Terahertz band communications” for 2th year ECE branch students on 26.8.2019. The speaker for the session was Mr. Surendhar, Associate Professor from saveetha engineering college, Chennai. He explained the importance PIC Micro Controller. He described about PIC Micro Controller and its applications. The lecture was very intermutual in which the students pleased to take a part to enrich their thoughts on PIC Micro Controller. Dr.M.Saravanan, HoD, ECE appreciated the efforts of Mr. Surendhar for sharing the knowledge on PIC Micro Controller.

PIC is a family of microcontrollers made by Microchip Technology, derived from the PIC1650 originally developed by General Instrument's Microelectronics Division. The name PIC initially referred to Peripheral Interface Controller, and is currently expanded as Programmable Intelligent Computer.



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**Guest Lecture
ON
Dynamically reconfigurable Optical Networks**

Department of Electronics and Communication Engineering organized a guest lecture on “Synthesis of digital circuits in VLSI” for 4th year ECE branch students on 12.2.2020. The speaker for the session was Mr. B. Muthukumar, Associate Professor from SRM Institute of Science and Technology, Chennai. He explained the importance Of Dynamically reconfigurable Optical Networks. He described how the problem solving works with Dynamically reconfigurable Optical Networks. The lecture was well-spoken in which the students actively took part to meliorated their intelligence on Dynamically reconfigurable Optical Networks. Dr. M.Saravanan, HoD, ECE appreciated the efforts of Mr. B. Muthukumar for sharing his knowledge on Dynamically reconfigurable Optical Networks. This was very successful lecture on the topic which helps for the project.

In fiber optics, a reconfigurable optical add-drop multiplexer is a form of optical add-drop multiplexer that adds the ability to remotely switch traffic from a wavelength-division multiplexing (WDM) system at the wavelength layer. This is achieved through the use of a wavelength selective switching module. This allows individual or multiple wavelengths carrying data channels to be added and/or dropped from a transport fiber without the need to convert the signals on all of the WDM channels to electronic signals and back again to optical signals.



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**Guest Lecture
ON
Role of Embedded Systems
10-07-2019**



Department of Electronics and Communication Engineering organized a guest lecture on “ROLE OF EMBEDDED SYSTEMS” for 4th year ECE branch students on 10.07.2019. The speaker for the session was Mr.S.Siva Perumal, Associate Professor from AdhiParaSakthi College of Engineering. He explained the importance of Embedded Systems and its applications. He described the various Electronic Components used in Embedded Systems, Assembly Languages and Architectures. The lecture was very interactive in which the students actively took part to enhance their knowledge about Embedded Systems. Dr.M.Saravanan, HoD, ECE appreciated the efforts of Mr.S.Siva Perumal for sharing the knowledge on Embedded Systems. This was very fruitful lecture on the topic which helps for the project.

An embedded system is a computer system a combination of a computer processor, computer memory, and input/output peripheral devices that has a dedicated function within a larger mechanical or electronic system. It is embedded as part of a complete device often including electrical or electronic hardware and mechanical parts. Because an embedded system typically controls physical operations of the machine that it is embedded within, it often has real-time computing constraints. Embedded systems control many devices in common use today.



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**Guest Lecture
ON
SEMICONDUCTOR DEVICES & ITS APPLICATIONS
10-02-2020**

The Department of Electronics and Communication Engineering organized a guest lecture on “SEMICONDUCTOR DEVICES & ITS APPLICATIONS” for 2nd year ECE branch students on 10.02.2020. The speaker for the session was Dr.K.V.Kavitha, Associate Professor from Vellore Institute of Technology, Vellore. She explained the eminence of Semiconductor device and it’s applications. She described the types of Semiconductor and applications . The lecture were very conversational in which the students actively took part to enhance their knowledge about Semi conductors. Dr.M.Saravanan, HoD, ECE appreciated the efforts of Dr.K.V.Kavitha for sharing the knowledge on Semiconductors and it’s applications. This was very effective lecture on the topic which helps for the project.

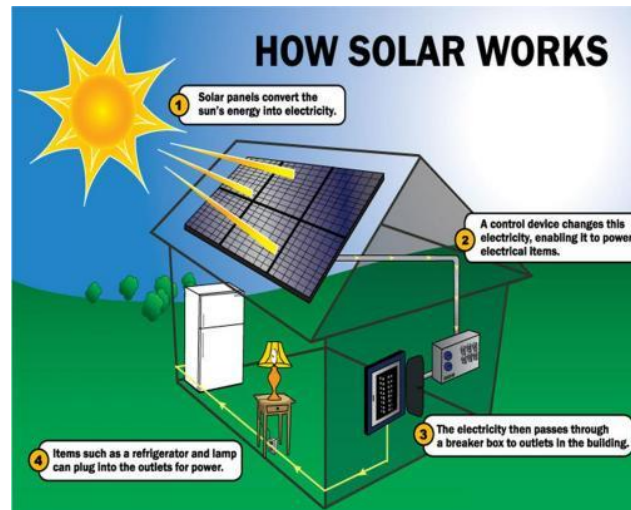
A **semiconductor device** is an electronic component that relies on the electronic properties of a semiconductor material (primarily silicon, germanium, and gallium arsenide, as well as organic semiconductors) for its function. All transistor types can be used as the building blocks of logic gates, which are fundamental in the design of digital circuits. In digital circuits like microprocessor, transistors act as on-off switches in the MOSFET, for instance, the voltage applied to the gate determines whether the switch is on or off. Transistors used for analog circuits do not act as on-off switches; rather, they respond to a continuous range of inputs with a continuous range of outputs. Common analog circuits include amplifiers and oscillators. Circuits that interface or translate between digital circuits and analog circuits are known as mixed-signal circuits.



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**Guest Lecture
ON
Renewable and solar energy**



Department of Electronics and Communication Engineering organized a guest lecture on “Field Programmable Gate Array and Direct Digital Synthesizer” for 3rd year ECE branch students on 23.1.2020. The speaker for the session was Mr.D.Sridhar raja, Associate Professor from Bharath Institute of Science and Technology, Chennai. He explained the Significance Renewable and solar energy. He described the Architectures and Applications of Renewable and solar energy. The lecture was very conversational in which the students actively took part to enhance their knowledge about Renewable and solar energy. Dr. M.Saravanan, HoD, ECE appreciated the efforts of Mr.D.Sridhar raja for exchange his ideology on Renewable and solar energy. This was very productive lecture on the topic which helps for the project.

Solar energy is a renewable source of energy that is sustainable and totally inexhaustible, unlike fossil fuels that are finite. Solar energy is used for heating water for domestic use, heating space in buildings and generating electrical energy.



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**Guest Lecture
On
Transducers**

Department of Electronics and Communication Engineering organized a guest lecture on “Transducers” for 1th year ECE branch students on 2.8.2019. The speaker for the session was Mr. R. Madhu Krishna, Associate Professor from saveetha engineering college, Chennai. He explained the importance PIC Micro Controller. He described about Transducers and its applications. The lecture were very intermutual in which the students pleased to take a part to enrich their thoughts on Transducers. Dr.M.Saravanan, HoD, ECE appreciated the efforts of Mr. R. Madhu Krishna for sharing the knowledge on Transducers.

A transducer is a device that converts energy from one form to another. Usually a transducer converts a signal in one form of energy to a signal in another. Transducers are often employed at the boundaries of automation, measurement, and control systems, where electrical signals are converted to and from other physical quantities (energy, force, torque, light, motion, position, etc.). The process of converting one form of energy to another is known as transduction.

